Appendix AIR
Air Quality Supporting Information

AIR.1 Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Report

D R A F T

Prepared for
City of Oakland
Oakland, California

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AIR QUALITY, GREENHOUSE GAS, AND HEALTH RISK ASSESSMENT TECHNICAL REPORT

OAKLAND WATERFRONT BALLPARK DISTRICT PROJECT

OAKLAND, CALIFORNIA

RAMBOLL

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ACRONYMS AND ABBREVIATIONS

AADT	Average Annual Daily Traffic
AB	Assembly Bill
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Air Dispersion Model
AQTR	Air Quality Technical Report
ARB	(California) Air Resources Board
ASF	Age Sensitivity Factors
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ATCM	Airborne Toxics Control Measure
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BEVs	Battery-Electric Vehicles
CAISO	California Independent System Operator
CalEEMod®	California Emissions Estimator Model
CAP	Criteria Air Pollutant
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
Coliseum	Oakland-Alameda County Coliseum
CPF	Cancer Potency Factor
cREL	Chronic Reference Exposure Level
CRRP	San Francisco Community Risk Reduction Plan
CTF	Cleaner Technologies and Fuels
DEIR	Draft Environmental Impact Report
DOSP	Downtown Oakland Specific Plan
DPM	Diesel Particulate Matter
EBCE	East Bay Community Energy
EBMUD	East Bay Municipal Utility District
EDR	Environmental Data Resources
EIR	Environmental Impact Report

EMFAC	EMission FACtor model
EMISFACT	Variable Emission Factors
ESA	Environmental Science Associates
ESS	Energy Storage System
Estuary	Oakland-Alameda Estuary
EVs	Electric Vehicles
EVSE	Electric Vehicle Supply Equipment
g/s	gram per second
GHG	Greenhouse Gas
HI	Hazard Index
Howard Terminal	Charles P. Howard Terminal
HP	Horsepower
HQ	Hazard Quotient
HRA	Health Risk Assessment
I-880	Interstate 880
I-980	Interstate 980
ICCT	International Council on Clean Transportation
IESVE	Integrated Environmental Solutions Virtual Environment
kBtu	Kilo-British Thermal Unit
KW	Kilowatt
kWh	Kilowatt hour
lbs	pounds
LEED	Leadership in Energy and Environmental Design
MEIR	Maximally Exposed Individual Receptor
MERV	Minimum Efficiency Reporting Value
MLB	Major League Baseball
N_2O	Nitrous Oxide
NFL	National Football League
NOx	Nitrogen Oxides
NREL	National Renewable Energy Laboratory
NSR	New Source Review
OEHHA	California Office of Environmental Health Hazard Assessment
OFFROAD2011	(ARB) In-Use Off-Road Equipment model

OPP	Oakland Power Plant
PEV	Plug-in Electric Vehicle
PG&E	Pacific Gas and Electric Company
PHEVs	Plug-In Hybrid Electric Vehicles
$PM_{2.5}$	Fine Particulate Matter Less than 2.5 Micrometers in Aerodynamic Diameter
PM_{10}	Particulate Matter Less than 10 Micrometers in Aerodynamic Diameter
PV	Photovoltaic
Ramboll	Ramboll US Corporation
ROG	Reactive Organic Gases
RPH	Range of Miles the Charger Enables the Car to Travel Per Hour
RPS	Renewable Portfolio Standard
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCSs	Sustainable Communities Strategies
TAC	Toxic Air Contaminant
TMP	Transportation Management Plan
TOG	Total Organic Gases
TRUs	Transportation Refrigeration Units
$\mu g/m^3$	Microgram Per Cubic Meter
USDOE	US Department of Energy
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
VTR	Vehicle Trip Reduction
X/Q	"chi over q"

1. INTRODUCTION

At the request of Environmental Science Associates (ESA) on behalf of the City of Oakland, Ramboll US Corporation (Ramboll) conducted an analysis in support of the California Environmental Quality Act (CEQA) Draft Environmental Impact Report (DEIR) of criteria air pollutants (CAP) and precursors, greenhouse gases (GHG), and local air quality and health impacts associated with the construction and operation of the proposed mixed-use Oakland Waterfront Ballpark District Project in Oakland, California (referred to hereafter as "the Project"). Additionally, a screening assessment for localized carbon monoxide (CO) impacts from motor vehicle traffic was conducted as a part of this analysis.

This emissions and Health Risk Assessment (HRA) methodology describes the scope and methodology for evaluation of air quality, GHG, and health impacts from construction sources and operational sources, and cumulative off-site sources at on-site and nearby off-site sensitive receptors. This analysis supports the DEIR's determination of potential impacts of the Project based on the 2017 Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines thresholds as well as the City of Oakland's CEQA Guidelines.[1,2]

1.1 Project Description

1.1.1 Existing Conditions

The Athletics ("A's or Project sponsor"), a Major League Baseball (MLB) team, currently play at the Oakland-Alameda County Coliseum (Coliseum), located in the Coliseum Area Specific Plan area between East Oakland and the Oakland International Airport. The A's team headquarters is currently located at Jack London Square. The Coliseum also currently hosts non-A's events, including National Football League (NFL) football games and other special events (e.g. Motocross and Monster Jam exhibitions). Upon the departure of the A's from the Coliseum, a permanent reduction in A's-related emissions potential at the Coliseum is anticipated. All current operations at the Coliseum are included in the "Existing Conditions" presented in this analysis. A portion of these current operations will be replaced by the Project; the operations associated with MLB games only will be referred to as "A's Related Existing Conditions". For this analysis, the A's 30-year average annual attendance of 22,671 people was used for the A's Related Existing Condition calculations.

The Project location is the Charles P. Howard Terminal (Howard Terminal) and certain adjacent properties – together referred to as the "Project site" – located in the southwestern area of Oakland, California. Existing regional freeway access to the Project site exists via Interstate 880 (I-880) and Interstate 980 (I-980). Depicted in **Figure 1**, the Project site is approximately nine miles northwest of the Oakland International Airport, approximately six miles northwest of the Oakland – Alameda County Coliseum, and approximately one mile from three stations on the regional Bay Area Rapid Transit (BART) system.

The Project site is located within the Seaport Area of the Port of Oakland, which includes the waterfront area generally bounded by the San Francisco-Oakland Bay Bridge to the northwest, I-880 to the east and northeast, and Howard Terminal on its easternmost

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[1] BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines, May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: March 2019.

[2] City of Oakland. 2016. CEQA Thresholds of Significance, October.

extension. Within the Port of Oakland, the Project site sits along the north shore of the Inner Harbor of the Oakland-Alameda Estuary (Estuary). The Project site is located at 1 Market Street and is approximately 55 acres at the foot of Market Street. **Figure 1** shows that the Project site is bound by the Estuary on the south; Jack London Square – an approximately 18-square-block, pedestrian-oriented mixed use and entertainment area to the east; the parallel Union Pacific railroad (UPRR) tracks and Embarcadero West roadway on the north; and the heavy metal recycling center, Schnitzer Steel, and Port lands on the west. The Project site sits approximately one-half mile southwest of Downtown, across I-880. The north shore of the City of Alameda is directly south of the Project site, across the Estuary.

The site was used by the Port of Oakland as a shipping container terminal until 2014 and is currently used for truck parking, loaded and empty container storage and staging, and longshore training facilities. According to the Port of Oakland's revised memorandum on Howard Terminal Truck Relocation Assumptions,[3] for the purposes of this analysis, it is conservatively assumed that prior to commencing Project construction all Port uses would be relocated to other off-Port locations elsewhere in the City or region.

1.1.1.1 Proposed Project

The Project is a mixed-use Waterfront Ballpark District development with the following project elements:

- Demolish existing buildings on the Project site, except the existing Oakland Power Plant (as discussed below in **Section 1.1.4** as a Project Variant) and the existing container cranes, which may be retained;
- Address any hazardous materials that may be present on the Project site;
- Construct:
  - A new privately funded, open-air, approximately 35,000-person capacity MLB park;
  - Up to 3,000 residential units of varying affordability and types
  - Approximately up to 1.77 million square feet of adjacent mixed-use development, including retail, commercial, and office uses;
  - A performance venue with a capacity of up to 3,500 individuals;
  - A 400-room hotel;
  - New and expanded utility infrastructure;
  - New signage and lighting; and
  - New parks and open spaces.
- Construct/provide improved access from the surrounding neighborhood and regional transportation networks; and
- Construct/provide new waterfront public access, enhanced water views, and on-site open space.

[3] Port of Oakland. 2019. Memorandum – Howard Terminal Truck Relocation Assumptions – Revised. June 25. From Andrea Gardner (Port of Oakland) to Molly Maybrun (City of Oakland).

Additionally, the Project has committed to complying with Assembly Bill (AB) 734 regarding implementation of sustainability measures, developing a Leadership in Energy and Environmental Design (LEED) Gold ballpark, and ensuring no net additional GHG emissions.

Project land uses are shown in **Table 1**.

1.1.1.2 Ballpark Activity Assumptions

As shown in **Table 2**, the Proposed Ballpark at Howard Terminal will have a capacity of 35,000 attendees. Attendance estimates for MLB games, NFL games, and other events were provided by the Project sponsor; emissions associated with NFL games and other events are not included in the A's-Related Existing Conditions. For MLB games, an attendance of 35,000 attendees per game is used for the Project and an attendance of 22,671 attendees per game is used for the Existing Conditions.[4]

For the proposed ballpark, it was assumed that the A's game schedule would not shift substantially from current Coliseum activity, which typically includes 41 weekday evening, 14 weekday day, and 27 weekend games (for a total of approximately 2,870,000 average attendees annually). For other events, it was assumed that the ballpark would host an average of approximately nine concerts per year with a maximum of 35,000 attendees each, 100 corporate or community events per year with a maximum of 2,000 attendees each, 16 plaza events per year with a maximum of 4,000 attendees each, and 35 other events per year with a maximum of 7,500 attendees each (for a total of approximately 841,500 average attendees annually).

1.1.2 Maritime Reservation Scenario

The Maritime Reservation Scenario involves an alternative site plan for the Project that will be analyzed alongside the Project site plan described above. Under the Term Sheet between the Project sponsor and the Port of Oakland, the Port would have the right to terminate the Project sponsor development rights to a portion of the Project site located generally within the southwestern corner of the site if the Port deemed that area necessary to accommodate the expansion of the turning basin that is used to turn large vessels within Oakland's Inner Harbor.

Under the Term Sheet, the Port of Oakland could, at any point within the next 10 years, choose to exercise its option and take back up to approximately 10 acres of the site from the Project sponsor. As a result, the Project site plan would be modified, and the proposed development would be denser, fitting the same development program (i.e., the ballpark and mix of other uses proposed) onto the smaller site, as shown in **Figure 10**.

The Port of Oakland has not designed or permitted an expanded turning basin and the impacts of the expansion, if it were proposed, are not considered in this Air Quality Technical Report (AQTR). If the Port were to exercise its option and take back a portion of the Project site from the Project sponsor, the Port would analyze the potential impacts of expanding the turning basin at that time.

Changes to the Project site plan that would occur with the Maritime Reservation Scenario would occur within the area of the Project site that would be developed after Phase 1. The

[4] Number of events, attendance, and population data provided by the Project sponsor. The 30-year annual average attendance per game was used for the Existing Conditions and A's Related Existing Conditions.

Maritime Reservation Scenario would distribute the Project's development program differently within the altered site configuration.

This AQTR will discuss the air quality, GHG, and health risk effects of the Maritime Reservation Scenario that are different from those identified for the Project. Additional details regarding the Maritime Reservation Scenario are discussed in **Section 5**.

1.1.3 Project Variants

The Project may include one or more variants, which are Project elements that may or may not be proposed as part of the Project for particular reasons. The variants analyzed in this report include:

- Development of a portion of an existing Oakland Power Plant (OPP), removal of adjacent tank, and construction of a mixed-use building ("Peaker Power Plant"); and
- An aerial tram or gondola above Washington Street extending from downtown Oakland near 12th Street BART to Jack London Square ("Aerial Gondola").

This AQTR will discuss the air quality, GHG, and health risk effects of the Project variants that are different from those identified for the Project.

1.1.4 Project Alternatives

In addition to the Project, this report also analyzes four alternatives to the Project, described below:

- **Alternative 1: No Project Alternative.** The No Project Alternative assumes that the Project is not constructed and that existing truck activity at Howard Terminal continues.
- **Alternative 2: The Off-Site (Coliseum Area) Alternative.** The Off-Site Alternative assumes that Howard Terminal would remain in its current use and the Oakland A's would construct a new ballpark and mixed-use development at the site of the Oakland Coliseum as envisioned in the City's adopted Coliseum Area Specific Plan. This AQTR does not provide any analyses for this alternative, as discussed further below.
- **Alternative 3: Reduced Project Alternative.** The Reduced Project Alternative assumes that the ballpark, hotel, and performance venue are constructed, as well as reduced square footage for the residential and commercial land uses.
- **Alternative 4: Grade Separation Alternative.** Under the Grade Separation Alternative, the Project would be constructed at the Project site and would be revised to include construction of a grade-separated crossing of the railroad tracks for vehicles accessing the site. This alternative would also construct a pedestrian and bicycle overcrossing. There are two potential locations for the grade-separated vehicular crossing, one at Market Street and one at Brush Street, as well as two possible designs for each location – an underpass or an overcrossing.

Emissions from Alternatives 1, 3, and 4, as well as a discussion of health risks, are included in **Section 8**.

1.1.5 Project Phasing

For the purposes of this analysis, the Project is conservatively assumed to be developed in two phases, though actual phasing may be in two or more phases or subphases. Phase 1 construction is set to begin in 2020 and has a target completion date of mid-2023. This phase will include the ballpark, up to 540 residential units, up to 250,000 square feet of

office, up to 30,000 square feet of retail, an approximately 400-room hotel, and associated infrastructure, including parking garages. Phase 2 construction is estimated to begin in 2023 and be completed as early as 2027 and will include the remaining non-ballpark development (otherwise referred to as the Full Buildout plan). Project Phasing and Project Construction Schedule are shown in **Table 3**. The grading and building construction areas included in Phase 1 and Full Buildout are shown in **Figure 2A and Figure 2B**.[5] Demolition and geotechnical work are assumed for purposes of this analysis to be completed across the entire site in 2020 and 2021. Once demolition and geotechnical work are complete, utilities and building construction will commence in the phased approach. This is depicted in **Figure 5**.

As the phasing of Project and Project Variant implementation is subject to change based on market conditions and other unanticipated factors, construction and operations could be extended beyond the anticipated buildout schedule. However, for the purposes of the CEQA analysis, it is assumed that the phasing schedule provided here represents an accelerated phasing schedule for the Project for the purposes of conservatively assessing daily maximum and annual average emissions impacts, and that construction would most likely not occur at a more rapid pace than is analyzed. As described further below, emission factors are anticipated to be lower in later years with improved on-road vehicle efficiency and cleaner off-road construction equipment; therefore, overall emissions and health impacts would be lower if the schedule was extended.

It is assumed that the residential buildings constructed in Phase 1 would be occupied immediately following conclusion of Phase 1, such that new on-site residents would be present during subsequent Phase 2 construction activities and are therefore considered in the health risk analyses.

1.2 Objective and Methodology

The purpose of this air quality, GHG, and HRA technical analysis is to assess potential criteria air pollutant emissions, GHG emissions, and health risks and hazards that would result from the construction and operation of the Project consistent with guidelines and methodologies from air quality agencies, specifically, the BAAQMD, the California Air Resources Board (ARB), the California Office of Environmental Health Hazard Assessment (OEHHA), and the US Environmental Protection Agency (USEPA).

1.2.1 Resources

Ramboll directly or indirectly relied on emissions estimation guidance from government sponsored organizations, government-commissioned studies of energy use patterns, Project-specific studies, and emissions estimation software as described below. In cases noted below, third-party studies were also relied upon to support analyses and assumptions made outside of the approach described above. Where Project-specific data estimates were available, they were used preferentially instead of model defaults. The methodology used to calculate this emissions inventory is described in detail in the following sections, including citations to information used in this inventory.

[5] The phasing plan shown is conservative, as explained below.

1.2.1.1 CalEEMod®

Ramboll primarily utilized the methodology from the California Emissions Estimator Model (CalEEMod®) version 2016.3.2[6] to assist in quantifying the criteria pollutant emissions in the inventories presented in this report for the Project. CalEEMod® is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. This model was developed under the auspices of the South Coast Air Quality Management District (SCAQMD) and received input from other California air districts. Itis currently supported by numerous lead agencies for use in quantifying the emissions associated with development projects undergoing environmental review. CalEEMod® utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available.

CalEEMod® provides a platform to calculate annual operational criteria pollutant emissions from a land use development project. The model also provides default values for water and energy use. Specifically, the model aids the user in estimating operational emissions associated with a fully built out land use development. This includes emissions from on-road mobile vehicle traffic associated with the land uses, emissions from landscaping equipment and other off-road mobile sources, emissions from natural gas usage in the buildings, emissions associated with electricity usage in the buildings and electricity usage associated with water usage. This also includes emissions associated with solid waste disposal.

CalEEMod® uses sources such as the USEPA AP-42 emission factors,[7] ARB's approved on-road and off-road equipment emission models such as the EMission FACtor model (EMFAC) and In-Use Off-Road Equipment model (OFFROAD2011), and studies commissioned by California agencies such as the California Energy Commission and CalRecycle. OFFROAD2011 is an emission factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment, agricultural equipment).[8] The off-road diesel equipment emission factors used by CalEEMod® are based on the ARB OFFROAD2011 program. EMFAC is an emission factor model used to calculate emissions rates from on-road vehicles (e.g. passenger vehicles).[9] The emission factors used by CalEEMod® for on-road vehicles are based on the ARB EMFAC2014 program. ARB has released an updated EMFAC2017 version that includes various updates, notably the incorporation of USEPA and ARB regulations and standards (e.g., Advanced Clean Cars and the Truck and Bus Rule). To more accurately assess the mobile GHG emission inventories, EMFAC2017 was incorporated into the analysis.

In addition, CalEEMod® contains default values and existing regulatory methodologies to use in each specific local air district or county. Appropriate statewide default values can be utilized if regional default values are not defined. Ramboll used default factors for Alameda County for the emissions inventory, unless otherwise noted in the methodology descriptions below.

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[6] CAPCOA. 2016. California Emissions Estimator Model®. Available at: http://www.CalEEMod.com/. Accessed: March 2019.

[7] The USEPA maintains a compilation of Air Pollutant Emission Factors and process information for several air pollution source categories. The data is based on source test data, material balance studies, and engineering estimates. Available at: http://epa.gov/ttnchie1/ap42/. Accessed: March 2019.

[8] CARB. 2011. Off Road Mobile Source Emission factors. Available at: http://www.arb.ca.gov/msei/msei.htm. Accessed: March 2019.

[9] CARB. 2011. Release. Available at: http://www.arb.ca.gov/msei/modeling.htm. Accessed: March 2019.

1.3 Document Organization

This methodology is divided into eight sections as follows:

Section 1.0 – Introduction: describes the purpose and scope of the air quality analysis, the objectives and methodology used, and outlines the document organization.

Section 2.0 –Criteria Air Pollutant and Greenhouse Gas Emissions Estimates: describes the methods and results for CAP and GHG emissions from the unmitigated and mitigated Project, as well as presents potential additional mitigation measures that the Project could implement and quantifies the emissions reductions potential of those measures;

Section 3.0 – Health Risk Assessment: provides an overview of the methodology for conducting the HRA and presents HRA results.

Section 4.0 – Localized Carbon Monoxide Impacts from Motor Vehicle Traffic: discusses the methodology and results for the localized CO screening analysis.

Section 5.0 – Cumulative Analysis: summarizes the approach and results used in the HRA cumulative analysis.

Section 6.0 – Maritime Reservation Scenario: summarized the approach and results of the Maritime Reservation Scenario emissions inventory and HRA analysis.

Section 7.0 – Project Variants: provides the approach and results of the Project Variant emissions inventory and HRA analysis.

Section 8.0 – Project Alternatives: provides a description of Project Alternatives, as well as emissions and HRA where they differ from the Project.

Sections 2, **3**, and **5** describe the methodology used to evaluate impacts for the Project and Existing Conditions, in particular. They also generally describe the methodologies used to evaluate the Maritime Reservation Scenario, Project Variants and Project Alternatives; however, the analysis of each scenario, variant or alternative may require some modification of the approach to account for differences in its construction or operation. As such, **Sections 2**, **3** and **5** describe methodologies used for the Project and any deviation from those methods are noted in subsequent sections: Maritime Reserve Scenario (**Section 6**), Project Variants (**Section 7**) and Project Alternatives (**Section 8**).

2. CRITERIA AIR POLLUTANT AND GREENHOUSE GAS EMISSIONS ESTIMATES

Emissions from the Project include one-time emissions from construction activities and ongoing emissions from operation of the Project. Emissions calculation methodologies and results are discussed below.

2.1 Existing Truck Activity at Howard Terminal

CAP and GHG emissions from existing truck activity at Howard Terminal were conservatively not removed from the overall Project emissions, since these are accounted for on a regional basis. The Project would replace truck parking, loaded and empty container storage and staging, and longshore training facilities at the existing Howard Terminal site; however, as these emissions may still occur within the general region, no reduction in emissions is quantified for the A's Related Existing CAP and GHG inventory. The reduction is only considered for the health risk assessment of localized impacts, as discussed in **Section 3**.

2.2 Project Construction Emissions

Ramboll estimated the Project CAP and GHG emissions from construction activities. Methodologies used to calculate CAP and GHG emissions are summarized below. TAC emissions are calculated from CAP emissions; additional discussion of TAC calculation methodologies is included in **Section 3.1.1**.

Construction emission calculation methodologies cover off-road equipment (primarily diesel-fueled) and on-road vehicles. The calculation methodology for construction emissions categories is presented in the sections below.

2.2.1 Construction Phasing

For the purposes of this analysis, the Project is conservatively assumed to be developed in two phases, though actual phasing may be in two or more phases or subphases.

This analysis conservatively assumed that there will be as few as two phases, that the complete build out would occur in as few as seven years and that the buildings constructed in each phase of the construction program (i.e., Phase 1 or Phase 2) would be occupied and fully operational as soon as construction of each phase is completed. This is conservative because occupancy and operation of each phase would likely ramp up over time, rather than immediately upon completion of construction. The analysis also assumed that operational emissions from Phase 1 will overlap with Phase 2 construction emissions and is conservative because it assumes only two phases, rather than several phases or subphases, which are conservatively estimated to be completed in approximately seven years.

The first phase of the construction program would commence after all existing uses have vacated. The preliminary construction schedule assumes that construction would start in 2020, that it would last approximately seven years or longer, and that it would take place on average for six days per week for the ballpark and five days per week for other land uses, with different equipment operating for different hours, as indicated in **Table 3**. Construction equipment is expected to operate on average 8 hours per day, but these 8 hours can occur anytime in the 12-hour window from 7 am- to 7 pm for most activities, and during a 24-hour window for other activities. An estimate of the percentage of time each piece of equipment will be used at night is also included in **Table 4**. Furthermore, construction is largely

expected to occur on weekdays (and Saturdays for ballpark construction) with specific and limited exceptions.

Initial construction activities affecting the full site area include demolition of the existing Howard Terminal buildings and parking lots, followed by geotechnical work. Construction activities related to Phase 1 land uses (the ballpark and initial mixed-use development) include grading, construction of a cut off wall,[10] site preparation, site utility upgrades, building construction, architectural coating, and paving. Construction activities related to Phase 2 land uses would include the same activities as Phase 1 for the remaining mixed-use development.

The analysis described here does not rely on the default construction phasing schedule from CalEEMod®, as a detailed schedule was provided by the Project sponsor. Error! Reference source not found. **Table 3**, provided by the Project sponsor, summarizes the expected construction phasing and construction daily schedule.

2.2.2 Off-Road Construction Equipment

Emissions calculations associated with off-road construction equipment are based on the construction schedule, type and quantity of equipment, and hours of operation for each piece of equipment based on Project-specific information provided by the Project sponsor for demolition, geotechnical work, site preparation and grading, cut off wall construction, utility upgrade installation, building construction, architectural coating, and paving activities. The Project-specific construction equipment list is provided in **Table 4**.

Emissions from diesel off-road construction equipment are estimated using methodologies consistent with CalEEMod® version 2016.3.2, as shown below:

$$E_C = \sum (EF_C * HP * LF * Hr * C)$$

Where:

E_C: off-road equipment exhaust emissions in pounds (lbs.)

EF_C: emission factor (g/bhp-hr). Emission factors for diesel equipment are default CalEEMod emission factors or Tier-specific emission factors[11]

HP: equipment horsepower. Project-specific

LF: equipment load factor. CalEEMod® defaults

Hr: equipment operating hours. Project-specific

C: unit conversion factor

[10] The project may include a cutoff wall that will be constructed in the ground, directly below the perimeter of the ballpark. The cutoff will be constructed to reduce or eliminate the effects of groundwater on the baseball playing field under both current and future groundwater levels. An additional benefit may be to reduce or eliminate water proofing of portions of the stadium constructed below the groundwater level. The cutoff will be approximately 3 feet in cross-sectional width and comprise a mixture of native soil, bentonite clay, cement and water. The cutoff will extend approximately 60 to 70 feet below existing grade into the San Antonio Formation. The wall will be constructed to create a complete circle.

[11] CalEEMod® 2016.3.2 emission factors are based on ARB's OFFROAD2011 database. CARB has released an online database with off-road equipment emission factors called ORION2017, however, it does not include updated emission factors for construction equipment in a usable format. Therefore, default OFFROAD2011 emission factors are used when appropriate.

Emissions associated with diesel-fueled off-road equipment include only running exhaust emissions since starting emissions are assumed to be minimal for diesel-fueled off-road equipment.

GHG emissions from electric off-road construction equipment are estimated using the following equation and shown in **Table 5**:

$$E_C = \sum (EF_C * kW * LF * Hr * C)$$

Where:

E_C: off-road equipment emissions in metric tons

EF_C: emission factor (lb/MWh). Emission factor based on the PG&E's renewable portfolio standard for 2020[12]

kW: equipment power. Project-specific or CalEEMod® defaults

LF: equipment load factor. Project-specific or CalEEMod® defaults

Hr: equipment operating hours. Project-specific

C: unit conversion factor

Off-road equipment emissions are calculated both with and without mitigation. Unmitigated off-road equipment emissions are estimated for diesel equipment using CalEEMod® default fleet-average emission factors. Mitigated emissions are estimated assuming that all diesel-fueled off-road equipment utilize Tier 4 Final engines or equivalent. Emissions from electric equipment are the same with and without mitigation.

Emissions from water trucks were calculated using EMFAC2017 emission factors as they are on-road trucks. GHG and CAP emissions from water trucks during Project construction are provided in **Table 6**. Indirect electricity emissions from water use in the water trucks were calculated using CalEEMod® methodology for electricity intensity and Pacific Gas and Electric Company's (PG&E's) GHG emission factor. GHG emissions from water use during Project construction are provided in **Table 7**.

As described further in **Section 3.1**, construction activities also result in the emissions of diesel particulate matter (DPM), a recognized Toxic Air Contaminant (TAC) in California. DPM emissions were assumed to be equivalent to PM with an aerodynamic diameter less than 10 microns (PM_{10}) emissions from diesel-powered sources.

2.2.3 On-Road Construction Trips

On-road construction vehicles, such as passenger vehicles for workers, and trucks for vendors, demolition material, soil, and other material hauling, generate emissions. These emissions are calculated based on the number of trips and vehicle miles traveled (VMT) along with emissions factors from ARB's Mobile Source Emission Inventory Model, EMFAC2017. Trip counts were provided by the Project sponsor and CalEEMod® defaults are used for trip lengths for worker and vendor trips. Hauling trip lengths represent the distance to the facility if known. For Grading and Site Prep Remediation, 50% of export trips would go to Livermore, a distance of 41 miles from the site, and 50% of export trips would go to

[12] The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO_2 emissions per total non-renewable energy metric from PG&E 2015 through 2017 data, as described in **Table 21**.

Buttonwillow, which is outside of the San Francisco Bay Area Air Basin, so a distance of 50 miles to the edge of the boundary was used. For the Cutoff Wall, 6.7% of import trips would be from Montana or Wyoming, which is outside of the San Francisco Bay Area Air Basin, so a distance of 50 miles to the edge of the boundary was used for those trips. The CalEEMod® default hauling trip length (20 miles) was assumed for all other subphases, as well as for any remaining trips in the subphases mentioned. On-road vehicle trips and fleet mix assumptions are shown in **Table 8**. Worker vehicles were assumed to be all gasoline vehicles while vendor and hauling vehicles were assumed to be all diesel vehicles.

EMFAC2017 incorporates the Pavley Clean Car Standards and the Advanced Clean Cars program. Emission factors were estimated for each fuel and vehicle type and include running exhaust, idling exhaust, starting exhaust, and evaporative losses estimated for the years 2020-2027. Construction on-road emission factors are shown in **Table 9**.

Running exhaust, running loss, tire-wear, and brake-wear emission factors were estimated with a gram/mile factor. These emissions are calculated as shown below:

$$E_M = \sum (EF_M * VMT)$$

Where:

VMT or Vehicle Miles Traveled: Trip Length*Trip Number

EF_M: emission factor (g/mile) from EMFAC2017

Emissions from vehicle idling exhaust, starting exhaust, and evaporative emissions were estimated with a gram/trip emission factor. Idling emission factors were only estimated for heavy duty trucks as idling emissions occur during extended idling events for these trucks, and EMFAC2017 takes account of idling emissions from light duty vehicles and other vehicle types in running emissions estimates. These emissions are estimated as shown below:

$$E_I = \sum (EF_I * Trip\ Number)$$

Where:

EF_T = emissions factor (g/trip) from EMFAC2017.

Trip Number = trips provided by Project sponsor

Road dust emissions are calculated using ARB methodology. The on-road entrained dust emission factor derivation is shown in **Table 10**.

Emissions for each year of construction are estimated based on the overall construction duration for each activity in a year.

2.2.4 Architectural Coating and Paving Off-Gas Emissions

Emissions from architectural coating and paving off-gas emissions were estimated using methodologies consistent with CalEEMod®.

Architectural coating emissions were based on the square footage of different land uses, as indicated by the Project sponsor, as well as CalEEMod® defaults regarding the amount of coated areas for the non-ballpark development land uses. Because CalEEMod® does not have specific default values for a ballpark stadium, the Project sponsor provided estimates for the amount of area of the ballpark that would require coatings; this estimate is shown in the calculations. The exterior area that requires coating is relatively low since the Project sponsor is planning to purchase pre-coated structural components for the ballpark.

In addition to the paving of the interim parking lot proposed to be developed during Phase 1 construction, Ramboll also included paving emissions from the proposed new surface streets surrounding the Project buildings (12.5 acres, as reported in the Project Description). The parking lot and the estimated square footage of roadways were summed together to determine the overall paved surface area assumed for the Project. This was used to calculate asphalt off-gassing emissions from the Project using default CalEEMod® methods and factors.

Unmitigated emissions from architectural coating during Project construction assume compliance with BAAQMD paint Volatile Organic Compounds (VOC) regulations, as shown in **Table 11**. Based on information from the Project sponsor, mitigated emissions assume that Project indoor painting during construction will utilize super-compliant coatings, which are paints that have been reformulated to exceed the SCAQMD's Rule 1113 (Architectural Coatings) requirements,[13,14] as shown in **Table 12.**

All parking land uses for the Full Project Buildout would be enclosed parking structures without any asphalt surface and hence would not have emissions from paving off-gassing. However, Phase 1 construction does include an interim surface parking area that will have off-gassing emissions. Paving off-gas emissions are reported for the Project in **Table 13**.

2.2.5 Construction CAP and GHG Emissions Summary

Unmitigated construction CAP emissions from the Project are summarized in **Table 14**, mitigated construction CAP emissions from the Project are summarized in **Table 15**, and GHG emissions from the Project are summarized in **Table 16**. CAP emissions are reported in units of annual average daily emissions for each year of construction. Greenhouse gas emissions are reported in total metric tons for each year of construction.

2.3 A's Related Existing Operational Emissions

As discussed above, Ramboll evaluated the A's Related Existing Conditions in order to determine the net new (Project minus A's Related Existing Conditions) CAP and GHG operational emissions.

Land uses included in A's Related Existing operational emissions calculations include the current Coliseum ballpark, the A's headquarters/offices, and ballpark parking, as shown in **Table 1**. A summary of activity and population data for all existing conditions is shown in **Table 2**.

A's Related Existing operational emissions are quantified using methodologies consistent with ARB's current approved model, CalEEMod® version 2016.3.2. Emissions categories include architectural coating, consumer products, energy use (indirect emissions from electricity and direct emissions from natural gas), exhaust, evaporative emissions, and fugitive dust from on-road vehicles (mobile emissions), water and wastewater, solid waste disposal, and landscaping equipment.

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[13] SCAQMD. Rule 1113. Available at: http://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings/tos. Accessed: March 2019

[14] SCAQMD. Super Compliant Architectural Coatings." Available online at: http://www.aqmd.gov/home/programs/business/business-detail?title=super-compliant-coatings&parent=other-low-voc-products Accessed September 20, 2019.

Emissions were calculated for year 2018 using CalEEMod® default methodologies, with adjustments for site-specific data provided by the Project sponsor, as described in the subsections below.

2.3.1 Architectural Coating

Operational architectural coatings include the reapplication of paint and coatings on interior and exterior surfaces, which result in emissions of reactive organic gases (ROGs). The office and parking floor areas were provided by the Project sponsor, and CalEEMod® defaults were used for the office and parking building surface area that would be coated, as well as the application rate and indoor and outdoor ROG emission factors. There are no CalEEMod® defaults for ballpark stadiums. Therefore, to approximate the coated building area square footage for the existing ballpark, Ramboll scaled the existing ballpark's total square footage by the same indoor and outdoor coated building areas ratio assumption for the new ballpark stadium provided by the Project sponsor. This data was used to calculate Architectural Coating ROG emissions for the A's Related Existing Condition, which were then scaled for the portion of the year that the MLB season runs (March through September, or 7 out of 12 months), since only MLB activities are considered in the A's Related Existing Condition. While there is A's activity at the Coliseum Ballpark in October through February, such as office uses, they are not included in the A's Related Existing Condition to be conservative. These emissions are shown in **Table 17**.

2.3.2 Consumer Products

Consumer product emissions come from various non-industrial solvents, including cleaning supplies, kitchen aerosols, cosmetics and toiletries, which emit ROGs during their use. As shown in **Table 19**, the consumer products ROG emission factor for A's Headquarters office was derived using methodology consistent with CalEEMod® but with updated statewide parameters. The CalEEMod® default emissions factor assumes 2008 statewide ROG inventory and building square footage. An updated ROG inventory for 2017 was taken from the ARB and 2017 population estimates based on the State of California's Department of Finance demographic projections were used to estimate a statewide ROG emission factor for 2017. The emission factor for the parking area is the default value from the CalEEMod® User's Guide.

As no CalEEMod® default is available specifically for a ballpark stadium, the office/retail/residential emission factor was used for the ballpark as well. Since the A's Related Existing Condition only takes into account MLB-related activities at the Coliseum Ballpark, consumer product emissions are estimated based on the Coliseum square footage and then scaled for the portion of the year that the MLB season runs (March through September, or 7 out of 12 months), which is conservative, as discussed above.

2.3.3 Energy Use

CAP and GHG emissions are generated from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel, including natural gas, emits CAP and GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. CAP and GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions.

Electricity and natural gas use rates per attendee for the Coliseum Ballpark were calculated based on historical energy use rates and actual attendance data for 2017 for MLB games

(3.2 kilowatt-hour [kWh]/attendee/year and 1.3 kilo-British thermal unit [kBtu]/attendee/year). PG&E invoices for the MLB season (March through September) are provided in **Appendix A**. A's Headquarters' energy use rate is based on CalEEMod® version 2016.3.2 defaults. Estimated energy use is shown in **Table 20**.

To estimate indirect GHG emissions from electricity use, the A's Related Existing electricity usage is multiplied by the emission intensity factors for PG&E-delivered electricity shown in **Table 21**. The PG&E intensity factor for the A's Related Existing scenario in 2018 assumes that California achieves the State's Senate Bill (SB) 100 requirement to acquire 33% of energy from renewable sources by 2020.[15] Ramboll recalculated emission factors and renewables percentages for 2015 through 2017 from PG&E's Corporate Responsibility Reports to project future electricity intensity based on the State achieving the 2020 target, and linearly interpolates to estimate the 2018 electricity intensity factor. The estimate assumes that Renewable Portfolio Standard (RPS)-eligible renewable energy sources do not result in any Carbon Dioxide (CO_2) emissions. The default electricity intensity for methane (CH_4) and nitrous oxide (N_2O) were obtained from eGRID2018 (using CAMEX subregion) and were conservatively not adjusted for future inventory years. To estimate direct CAP and GHG emissions from natural gas combustion, the A's Related Existing natural gas usage is multiplied by CalEEMod® default emission factors.

A's Related Existing energy use emissions are calculated in **Table 22**. CAP emissions are calculated from on-site natural gas use only and not from electricity use, while GHG emissions include emissions from both natural gas use and electricity use.

2.3.4 On-road Mobile Sources

Vehicles on the roadway emit CAPs, TACs, and GHGs in their exhaust, through evaporation, and through the generation of fugitive dust. Mobile source emissions for the existing conditions include event-day trips related to MLB games at the Coliseum, commute trips by arena employees to the Coliseum and A's sports team management to the team headquarters in Jack London Square, and delivery trips associated with MLB games.

To estimate A's Related Existing on-road vehicle emissions, Ramboll used A's Related Existing trip rates and VMT estimated by Fehr & Peers as shown in **Table 23**.[16]

CalEEMod® methodology estimates mobile CAP and GHG emissions from running, idling, and starting exhaust, evaporative emissions (running loss, resting loss, hot soak, and diurnal), brakewear, and tirewear for the projected vehicle fleet in a given calendar year and county. Emission factors were obtained from ARB's EMFAC2017 for Alameda County.[17] Four fleet mixes (Passenger-Only, Trucks-Only, Buses-Only, and All) were developed for each of the Existing Conditions, Phase 1, and Full Project Buildout operational years. The Passenger-Only fleet mix for each operational year was derived using the Alameda County fleet mix in EMFAC2017 for LDA, LDT1, LDT2, MCY, and MDV vehicle classes in that year. The Trucks-Only fleet mix for each operational year was derived using the Alameda County fleet mix from EMFAC2017 for HHDT, LHDT1, LHDT2, and MHDT. The Buses-Only fleet mix for each

[15] De Leon. SB 100. 2018. California Renewables Portfolio Standard Program: emissions of greenhouse gases. Available at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100.

[16] Fehr & Peers. 2020. Memorandum, Subject: Howard Terminal – Air, Noise, and Greenhouse Gas Forecast Inputs. January 27. See Appendix B.

[17] CalEEMod® incorporates on-road vehicle emission factors from the prior release of this model, EMFAC2014. Ramboll incorporated updated EMFAC2017 emission factors as they are the best available data.

operational year was derived using the Alameda County fleet mix from EMFAC2017 for OBUS and UBUS. The All fleet mix for each operational year describes the EMFAC2017 fleet mix for Alameda County in that year across all vehicle types. Fleet mix assumptions are shown in **Table 24**.

These four specific fleet mixes were used for different trip types. The Passenger-Only vehicle fleet mix was used for event attendee trips and commute trips; the Trucks-Only and Buses-Only fleet mix were used for separate delivery trips, based on information from the Project sponsor. Existing Conditions trips include the Passenger-Only, Trucks-Only, and Buses-Only fleet mixes, but do not include All vehicles fleet mix based on the existing land uses.

Separate emission factors for each fleet mix were estimated for each operational year. Emission factors estimated using EMFAC2017 for Alameda County are shown in **Table 25**.[18] Ramboll used the trip generation, fleet mix, and emission factor information to calculate on-road mobile emissions shown in **Table 26**.

Additionally, fugitive dust, calculated as PM_{10} and fine particulate matter less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5}$), is generated from vehicles driving on roadways. An Alameda County-specific road surface silt loading factor is calculated in **Table 27** and on-road fugitive dust calculations utilizing ARB methods are shown in **Table 28.**

TAC emissions from A's Related Existing Coliseum Ballpark mobile activity occur outside the zone of influence for the Project HRA and were not quantified or included in the HRA.

2.3.5 Water and Wastewater

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute the Project's water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water, as well as the source(s) of the water. Additionally, direct CH_4 and N_2O emissions result from the treatment of wastewater.

For the Coliseum Ballpark, a per-attendee water use rate was estimated based on East Bay Municipal Utility District (EBMUD) water supply billing data for the 2017 MLB season and 2017 MLB attendance (see Appendix A). The per-attendee water use rate was used to estimate total water usage associated with MLB games at the Coliseum in units of gallons per year. For the A's headquarters at Jack London Square, water use is calculated using the CalEEMod® default water consumption profile for a General Office Building.

Emissions from water and wastewater were calculated using methods from CalEEMod® 2016.3.2. Emission factors are based on CalEEMod® defaults for Alameda County. The electricity intensity factor is the same as used for electricity emissions, as described in **Section 2.3.3**.

Details regarding water usage and electricity intensity from water usage are included in **Table 29**, and wastewater details are shown in **Table 30**. Emissions associated with water and wastewater are presented in **Table 31**.

[18] Vehicle travel associated with the Project sponsor's activity at the Coliseum are likely to include trips outside of the County to and from the ballpark. This analysis represents conservative mobile emissions as Alameda County-specific emission factors derived from EMFAC2017 are more conservative overall than San Francisco Bay Area Air Basin regional emission factors.

2.3.6 Solid Waste Disposal

Solid waste treatment releases CH_4 emissions from the decomposition of waste and the CO_2 emissions associated with the combustion of CH_4, if applicable. Emissions from solid waste treatment are estimated using CalEEMod® default emission factors for Alameda County.

A per-attendee solid waste disposal rate for Coliseum Ballpark was estimated based on 2017 Coliseum waste disposal data provided by the Project sponsor (see Appendix A). The solid waste disposal rate was divided by the attendees for all events at the Coliseum to derive waste disposal in tons per year per attendee. For the A's headquarters at Jack London Square, solid waste disposal is calculated using the CalEEMod® default profile for a General Office Building.

GHG emissions associated with non-landfill diverted waste streams, such as composting, are not considered, because it is generally assumed that these diversions do not result in any appreciable amounts of GHG emissions when operated effectively and standardized emissions quantification methods and data are generally not available.[19] These waste diversion alternatives may result in differences in life-cycle emissions of GHGs, but it is not appropriate to combine life-cycle emissions for only one category of emissions.[20] Additionally, biogenic CO_2 emissions were not included when CARB analyzed the GHG emissions inventory under AB32. Therefore, they are not included in the emissions inventory.

Solid waste generation assumptions are shown in **Table 32**, and emissions from this generation are shown in **Table 33**.

2.3.7 Landscaping Equipment

Emissions from landscaping equipment were calculated using CalEEMod® 2016.3.2 and based on information regarding building square footage and acreage, as well as CalEEMod® defaults. These emissions are shown in **Table 34** and CalEEMod® output files are shown in **Appendix C.**

2.3.8 Emergency Generators

Existing emergency generators located at the Coliseum are included in the Existing Conditions but were not included in emissions calculations for the A's Related Existing Conditions since it is not possible to separate out emissions from the A's activity at the Coliseum and other Coliseum activities. Further, it is assumed that the existing Coliseum generators may continue to operate even if the A's vacate the Coliseum. Therefore, emissions for this generator were not estimated or included in the A's Related Existing Conditions analysis, which is a conservative assumption since they would increase the A's Related Existing Conditions emissions and therefore decrease net Project emissions if included.

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[19] ARB. 2010. Local Government Operations Protocol. Chapter 9.4. Available online: https://www.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf

[20] This inventory represents scope 1 and 2 emission categories. A life-cycle analysis of waste diversion would be a scope 3 inventory. CARB's Local Government Operations Protocol Version 1.1, Section 4.7 (May 2010) clearly states that scope 3 emissions should not be combined with scope 1 and 2 emissions.

Generator emission factors are shown in **Table 35**. For the Existing Conditions, it was assumed that the generators are tested for 50 hours per year as shown in **Table 36**, consistent with the maximum allowed testing time from the Airborne Toxics Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115).[21]

2.3.9 Transportation Refrigeration Units (TRUs)

Transportation Refrigeration Units (TRUs) are cooling units installed on trucks carrying perishable goods, such as food. TRU emissions were calculated for this analysis to account for perishable goods delivery for the existing Coliseum. It was assumed that all TRUs are diesel-powered. Emissions during travel time and during unloading were calculated using TRU trips per event, number of events, engine size and load factors from CARB's 2011 off-road inventory[22], average speed and miles traveled for trucks, and unloading time. Additional calculation details are shown in **Table 40**.

2.4 Project Operational Emissions

As discussed above, Ramboll evaluated the Project and net new (Project minus A's Related Existing Conditions) CAP and GHG emissions from operations.

Operational emissions are quantified using methodologies consistent with ARB's current approved model, CalEEMod® version 2016.3.2. Emissions categories are the same as those for the A's Related Existing operational emissions, with the addition of stationary sources within the Project site (generators) and idling emissions associated with delayed trucks traveling to the Port of Oakland due Project-related traffic. Additionally, emissions reductions from electric vehicle charging consistent with City of Oakland requirements are also included.

Operational emissions were calculated for Phase 1 Buildout (Year 2023) and Full Project Buildout (Year 2027) using CalEEMod® methodologies, with adjustments for site-specific data provided by the Project sponsor, as described in the subsections below.

Operational emissions that are concurrent with construction activities will be presented by year in order to determine the combined and overlapping construction and operational emissions for each year of construction, as discussed further in **Section 5**.

2.4.1 Architectural Coating

Unmitigated and mitigated architectural coating emissions were estimated for Phase 1 Buildout of the Project as well as Full Project Buildout. The building surface areas for the non-ballpark land uses assume CalEEMod® defaults conversions from floor areas (provided by the Project sponsor). There are no CalEEMod® defaults for ballpark stadiums. Therefore, to approximate the coated building area square footage for the ballpark, the Project sponsor estimated that approximately 630,000 square feet of interior area would be painted, and 300,000 square feet of exterior area would be painted in total; where the CalEEMod® assumption that 10% of surfaces are coated each year was used to calculate annual emissions.

Unmitigated architectural coating emissions assume indoor and outdoor ROG emission factors that meet BAAQMD paint VOC regulations (Regulation 8-3); unmitigated architectural

[21] California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf

[22] ARB 2011 off-road inventory, available for download at https://ww3.arb.ca.gov/msei/ordiesel.htm.

coating emissions for the Project operations are shown in **Table 17.** Mitigated architectural coating emissions assume super-compliant architectural coatings with a VOC content below 10 grams/liter for all interior coated surfaces other than residential, since the Project sponsor could specify these through direct operational control. However, they were not assumed for residential uses as the Project sponsor may not be able to enforce the types of coatings used in residential tenant spaces. Exterior surfaces are assumed to use coatings compliant with BAAQMD's paint VOC regulations, which specify 150 grams/liter for architectural coatings other than flat paint. Exterior areas were not assumed to be coated with super-compliant coatings based on concerns of maintenance, and use in marine environments.[23] Mitigated architectural coating emissions for the Project operations are shown in **Table 18.**

2.4.2 Consumer Products

Consumer product emissions from the Project Phase 1 Buildout and Project Full Buildout are shown in **Table 19**. The consumer products ROG emission factor for the non-ballpark development was derived using methodology consistent with CalEEMod® but with updated statewide parameters. The CalEEMod® default emissions factor assumes the 2008 statewide ROG inventory and building square footage. An updated ROG inventory for 2017 was taken from the ARB and 2017 population estimates based on the State of California's Department of Finance demographic projections were used to estimate a statewide ROG emission factor for 2017.[24] The emission factor for the parking area is the default value from the CalEEMod® User's Guide. As no CalEEMod® default is available specifically for a ballpark stadium, the office/retail/residential emission factor was used for the ballpark as well. Project-specific data is not available for this source.

2.4.3 Hearths

According to the Project sponsor, none of the residences will included fireplaces or hearths; therefore, emissions from these were not included in this analysis.

2.4.4 Energy Use

As described in **Section 2.3.3**, energy emissions include indirect emissions from electricity used by buildings and direct emissions from natural gas combustion.

Annual electricity use for the new ballpark stadium was based on Project-specific estimates provided by the Project sponsor. As Project-specific estimates for ballpark natural gas use were not available, the per-attendee natural gas usage rate (based on 2017 data) for the Project ballpark was assumed to be the same as the Coliseum ballpark usage rate. This per-attendee usage rate was scaled based on full capacity annual attendance assumed for the

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[23] Based on discussions with Project sponsor and construction team.

[24] The consumer products ROG emission factor for office, retail, and residential land uses was derived using methodology consistent with CalEEMod® but with updated statewide parameters. The CalEEMod® default emissions factor assumes 2008 statewide VOC (ROG) inventory and statewide building square footage. An updated VOC inventory for 2017 was taken from ARB and 2017 population estimates based on the State of California's Department of Finance demographic projections were used to estimate a statewide VOC emission factor for 2017. The emission factors for the parking land uses were taken as default values from the CalEEMod® User's Guide. As a conservative measure, and since no CalEEMod® defaults are available specifically for a ballpark stadium, the office/retail/residential emission factor was used for the ballpark as well. VOC inventory for 2017 available at: https://ww3.arb.ca.gov/regact/2013/cp2013/cp13isor.pdf. Population estimates for 2017 available at: http://www.dof.ca.gov/Forecasting/Demographics/Projections/.

Project (35,000 attendees per game or 2,870,000 attendees per year) to estimate annual natural gas usage for the Project ballpark. This is conservative as the new ballpark stadium is likely more efficient for natural gas use than the existing Coliseum Ballpark. Electricity emissions for the Project's retail, hotel, office, restaurant, performance venue, residential, and parking uses are calculated using CalEEMod® default energy consumption profiles, which account for 2016 Title 24 Building Energy Efficiency Standards. Energy use rates were updated to account for further improvements from 2019 Title 24. For the Phase 1 and Full Project scenarios, Title 24 electricity and lighting electricity use rates were reduced by 10.7% and Title 24 natural gas use rates were reduced by 1.0%, per the California Energy Commission's 2019 Title 24 Impact Analysis.[25,26] As the Project phasing schedule anticipates build out between 2023 and 2027, further reductions can be anticipated from future Title 24 code cycles. Thus, this analysis represents a conservative estimate of energy-related emissions. Additionally, the Project will likely include additional energy conservation measures as part of its effort to obtain LEED status; however, details are not known at this time and are conservatively excluded from the emissions estimates. Estimated Project energy use and details on the Title 24 adjustments are presented in **Table 20.**

To estimate indirect GHG emissions from electricity use, Project electricity usage is multiplied by the emission intensity factors for PG&E-delivered electricity. The PG&E intensity factor for the Project scenario assumes that California achieves the State's SB100 requirement to acquire 33% of energy from renewable sources by 2020 (used for Phase 1 buildout in 2023) and 52% by 2027, which supersedes the RPS assumptions in the CARB 2017 Climate Change Scoping Plan.[27] Energy emission factors are presented in **Table 21**.

Project energy use emissions are calculated in **Table 22.** CAP emissions are calculated from natural gas use only and not from electricity use, while GHG emissions include emissions from both natural gas use and electricity use.

2.4.5 On-road Mobile Sources

Vehicles on the roadway emit CAPs, TACs, and GHGs in their exhaust, through evaporation, and through the generation of fugitive dust.

Mobile source emissions for the Project include event-day trips related to MLB games and other events at the Howard Terminal ballpark; commute trips by ballpark and sports team management employees; residential, commuter, and visitor trips associated with the non-ballpark development land uses; delivery trips associated with events at the ballpark and performance venue; and bus trips to the performance venue.

Ramboll used Project trip rates and VMT estimated by Fehr & Peers, as shown in **Table 23.**[28] Trip rates incorporate vehicle trip reduction (VTR) measures from Transportation Demand Management and Transportation Management Plan measures. Fehr & Peers also provided

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[25] California Energy Commission. 2019. Impact Analysis for 2019 Energy Efficiency Standards. Available online at: https://www.energy.ca.gov/title24/2019standards/post_adoption/documents/2019_Impact_Analysis_Final_Report_2018-06-29.pdf.

[26] The California Energy Commission (CEC) is California's primary energy policy and planning agency.

[27] CARB. 2017. 2017 Scoping Plan, Appendix D: PATHWAYS, pg. 12 (November). Available at: https://www.arb.ca.gov/cc/scopingplan/2030sp_appd_pathways_final.pdf

[28] Fehr & Peers. *op. cit*.

VMT without VTR measures; emissions and health risks using the unreduced VMT were also calculated and are included in **Appendix D**.

CalEEMod® methodology estimates mobile CAP and GHG emissions from running, idling, and starting exhaust, evaporative emissions (running loss, resting loss, hot soak, and diurnal), brakewear, and tirewear for the projected vehicle fleet in a given calendar year and county. Emission factors were obtained from ARB's EMFAC2017 for Alameda County.[29] The Alameda County fleet mix was adjusted to reflect the appropriate fleet mix for the trip type (see details of this calculation described in **Section 2.3.4**). A passenger vehicle fleet mix was used for employee commute trips, attendee trips to the ballpark for MLB games and other events, and attendee trips to the performance venue. A truck fleet mix was used for delivery trips and a bus fleet mix was used for bus trips to the performance venue. For all non-ballpark land uses besides the performance venue, the default Alameda County fleet mix was used to estimate fleet-average emission factors. Fleet mix assumptions are shown in **Table 24** and emission factors estimated using EMFAC2017 for Alameda County are shown in **Table 25.**[30]

Ramboll used the trip generation, fleet mix, and emission factor information to calculate on-road mobile exhaust emissions shown in **Table 26**.

The on-road fugitive dust calculations for the Project use ARB methods and are shown in **Table 27** and **Table 28**.

Additionally, the Transportation Management Plan (TMP) includes various strategies to reduce ballpark trips by 20 percent. One of those strategies provides that a transit hub be situated along 2nd Street to be used for shuttle bus stops from each of the three nearby Bart stations. Shuttle buses are assumed to operate for six hours a day on gamedays and for ballpark concert events only. Such service is an optional element of the TMP. For this reason, it is not known whether this service will be provided. Because such service is possible, shuttle bus air pollutant emissions have been estimated, as shown in **Appendix E**. These emissions would be in addition to those discussed in this Section.

2.4.6 Water and Wastewater

As described in **Section 2.3.5**, water emissions include indirect emissions from electricity used to convey, treat, and distribute water and wastewater and direct CH_4 and N_2O emissions from wastewater treatment.

Indoor water use for all land uses was based on Project-specific estimates,[31] while outdoor water use was based on CalEEMod® defaults for Alameda County. The outdoor estimates do not account for water conservation systems that may be included as part of the LEED design since refined Project-specific details on outdoor water use were not available at the time of this analysis. This, however, is a conservative analysis as emissions from water use are likely overestimated. Emissions from water and wastewater were calculated using methods from

[29] CalEEMod® incorporates on-road vehicle emission factors from the prior release of this model, EMFAC2014. Ramboll incorporated updated EMFAC2017 emission factors as they are the best available data.

[30] Vehicle travel associated with Howard Terminal are likely to include trips outside of Alameda County to and from the Project site. This analysis represents conservative mobile emissions as Alameda County-specific emission factors derived from EMFAC2017 are more conservative overall than San Francisco Bay Area Air Basin regional emission factors.

[31] Project-specific estimates provided by Meyers+ Engineers dated February 14, 2019.

CalEEMod® 2016.3.2. Emission factors are based on CalEEMod® defaults for Alameda County. The electricity intensity factor is the same as used for electricity emissions, as described in **Section 2.3.3**.

Details regarding water usage and electricity intensity from water usage are included in **Table 29**, and wastewater details are shown in **Table 30**. Emissions associated with water and wastewater are presented in **Table 31**.

2.4.7 Solid Waste Disposal

As described in **Section 2.3.6**, solid waste treatment releases CH_4 emissions from the decomposition of waste and the CO_2 emissions associated with the combustion of CH_4, if applicable.

Solid waste disposal for the Project's ballpark were quantified using the same methodology as described for the existing conditions in **Section 2.3.6.** Solid waste disposal rates for the Project's retail, hotel, office, restaurant, performance venue, residential, and parking uses are calculated using CalEEMod® defaults for Alameda County. The Project will also implement waste reduction and recycling measures that may further reduce solid waste disposal, which are not quantified as part of the Project analysis since refined Project-specific details on solid waste were not available at the time of this analysis. This, however, is a conservative analysis as emissions from solid waste are likely overestimated.

GHG emissions associated with non-landfill diverted waste streams, such as composting, are not considered, because it is generally assumed that these diversions do not result in any appreciable amounts of GHG emissions when operated effectively and standardized emissions quantification methods and data are generally not available.[32] These waste diversion alternatives may result in differences in life-cycle emissions of GHGs, but it is not appropriate to combine life-cycle emissions for only one category of emissions.[33] Additionally, biogenic CO_2 emissions were not included when CARB analyzed the GHG emissions inventory under AB32. Therefore, they are not included in the emissions inventory.

Solid waste generation assumptions are shown in **Table 32** and emissions from this generation are shown in **Table 33**.

2.4.8 Landscaping

Emissions from landscaping equipment were calculated using CalEEMod® 2016.3.2 based on information regarding building square footage and acreage. Landscaping emissions are shown in **Table 34.**

2.4.9 Emergency Generators

Operation of standby emergency engines will result in direct emissions of CAPs and GHGs. As described further in **Section 3.1**, operation of emergency generators also results in the emissions of DPM, a recognized TAC in California. DPM emissions were assumed to be equivalent to PM_{10} emissions from diesel-powered generator exhaust.

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[32] ARB. 2010. Local Government Operations Protocol. Chapter 9.4. Available online: https://www.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf

[33] This inventory represents scope 1 and 2 emission categories. A life-cycle analysis of waste diversion would be a scope 3 inventory. CARB's Local Government Operations Protocol Version 1.1, Section 4.7 (May 2010) clearly states that scope 3 emissions should not be combined with scope 1 and 2 emissions.

The Project is anticipated to include an emergency generator at the ballpark stadium as well as a new emergency generator on each of the non-ballpark mixed-use buildings. The number and size of Project emergency generators were provided by the Project sponsor for the Phase 1 and Full Buildout development scenarios.

Generator emissions were calculated both for an unmitigated scenario and a mitigated scenario. Unmitigated generator emissions assume Tier 2 generators and the maximum allowed maintenance and testing time (50 hours per year) under the ATCM for Stationary Compression Ignition Engines (17 CCR 93115).[34] Mitigated generator emissions assume generators are equipped with Tier 4 engines and 20 hours per year operation for routine testing and maintenance. Tier 4 engines can be used in on-site emergency generators to achieve reductions in DPM emissions, as well as Nitrogen Oxides (NOx) and ROG reductions, for engines larger than 25 Horsepower (HP). The use of Tier 4 engines also has health risk benefits due to DPM emission reductions, as discussed further below. Generator emission factors for both scenarios are shown in **Table 35.** Unmitigated emissions from the proposed generators are shown in **Table 36** and mitigated emissions are shown in **Table 37**.

2.4.10 Electric Vehicle Chargers

Electric vehicle chargers result in indirect GHG emissions from electricity use and replace CAP and GHG emissions from conventional fossil-fueled vehicles. Conventional gasoline and diesel vehicles emit CAPs and GHGs from the tailpipe, whereas electric vehicles (EVs) minimize these emissions. EVs, including battery-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), comprise a growing fraction of the passenger vehicles on the roads in California, and EV adoption is expected to greatly increase over the upcoming decades due in part to improvements in battery technology and public initiatives and goals.

A recent National Renewable Energy Laboratory (NREL) assessment for the California Energy Commission (CEC) estimates that over 200,000 EV chargers will be needed in California by 2025 to meet its short-term EV goals, and many more chargers will be needed to meet more ambitious 2030 and later targets. This figure includes destination chargers (workplace and public locations), fast chargers, and chargers at multifamily residences; it excludes the additional charger needs at single family homes.[35] The availability and accessibility of a plug at home increases a person's propensity to buy an electric vehicle.[36] NREL's earlier assessment for the CEC found that home charging is the predominant location for charging, followed by workplace/retail charging, then public charging.[37] In the near term, the CEC believes that "can't miss" locations are homes and multi-unit dwellings, followed by workplaces.[38] The International Council on Clean Transportation (ICCT) reports that

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[34] California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf

[35] NREL. 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025. Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

[36] Hidrue, M.K., G.R. Parsons, W. Kempton, and M.P. Gargner. 2011. Willingness to pay for electric vehicles and their attributes. Resource Energy Econ. doi:10.1016/j.reseneeco.2011.02.002. Available at: http://www.udel.edu/V2G/resources/HidrueEtAl-Pay-EV-Attributes-correctedProof.pdf

[37] NREL. 2014. California Statewide Plug-In Electric Vehicle Infrastructure Assessment. Available at: https://www.nrel.gov/docs/fy15osti/60729.pdf

[38] Ibid.

""[c]harging infrastructure is critical to support electric vehicle market growth…Even as most charging occurs at home, greater electric vehicle market shares are typical where there is greater availability of public regular, public fast, and workplace charging infrastructure."[39]

In addition, research shows that access to charging infrastructure at home plays an important role in decisions regarding purchase of EVs. A 2013 study conducted by the Institute of Transportation Studies at University of California, Davis explored the characteristics of 1,200 households who purchased a new plug-in vehicle in California during 2011-2012, with the overall target population of the survey being new plug-in electric vehicle (PEV) owners in California.[40] This study reveals that purchasing a PEV is associated in most cases with the installation of electric vehicle supply equipment (EVSE) at home and the ability to plug the car to the power for charging.[41] Another study revealed that when asked about the critical factors that may influence their decision, the highest percentage (63 percent) of respondents cited the ability to charge at home [other factors included battery range, total operating cost, government subsidy].[42] A 2018 study concluded that EV charging infrastructure investments likely result in a "multiplying effect" on EV adoption.[43]

The Plug-in Electric Vehicle Owner Survey, managed by the Center for Sustainable Energy, further highlighted the importance of subsidized or discounted chargers.[44] Of those with an installed Level 2 charger at home, 64 percent received a free or subsidized charger and 80 percent of them found the importance of the subsidy to install a Level 2 charger influential. Thus, a home with an already installed (free) charger might influence residents to purchase a PHEV. Another study reveals that 83.1 percent of the participants of a consumer survey on plug-in hybrid electric vehicles stated that it would increase their comfort in purchasing or leasing a PHEV by "a lot" or would be "a deciding factor" if they have recharge facilities at home for easy overnight recharge.[45] This evidence suggests that investment in a charging infrastructure could result in an increased probability of a household purchasing an EV.

According to the Project sponsor, Project parking will be equipped with electric vehicle chargers at 10% of the total number of parking spaces (which exceeds City of Oakland code requirements that require EV-ready electrical prewiring but not actual charger installation).[46]

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[39] ICCT. *Op cit.*

[40] Tal, G., M.A. Nicholas, J. Woodjack, and D. Scrivano. February 2013. UCD ITS. Research Report – UCD-ITS-RR-13-02. Available at: https://merritt.cdlib.org/d/ark:%252F13030%252Fm56692z3/1/producer%252F2013-UCD-ITS-RR-13-02.pdf.

[41] Tal, G., et al. *op. cit*.

[42] Accenture. 2011. Plug-in Electric Vehicles Consumer Perceptions.

[43] Easwaran Narassimhan and Caley Johnson. 2018. Environ. Res. Lett. 13 074032. Available at: https://iopscience.iop.org/article/10.1088/1748-9326/aad0f8/pdf.

[44] California Center for Sustainable Energy (CCSE) and CARB. 2012. Available at: https://energycenter.org/sites/default/files/docs/nav/policy/research-and-reports/California%20Plug-in%20Electric%20Vehicle%20Owner%20Survey%20Report-July%202012.pdf

[45] Krupa, J.K., D.M. Rizzo, M.J. Eppstein, D.B. Lanute, D.E. Gaalema, K. Lakkaraju, and C.E. Warrender. 2014. Analysis of a Consumer Survey on Plug-in Hybrid Electric Vehicles. Transportation Research Part A 64 (2014) 14-34. Available at: http://www.sciencedirect.com/science/article/pii/S0965856414000500.

[46] City of Oakland. Electric Vehicle Infrastructure Requirements for New Multi-Family and Nonresidential Buildings. 2017, Available at: http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak063669.pdf. Accessed: March 2019.

The electric vehicle charging stations are anticipated to achieve a similar or better functionality as a Level 2 charging station.

The main variables contributing to the calculated GHG benefit of installing EV charging stations are as follows:

- Electric Vehicle Penetration and Usage Rate: Charge station usage will vary from zero hours per day to 24 hours per day for each electric vehicle charging station. The benefit of the Project chargers is calculated by subtracting the usage rates of EV chargers based on the anticipated EV fleet mix percentage from CARB's VISION model Reference scenario from CARB's VISION Model Cleaner Technologies and Fuels (CTF) scenario in the Bay Area region for each relevant calendar year. The Reference scenario modeling is based on EMFAC2014 and incorporates adopted regulations and updates to reflect VMT consistent with adopted Sustainable Communities Strategies (SCSs), while the CTF scenario assumes increases in EV penetration needed to achieve mobile GHG reductions through 2050.[47] The usage rates of the EV chargers is discussed in **Table 38**, while the year-by-year VISION fleet projections are shown in **Table 55**. The estimated miles charged using project chargers per year are shown in **Table 56**. Details of the calculation of miles charged by Project chargers for each year are shown in **Appendix F**. The presence of Project EV chargers would likely encourage additional EV adoption to help achieve the statewide targets.

  Additionally, the hours of charging per activity is limited to assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the non-ballpark non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

- Charge Rate: The charge rate refers to the amount of power supplied from the charger to the car battery per hour, or the range of miles the charger enables the car to travel per hour (RPH). The US Department of Energy (USDOE) writes that a Level 2 charging station is expected to charge 10 to 20 miles of RPH, depending on the circuitry.[48] ChargePoint commercial Level 2 electric vehicle charging stations charge up to 25 RPH.[49] Direct Current "fast charging" stations and future three-phase charging options allow for much

[47] CARB. VISION Scenario Planning. Available at: https://ww3.arb.ca.gov/planning/vision/vision.htm. Accessed: December 2019.

[48] US Department of Energy (USDOE) Alternative Fuels Data Center. 2016. Charging Equipment. Available at: http://www.afdc.energy.gov/fuels/electricity_infrastructure.html. Accessed: March 2019.

[49] ChargePoint. Available at: https://www.chargepoint.com/about/news/defining-rph-miles-range-hour-ev-charging-station-delivers/. Accessed: March 2019

higher rates of charging.[50] These charge rates are influenced based on the technology for the actual charge rate of Kilowatt (KW) per hour and also the vehicle fuel efficiency (discussed further below). The technology for chargers, batteries, and electric vehicle efficiency is expected to improve into the future. Thus, Ramboll estimated that the charging stations can provide 25 miles of driving range per hour of charging.

- Electric Vehicle Fuel Economy: Electric vehicle fuel economy reflects the amount of electricity needed to drive a certain distance. Based on USDOE data, the fuel economy in currently available electric vehicles ranges from 25 to 40 kilowatt-hours per 100 miles (kWh/100 mi).[51] This fuel economy varies depending on the vehicle model, with examples of a 2015 Nissan Leaf achieving 30 kWh/100 mi and a 2019 Tesla Model 3 Long Range achieving 26 kWh/100 mi.[52] The technology for batteries and electric vehicle fuel economy is expected to improve into the future. Thus, Ramboll estimated that the electric vehicles will achieve a fuel economy of 25 kWh/100 mi to represent the near-future electric vehicle fleet. This is consistent with the assumptions in the recent NREL report for the CEC on near-term EV charger infrastructure needs for California.[53]
- EV Charger Availability: EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home. EV charging at non-residential land uses is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity, particularly in earlier years and under the VISION Reference scenario. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

  For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 15,000 miles and over 1,800 EV trips per ballgame in 2027, on average (as shown in **Table 38**), the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use in 2027, if chargers are used 8 hours per day, only 32 of the 300 chargers would be used in this scenario (for a total of 256 hours/day charging). This is equivalent to using all 300 chargers at 0.85 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

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[50] USDOE. 2016. *op. cit*.

[51] USDOE. Alternative Fuels Data Center - Electric Vehicle Benefits and Considerations. Available at: http://www.afdc.energy.gov/fuels/electricity_benefits.html. Accessed: March 2019.

[52] USDOE. Fuel Economy. Available at: https://www.fueleconomy.gov/feg/findacar.shtml. Accessed: March 2019.

[53] NREL. 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf

- Emission Factors: The electricity intensity factors are the same as used for electricity emissions, as described in **Section 2.3.3**. Gasoline/diesel emission factors are derived using California Air Resource Board's EMFAC2017 software model, as described in **Section 2.3.4**. Emission factors include running exhaust and exclude vehicle idling, which conservatively underestimates potential emissions reductions.

  The calculations shown in **Table 39** estimate the GHG emissions from charging station electricity use and the CAP and GHG reductions from replacing conventional gasoline or diesel light-duty vehicles with electric vehicles from the passenger fleet mix. The table calculates the estimated range that the charging stations are estimated to provide to electric vehicles in miles per year for the Reference and CTF scenarios, based on the charge station usage and charge station rates by land use type and year calculated in **Table 38**. The emissions reductions are calculated by subtracting the total number of miles per year that will be driven in electric vehicles instead of conventional vehicles for the Reference scenario from the CTF scenario. This methodology thus only takes reductions for charger use that occurs due to the Project and excludes reductions from charger use that would be expected to occur with default EV fleet penetration.

2.4.11 Transportation Refrigeration Units (TRUs)

TRU emissions were calculated for this analysis to account for perishable goods delivery for the ballpark and performance venue events. It was assumed that all TRUs coming to the Project will be diesel-powered. Emissions during travel time and during unloading were calculated using TRU trips per event and number of events, both provided by the Project sponsor, as well as engine size and load factors from CARB's 2011 off-road inventory,[54] average speed and miles traveled for trucks, and unloading time. The average speed traveled by trucks carrying TRUs was assumed to be 25 mph, based on Oakland Code of Ordinances 10.20.040 "Prima facie speed limits", which states that the standard speed limit for business or residential districts in California is 25 mph. The trip length was assumed to be consistent with the truck deliveries estimated as part of the mobile emissions inventory. Unloading time was assumed to be two minutes based on City of Oakland commercial unloading and loading time restrictions. Additional details regarding these calculations are shown in **Table 40**.

2.4.12 Port Truck Idling Delays

Based on information in the transportation study,[55] trucks traveling to and from the Port may experience additional traffic delays on ballpark event days due to the Project. The transportation study provided idle-hour per day delays to Ramboll for specific time periods at various intersections within the vicinity of the Project and the Port for the existing Howard Terminal and for Project weekday events, weekday evening events, and after full buildout of the non-ballpark development. Port truck delays are assumed to occur only on weekdays. Even if similar delays occurred on the weekend, based on the results of the weekday analysis, overall emissions from port truck delays would be very low. Emission factors were estimated using EMFAC2017 to generate emission rates for Alameda County from HHDT, LHDT1, LHDT2, and MHDT vehicle classes. Based on the emission factors and idle delay

[54] CARB 2011 off-road inventory, available for download at https://ww3.arb.ca.gov/msei/ordiesel.htm

[55] Fehr & Peers. 2020. Memorandum, Subject: Howard Terminal – Air, Noise, and Greenhouse Gas Forecast Inputs. January 27. See Appendix B.

times, emissions due to truck idling delays were calculated for both existing Howard Terminal operations and the Project in order to determine the net increase attributable to the Project-related changes in delays, as shown in **Table 41**.

2.4.13 Operational CAP and GHG Emissions Summary

Operational emissions are presented for the A's Related Existing Conditions (2018) and Existing Conditions (2018), and unmitigated and mitigated operational emissions are presented for Phase 1 Buildout (2023), and Full Project Buildout (2027).

In order to calculate the net operational emissions for the Project, Ramboll evaluated both the A's Related Existing Conditions and Project operational emissions. As discussed in earlier sections, the Project would replace existing MLB events at the Coliseum site. The Project would also replace truck parking, loaded and empty container storage and staging, and longshore training facilities at the existing Howard Terminal site; however, as these emissions may still occur within the general region, no reduction in emissions is quantified for the A's Related Existing CAP and GHG inventory. Therefore, total operational emissions associated with the Project are calculated as the difference between emissions from the new sources at Howard Terminal and emissions from A's Related Existing sources that would no longer be present at the Oakland Coliseum. Unmitigated operational CAP and GHG emissions are summarized in **Table 42** and mitigated operational CAP and GHG emissions are summarized in **Table 43.**

2.5 Combined Construction and Operational CAP Emissions Summary

Due to the phased nature of the construction program, there are periods of concurrent construction and operational emissions. For certain years after Phase 1 construction is complete, Phase 2 construction emissions will occur contemporaneously with Phase 1 operational emissions. To account for these overlapping emissions, construction and operational CAP emissions are added together on a year by year basis beginning at the start of Phase 1 operations in 2023 through the first full year of operations for Full Buildout in 2028. Construction and operational emissions occurring in partial years (2023 and 2027) are scaled for the number of days of construction and non-ballpark operations in that year. The ballpark becomes fully operational during 2023 but is conservatively assumed to be operational 100 percent of the year because a full season of MLB will occur. These overlapping emissions are shown in **Table 44** and **Table 45** for the unmitigated and mitigated scenarios, respectively.

2.6 Potential Additional Mitigation Measures

In addition to the mitigation measures included in the mitigated emissions scenario presented above (Tier 4 engines for construction, super-compliant low VOC architectural coatings in select applications, and Tier 4 emergency generators with 20 hours per year operation for routine testing and maintenance), there are a variety of potential additional measures that could be considered to reduce CAP and GHG emissions from Project operations. Ramboll has quantified several of these potential mitigation measures in the sections below. Implementation of these measures will be subject to efficacy and feasibility.

Alternative means of reducing emissions may be identified as the Project is developed on a phased basis, based on efficacy, enforceability, feasibility, and other factors.

2.6.1 Potential Mitigation Measures for Operations

2.6.1.1 100% Zero-Carbon Electricity

If it is available, the Project could purchase 100% zero-carbon electricity through the East Bay Community Energy[56] program. In this quantification, it is assumed that all electricity for which emissions in **Table 22** are quantified using PG&E projected factors is instead replaced by zero-carbon electricity. Emissions reductions from this potential mitigation measure are quantified in **Table 46**.

2.6.1.2 On-Site Solar

This analysis also analyzed potential emissions reductions from on-site solar photovoltaic (PV) energy on the rooftops of the non-ballpark buildings. Based on information from the Project sponsor, for the purpose of this estimation, it was assumed that 50% of the available rooftop space of all non-ballpark buildings could be utilized for rooftop solar PV panels. This estimate is specific to the Project based on conversations with the Project sponsor. Rooftop area was estimated from Project site plans. Annual electricity generated is calculated using the NREL's PVWatts®, version 6.[57] Input parameters are all defaults for Oakland, California, including a standard module type, fixed (roof mount) array type, system losses, tilt, and azimuth, as shown in **Table 47**.

2.6.1.3 No Natural Gas for Residential Development

The Project could choose to include no natural gas in some or all residences in the non-ballpark development. Ramboll calculated the reduction in emissions from natural gas consumption for residential land uses by assuming that all natural gas use from the Project residential land use is replaced by zero-carbon electricity. Alternatively, natural gas use could also be replaced by grid electricity, in which case emissions reductions would be lower, as shown in **Table 48**. This analysis assumes that the all-electric residences have an overall 40% higher kilowatt-hour usage compared to residential buildings with natural gas domestic hot water, space heating and appliances, as estimated by Meyers+ Engineers. The calculations and resulting emissions are shown in **Table 48**.

2.6.1.4 Limited Natural Gas for Retail/Commercial Development

This potential mitigation measure shows the reduction in emissions that would result from the replacement of natural gas consumption from space heating for non-ballpark non-residential land uses by zero-carbon electricity. Alternatively, natural gas consumption from space heating for non-residential land uses could instead be replaced by grid electricity, which would result in lower emissions reductions. This analysis assumes that the all-electric commercial buildings have an overall 15% higher kilowatt-hour usage compared to commercial buildings with natural gas space heating, as estimated by Meyers+ Engineers. Emissions reductions are shown in **Table 49**.Table 49

2.6.1.5 Additional EV Charging

Ten percent of parking spaces at the Project will be equipped with EV chargers, as described in the sections above. The Project sponsor could choose to add additional EV charging. For the purposes of this analysis, it is assumed that greater than 10 percent of parking spaces are serviced by Level 2 electric vehicle charging stations. Instead of increasing the

[56] East Bay Community Energy (EBCE). Information available online: https://ebce.org/power-mix/

[57] PVWatts. Available online at https://pvwatts.nrel.gov/pvwatts.php

percentage of charging-capable parking spaces uniformly, EV charging-capable parking spaces were increased in specific land uses which were charger-limited to maximize reductions from EV charging.

Reductions are capped based on the maximum charging capacity and number of EV trips that are available for charging for each activity type. For certain activities, such as weeknight ballpark games in early years, the Project is charger-limited at 10% (e.g. there are more EV trips than there is available charger capacity during prime business or activity hours), while for other activities the Project is EV-limited at 10% (e.g. there is more than enough charger capacity to charge the number of EVs expected to visit the site based on the fleet mix that would achieve statewide targets). For the land uses that were charger-limited at 10%, the percent of EV chargers was increased, resulting in the following breakdown:

- Residential: 15% of spaces
- Office: 10% of spaces
- Restaurant: 20% of spaces
- Retail: 20% of spaces
- Hotel: 15% of spaces
- Ballpark: 35% of spaces

For Phase 1 Buildout, this includes 27 additional parking spaces for residential units, no additional parking spaces for office land use, 8 additional parking spaces for retail and restaurant, 10 additional parking spaces for the hotel, and 0 parking spaces for the interim ballpark parking. For Full Buildout, this includes 150 additional parking spaces for residential units, no additional parking spaces for office land use, 70 additional parking spaces for retail and restaurant, 10 additional parking spaces for the hotel, and 500 additional parking spaces for the ballpark. The incremental increase in miles charged by Project chargers per year and CAP and GHG emissions reductions from this charging relative to conventional gasoline vehicles were calculated using the same methods and assumptions used for the Project, as discussed in **Section 2.4.10**. Details regarding the VMT associated with potential CAP and GHG emissions reductions from additional electric vehicle charging are provided in **Table 50**. Emissions reductions from these additional chargers are shown in **Table 51**.

2.6.1.6 Ballpark Solid Waste Diversion

As discussed in **Section 2.3.8**, waste generation rates for the Project ballpark were calculated based on actual 2017 MLB waste rates at the Coliseum and attendance data for 2017 for MLB games. A potential mitigation measure for the Project is a higher waste diversion rate of 75%. Emissions calculations for this potential mitigation measure are shown in **Table 52**.

2.6.2 Summary of Emissions Reductions from Potential Mitigation Measures

A summary of potential operational CAP and GHG emissions reductions from the above potential additional mitigation measures is shown in **Table 53**. It is important to note that the reductions shown in this table are not all additive. For example, if the Project purchases 100 percent zero carbon electricity through East Bay Community Energy (EBCE), it cannot also claim credit for on-site solar electricity because they both would mitigate the same emissions, and therefore would be double-counting. Since it is not yet known whether these

will be implemented, they are not summed with total emissions from the Project but are instead provided for informational purposes.

2.6.3 GHG Emissions by Year

GHG emission factors for electricity and mobile sources are expected to decrease over the course of Project construction and operation; a breakdown of GHG emission factors by year is shown in **Table 54**. These declining emission factors are taken into account in both Project emissions and Existing Conditions emissions. A summary of potential non-mobile, non-ballpark net Project operational GHG emissions per service population projected in 2023 through 2057 is presented in **Table 57**. The A's related existing emissions in **Table 57** are shown to decrease reflecting the expected decrease in electricity and mobile source GHG emission factors. This summary includes only one of the possible additional mitigation measures (100 Percent Zero Carbon Electricity through EBCE), along with 100% electric residential units and reduced generator hours. Emissions shown in **Table 57** do not include any emissions from mobile sources or ballpark sources. As part of the Project design, the Project has committed to providing EV chargers for at least 10% of its parking spaces. While installing EV chargers onsite is beyond the City of Oakland's requirement that 10% of spaces be EV-ready, the reductions have conservatively not been included in this analysis since it is not required to meet the threshold. For purposes of this analysis, Arena Management and Sports Team Management staff were not considered "ballpark" land uses. Emissions presented in **Table 57** for operational years 2023 and 2027 may differ from the emissions reported elsewhere in this technical analysis because the emissions in this table were phased in based on the Project schedule, rather than assumed to have full operations of each phase as shown elsewhere in this document.

Net GHG emissions per year for all Project sources are shown in **Table 58**. The calculation presented in **Table 58** includes the 100 percent zero carbon electricity through EBCE, as well as reductions from Project EV charging commitments. Additional reductions quantified elsewhere could be included to reduce the overall offsets needed to purchase.

The Project's AB734 application relies on different underlying assumptions; therefore, the emissions inventories are not directly comparable. Additionally, GHG emissions by land use are shown in **Table 59**.

3. HEALTH RISK ASSESSMENT

This HRA evaluates the estimated cancer risk, non-cancer chronic hazard index (HI), and $PM_{2.5}$ concentration associated with construction and operation of the Project. In addition to the evaluation of an individual project, the BAAQMD CEQA Guidelines recommend a cumulative evaluation of a project which includes other air emissions sources within a "zone of influence" of 1,000 feet surrounding the project. Based on the location of the Project in West Oakland, which has been designated by the BAAQMD as a priority community through the agency's Community Health Protection Program, this "zone of influence" for the Project level evaluation was conservatively extended to 2,000 feet. As a conservative measure, the zone was further increased to include other parts of West Oakland in the vicinity of nearby freeways.

Acute non-cancer health effects were not estimated as the only source of chemicals with acute toxicity are Total Organic Gases (TOG) emissions from Project traffic, which are not anticipated to be significant for the reasons discussed below.

The HRA evaluates potential sensitive receptor locations including "people—children, adults, and seniors—occupying or residing in:

- Residential dwellings, including apartments, houses, condominiums;
- Schools;
- Day care centers;
- Parks;
- Hospitals; and
- Senior-care facilities."[58]

To meet these objectives, this HRA was conducted consistent with the following guidance:

- Air Toxics Hot Spots Program Risk Assessment Guidelines;[59]
- May 2017 BAAQMD CEQA Guidelines;[60]
- BAAQMD Recommended Methods for Screening and Modeling Local Risks and Hazards;[61] and

[58] BAAQMD. 2012a. Recommended Methods for Screening and Modeling Local Risks and Hazards. May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en. Accessed: April 2019. http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools. Accessed: April 2019.

[59] California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard Assessment (OEHHA). 2015a. Air Toxics Hot Spots Program Risk Assessment Guidelines. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed: April 2019.

[60] BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines. May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: April 2019.

[61] BAAQMD. 2012a. Recommended Methods for Screening and Modeling Local Risks and Hazards. May. Available at: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools. Accessed: April 2019.

- BAAQMD Air Toxics New Source Review (NSR) Program – Health Risk Assessment Guidelines.[62]

3.1 Estimated Air Concentrations

To evaluate the health risks and concentration of air toxics and $PM_{2.5}$ in the surrounding community, BAAQMD recommends estimating concentrations using air pollution dispersion modeling. The methodologies used to evaluate emissions for the Project are based on the most recent BAAQMD CEQA Guidelines and the most recent Air Toxics Hot Spots Program Risk Assessment Guidelines from BAAQMD and OEHHA.[63,64,65]

Air concentrations of TACs and $PM_{2.5}$ from Project emissions are estimated using the American Meteorological Society/Environmental Protection Agency regulatory air dispersion model (AERMOD) at off-site and on-site receptors. Receptors are discussed further below in **Sections 3.1.2.6** and **3.2.1** below.

As discussed above, the phasing of the Project is subject to change based on market conditions and other unanticipated factors; therefore, construction and operations could be extended beyond the anticipated buildout schedule. However, the anticipated phasing schedule assumed for the purposes of the CEQA analysis represents an accelerated phasing schedule for the Project to conservatively assess emissions impacts, and it is assumed that construction would most likely not occur at a more rapid pace than is analyzed. Emission factors are anticipated to be lower in later years with improved on-road vehicle efficiency and cleaner off-road construction equipment. Additionally, emissions would be spread out over a longer time frame and therefore concentrations would be lower during sensitive age ranges of Phase 1 residents, as discussed further in **Section 3.2.1**. If Phase 2 construction is slower than analyzed and some Phase 2 residents move onto the Project site prior to the completion of Phase 2 construction, those residents would be exposed to fewer construction emissions than what was analyzed for the Phase 1 residents. Therefore, overall emissions and health impacts would likely be lower if the schedule was extended.

3.1.1 Toxic Air Contaminant Emissions

3.1.1.1 Construction Sources

Ramboll evaluated excess lifetime cancer risk, non-cancer chronic hazard index, and $PM_{2.5}$ concentration for on-site and off-site sensitive receptors from Project construction emissions.

The excess lifetime cancer risk and chronic hazards analysis in the construction HRA assesses impacts from DPM emissions from off-road diesel construction equipment and on-road diesel hauling trucks. On-road construction worker trips are primarily gasoline-fueled

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[62] BAAQMD. 2016. Health Risk Assessment Guidelines. Air Toxics NSR program. December. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf. Accessed: April 2019.

[63] BAAQMD. 2012a. Recommended Methods for Screening and Modeling Local Risks and Hazards. May. Available at: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools. Accessed: April 2019.

[64] BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines, May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: March 2019.

[65] Cal/EPA, OEHHA... 2015a. *op. cit*.

which contribute negligible TAC emissions and are therefore not included in the HRA analysis. DPM emissions are assumed to be equal to exhaust PM_{10} from on- and off-road construction equipment. Diesel exhaust, a complex mixture that includes hundreds of individual constituents, is identified by the State of California as a known carcinogen.[66,67] Under California regulatory guidelines, DPM is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole. Cal/EPA and other proponents of using the surrogate approach to quantifying excess lifetime cancer risks associated with the diesel mixture indicate that this method is preferable to use of a component-based approach because it provides a protective approach to estimating health risks. A component-based approach involves estimating risks for each of the individual components of a mixture. Critics of the component-based approach believe it will underestimate the risks associated with diesel as a whole mixture because the identity of all chemicals in the mixture may not be known and/or exposure and health effects information for all chemicals identified within the mixture may not be available. Furthermore, Cal/EPA has concluded that "potential cancer risk from inhalation exposure to whole diesel exhaust will exceed the multi-pathway cancer risk from the speciated components".[68] This analysis was based on the surrogate approach, as recommended by Cal/EPA. No acute non-cancer toxicity has been identified for DPM.[69] Thus, an acute HI from Project construction was not estimated.

Emissions were estimated consistent with the methodologies outlined in **Section 2.2**. For the HRA analysis, it is assumed that DPM is the same as exhaust PM_{10}. Given that $PM_{2.5}$ is a subset of PM_{10}, the use of PM_{10} as a surrogate for DPM results in more conservative (i.e., overestimate) concentrations than using $PM_{2.5}$ as a surrogate for DPM. $PM_{2.5}$ emissions include engine exhaust, brakewear and tirewear, and entrained dust. Because localized health impacts depend on the proximity to the source, emissions from on-road truck activity were estimated for the specific length of modeled truck routes within the zone of influence (as opposed to the entire hauling trip length, which is used to estimate CAP emissions for comparison against the applicable mass emissions thresholds, as described in **Section 2.2**).

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[66] Cal/EPA, OEHHA. 1998. Findings of the Scientific Review Panel on The Report on Diesel Exhaust, as adopted at the Panel's April 22, 1998, meeting.

[67] Cal/EPA, OEHHA. 2018. OEHHA/ARB Consolidated Table of Approved Risk Assessment Health Values. May. Available at: https://www.arb.ca.gov/toxics/healthval/contable.pdf. Accessed: April 2019.

[68] Cal/EPA, OEHHA. 2015b. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Appendix D: Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015gmappendices.pdf. Accessed: April 2019.

[69] For sources of DPM, according to the BAAQMD, "diesel exhaust particulate matter should be used as a surrogate for all TAC emissions from diesel-fueled compression-ignition internal combustion engines," and DPM does not have an acute reference exposure level.

BAAQMD, *Regulation 2 Permits Rule 5 New Source Review of Toxic Air Contaminants*, 2016, December 7, http://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-rule-5-new-source-review-of-toxic-air-contaminants/documents/rg0205_120716-pdf.pdf?la=en, accessed April 2019

CARB, *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*, 2018c, August, https://www.arb.ca.gov/toxics/healthval/contable.pdf, accessed April 2019.

3.1.1.2 Operational Sources

The excess lifetime cancer risk and chronic hazards analysis in the operational HRA from Project sources include DPM emissions from on-road diesel vehicle exhaust, speciated evaporative and exhaust TOGs from on-road emissions from non-diesel vehicles, DPM emissions from emergency diesel generators exhaust during operation, and DPM from TRU exhaust at the ballpark during operation. The $PM_{2.5}$ concentration in the operational HRA includes engine exhaust from vehicles, generators, and TRUs, as well as vehicular brakewear, tirewear, and entrained dust. Performance venue TRUs were modeled at the ballpark loading docks since the location of the performance venue loading dock is not yet known.

As noted above, acute HI from TOG emissions from Project traffic was not estimated. The BAAQMD has found that roadway traffic is not significant for acute impacts even for roadways with high traffic volumes above 10,000 vehicles per day.[70]

BAAQMD recommends evaluating impacts from all roadways with traffic of over 10,000 vehicles per day within the "zone of influence." To complete that evaluation, existing traffic volumes in West Oakland as well as combined existing plus Project traffic volumes were provided by Fehr & Peers for both freeways and surface streets. Ramboll subtracted existing volumes from the combined volumes to get Project generated traffic volumes. As a conservative measure, all roadways within the zone of influence with more than 1,000 Project-generated trips per day were included in this analysis. Health impacts from operational traffic were evaluated for all roadway streets with Project-generated traffic above 1,000 vehicles per day within the vicinity of the Project. Health impacts from operational traffic on highways were also evaluated for all highway segments with more than 1,000 Project-generated trips per day. Additionally, roadway and highway segments below 1,000 trips per day that were neighbored by two other segments above 1,000 trips per day were included. Segments that were modeled in previous drafts of this analysis that no longer exceed 1,000 trips per day were conservatively included. The inputs used for operational traffic HRA emissions are shown in **Table 60** and **Table 61**.

Project generator emissions were estimated consistent with the methodologies outlined in **Section 2.4.9** and are shown in **Table 36** and **Table 37** for unmitigated and mitigated emissions, respectively.

As discussed in **Section 2.3.9**, TRUs delivering perishable goods to the ballpark and performance venue were included in the CAP and GHG emissions analysis. TRU emissions from non-ballpark land uses of the Project (with the exception of the performance venue) were not included since it is not yet known what tenants will be included in the non-ballpark land uses and whether TRUs would be part of their operations. DPM emissions from TRUs at the ballpark were included in the HRA and are shown in **Table 40**.

Idling emissions from trucks traveling to and from the Port of Oakland delayed in traffic due to the Project were also calculated. Those emissions were not included in the HRA since they only represent approximately 1.3% of all DPM emissions from Project operations. Further, idling emissions from trucks traveling to and from the Port of Oakland would be spread out around the intersections analyzed and would not be concentrated in the vicinity of the Maximally Exposed Individual Receptor (MEIR). Therefore, it is not expected that these truck

[70] BAAQMD. 2012a. *op. cit*.

idling emissions from traffic delays would have a significant impact on on-site or off-site receptors.

The existing truck activity at Howard Terminal was also analyzed for the HRA analysis. The reduction of emissions due to the removal of existing truck activity currently located at Howard Terminal was accounted for in the overall health impacts of the Project. If truck activity is relocated to other areas of the Port, it would likely not be concentrated enough in the immediate vicinity of the Project's MEIR to cause an impact since impacts are localized (generally within 1,000 feet of the Project sources). Similarly, if the existing Port activity were to be relocated in the vicinity of the Project, this activity would likely be more spread out and therefore not concentrated enough to cause a similar or higher impact at the Project's MEIR. This is discussed further in the No Project Alternative and shown in **Table 130**. Emissions were estimated from on-site truck idling and truck movement.

Additionally, as was discussed in **Section 2.4.5**, Fehr & Peers also provided VMT without VTR measures; health risks assuming the unreduced VMT were also calculated and are included in Appendix D. Furthermore, the TMP includes various strategies to reduce ballpark trips by 20 percent, including shuttle buses and a transit hub. While it is not known whether these strategies will be implemented, health risks were estimated for both. Methods and results of those analyses are included in Appendix E.

3.1.2 Air Dispersion Modeling

Ramboll used the most recent version of the American Meteorological Society/Environmental Protection Agency regulatory air dispersion model (AERMOD Version 19191) to evaluate ambient air concentrations of DPM, $PM_{2.5}$ and TOG at on- and off-site receptors.[71,72] For each receptor location, the model generates air concentrations (or air dispersion factors if unit emissions (i.e., 1 gram per second [g/s]) were modeled) that result from emissions from multiple sources.

Air dispersion models such as AERMOD require a variety of inputs such as source parameters, meteorological data, topography information, and receptor parameters. When site-specific information was unknown, default parameter sets that are designed to produce conservative (i.e., overestimate) air concentrations were used.

3.1.2.1 Meteorological Data

Air dispersion modeling applications require the use of meteorological data that ideally are spatially and temporally representative of conditions in the immediate vicinity of the site under consideration. For this analysis, meteorological data from the Oakland International Airport and upper air data from the Oakland International Airport for the years 2014 through 2018 were used.

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[71] United States Environmental Protection Agency (USEPA). 2004. User's Guide for the AMS/EPA Regulatory Model - AERMOD. April. Available at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf. Accessed: April 2019.

[72] USEPA. 2017. Guideline on Air Quality Models (Revised). 40 Code of Federal Regulations, Part 51, Appendix W. Office of Air Quality Planning and Standards. January. Available at: https://www3.epa.gov/ttn/scram/appendix_w-2016.htm. Accessed: April 2019.

3.1.2.2 Terrain and Land Use Considerations

Elevations for all sources and receptors were imported from the National Elevation Dataset maintained by the United States Geological Survey.[73] For the construction sources, generators, on-site receptors and buildings, the elevations were set to the elevation for the facility centroid.

As the Project site is surrounded by primarily industrial, commercial, and medium to high-density residential areas, urban dispersion coefficients were used. The urban option in AERMOD accounts for increased turbulence associated with the urban heat island effect. An urban population of 425,195 was determined from the 2017 US Census for the City of Oakland.[74]

3.1.2.3 Emission Rates

Emissions were modeled using the X/Q ("chi over q") method, such that each source group has a unit emission rate (i.e., g/s), and the model estimates dispersion factors (with units of Microgram Per Cubic Meter [$\mu g/m^3$]/[g/s]). Actual emissions were multiplied by the dispersion factors to obtain concentrations.

Emitting activities were modeled to reflect the actual hours of construction and operation. According to the Project sponsor, construction of the Project will mostly likely occur between the hours of 7 am and 7 pm; however, there may be some night time work required for certain activities, including ballpark construction. To account for this schedule, the Project sponsor provided an estimate of percent of night time work expected for each piece of equipment in the construction equipment list provided in **Table 4**. The Project sponsor also indicated that approximately 90% of the nighttime work would occur between 7 pm and 1 am and approximately 10% of the nighttime work would occur between 1 am and 7 am. To account for these parameters, construction emissions are divided according to these percentages between three modeled time periods: 7 am to 7 pm, 7 pm to 1 am, and 1 am and 7 am.

For annual average ambient air concentrations, the estimated annual average dispersion factors are multiplied by the annual average emission rates. The emission rates will vary day to day, with some days having no emissions. For simplicity, the model will assume a constant emission rate during the entire year for both construction and operations. For construction, the equipment is expected to operate on average 8 hours per day, but these 8 hours can occur anytime in the 12-hour window from 7 am to 7 pm for most phases, and anytime within the 24-hour window for ballpark construction. Because the exact timing of when the equipment will operate is not known, the 8 hours of emissions were averaged over these 12 (or 24) hours of meteorology utilizing the AERMOD variable emission factor (EMISFACT) option, which allows for the modeling of variable emission rates. The average emission rate from construction will be calculated by taking the total mass of emissions and

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[73] United States Geological Survey (USGS). 2017. National Elevation Dataset. February. Available at: https://www.mrlc.gov/tools. Accessed: February 2019.

[74] United States Census Bureau. 2017. American Community Survey (ACS). Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF. Accessed: February 2019.

dividing by the hours considered in the model.[75] Furthermore, with the exception of ballpark construction, most construction is largely expected to occur on weekdays with specific and limited exceptions, but weekend meteorology is included in the dispersion model. The meteorology for a given hour of the day is independent of whether it falls on a weekend or weekday. Thus, weekends were included to have a more representative sample of meteorology during the time of day construction will occur.

For operational traffic, to account for the diurnal pattern of traffic volumes (high volumes during rush hour and during the day, with low volumes overnight), Ramboll utilized the AERMOD EMISFACT option. The diurnal profile sets hourly fractions (relative to peak traffic) representing hourly changes in traffic over the course of a day. Hourly traffic activity was set to an hourly profile for West Oakland derived from local weekday traffic data provided by Fehr & Peers. Different diurnal profiles were estimated for surface streets and highways. For surface streets, a diurnal profile was specified for all vehicles. For freeways, two diurnal profiles were specified, one for light-duty and medium-duty vehicles and another for heavy-duty vehicles. While annual average daily traffic (AADT) are roadway link specific, the diurnal profiles are constant across all relevant roadways. The diurnal profiles used in the HRA are illustrated in **Figure 3**.

Additionally, the Project operations are assumed to include 17 emergency diesel generators. Generators were modeled with unit emission rates. Since generator testing could occur at any hour of the day, the model was not constrained to use only certain hours of meteorological data.

3.1.2.4 Source Parameters

Modeled construction sources included on-site activity and on-road trucks. Area polygon sources were used to represent the on-site activity in AERMOD. The on-site construction sources were modeled with a release height of 5 meters and an initial vertical dimension of 1.16 meters.[76] The area polygon source size and number of vertices are dependent on the specific configuration of each source. Adjacent volume sources were used to represent heavy-duty trucks using a series of adjacent volume sources along expected construction truck routes. The modeled release height was 2.55 meters, the initial vertical dimension was 2.37 m, and the initial lateral dimension was 4.19 meters, consistent with the USEPA haul road guidance. The modeled construction haul road routes are shown in **Figure 4** and the modeled construction area sources are shown in **Figure 5**.

On-road traffic sources were modeled as a series of adjacent volume sources, with light-duty and heavy-duty vehicles modeled separately. Vehicle heights were assumed to be 2 meters

[75] Annual average daytime construction emissions were calculated by taking the total mass of emissions per construction source group and dividing by 24 hours per day and 365 days per year. The variable emission factor for daytime AERMOD modeling (EMISFACT) includes hours between 7 am and 7 pm, with a multiplier of 2 for each hour of meteorology included in the model. Thus, the total EMISFACT sum equals 24 hours per day, which matches the construction emissions averaged over 24 hours per day. Nighttime construction was modeled for 6 hours. Because the total EMISFACT sum equals 6 hours per day, annual average nighttime construction emissions were calculated by taking the total mass of emissions per construction source group and dividing by 6 hours per day and 365 days per year.

[76] USEPA. 2019. User's Guide for the AMS/EPA Regulatory Model (AERMOD). U.S. EPA Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. Available at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf

for light-duty vehicles and 3 meters for heavy-duty vehicles, and release height and initial vertical dimension were calculated in line with USEPA haul road guidance. Elevated roadways and highways were modeled at grade as surface sources, which is conservative for air dispersion modeling for receptors also located at grade.[77,78,79] While the BAAQMD recommends that traffic on roadways is out to at least 1,000 feet from the property boundary, this analysis conservatively extends the roadways and freeways throughout the West Oakland neighborhood, as shown in **Figure 6**.[80]

The emergency generators were modeled as point sources with typical release characteristics consistent with default stack parameters presented in a technical memorandum to the BAAQMD,[81] as Project-specific source parameters were not available. These parameters have also been used by BAAQMD for the San Francisco Community Risk Reduction Plan (CRRP) HRA modeling, as well as the West Oakland Community Action Plan DEIR.,[82,83] As exact locations of the emergency generators are not known at this time, it was assumed for the purposes of air dispersion modeling that the ballpark stadium generator is located at grade at the northern-most portion of the site (close to off-site sensitive receptors). The non-ballpark generators were assumed to be located at ground level at the building centroid of each non-ballpark building for the unmitigated scenario and on the rooftops of each non-ballpark building at the building centroid for the mitigated scenario, as shown in **Table 67**. Podium-level generators were also analyzed as part of the sensitivity analysis discussed below. Modeled generator locations are shown in **Figure 7**.

The TRU operations were modeled as a single volume source at the ballpark loading dock. The TRU operation volume source was modeled using a release height consistent with BAAQMD trucks (5 meters). The other modeling parameters were estimated using methodology consistent with USEPA AERMOD guidance for volume sources.

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[77] U.S. Environmental Protection Agency. 2018. AERMOD Implementation Guide. April 17.

[78] From the AERMOD Implementation Guide (2018), "For cases in which receptor elevations are lower than the base elevation of the source (i.e., receptors that are down-slope of the source), AERMOD will predict concentrations that are less than what would be estimated from an otherwise identical flat terrain situation."

[79] Some receptors on-site were modeled at heights above grade (in addition to at grade). The on-site receptors are more than 1,000 feet from the elevated freeways and are also not located downwind of the freeways; therefore, these receptors would not have a significant impact from the freeway regardless of the heights they are modeled.

[80] BAAQMD. 2012a. Recommended Methods for Screening and Modeling Local Risks and Hazards. May. Available at: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools. Accessed: April 2019.

[81] Sonoma Technology, Inc (STI). 2011. Default modeling parameters for stationary sources. Technical Memorandum from John Stilley and Stephen Reid to Phil Martien and Virginia Lau, Bay Area Air Quality Management District. April 1.

[82] BAAQMD. 2012b. The San Francisco Community Risk Reduction Plan: Technical Support Documentation. December. Available at: https://www.gsweventcenter.com/Appeal_Response_References/2012_1201_BAAQMD.pdf. Accessed: April 2019.

[83] BAAQMD. 2019. "Draft Environmental Impact Report for the AB 617 Owning Our Air: The West Oakland Community Action Plan." July. Available online at: http://www.baaqmd.gov/~/media/files/ab617-community-health/west-oakland/deir/ab617_wo_deir_072519-pdf.pdf?la=en. Accessed August 19, 2019.

Existing Howard Terminal truck activity was modeled as an area source covering the full Project site with release parameters similar to on-road truck release parameters, discussed above.

Modeling parameters are shown in **Table 62**.

3.1.2.5 Generator Sensitivity Analysis

The exact location, including height, of the generator at each of the Project non-ballpark buildings is not known; therefore, a sensitivity analysis was performed to understand the correlation between modeled height and health impacts. Generators were modeled at the centroid of each parcel at three elevations: ground-level, approximate podium-level (85 feet above ground level), and rooftop.[84] For all three models, the stadium generator was modeled at ground-level.

Ramboll conducted a health risk assessment for each of the three sets of generators assuming both unmitigated and mitigated emissions. As discussed above, the unmitigated generators were assumed to operate for 50 hours per year with emission factors consistent with ATCM engine emission factors. The mitigated generators were assumed to operate for 20 hours per year with Tier 4 engines.

Results of this sensitivity analysis are presented in **Table 67**. In both the unmitigated and mitigated scenarios, rooftop generators resulted in the lowest health impacts and podium-level generators resulted in the highest health impacts. This analysis then informed the Project health risk assessment; in the Project and Maritime Reservation Scenario HRAs, the height of the generators was an additional control strategy. For the mitigated scenarios presented in the Project HRA and the Maritime Reservation Scenario HRA, the non-ballpark parcel generators were assumed to be on the roofs of the non-ballpark buildings. For the unmitigated scenarios, the generators were assumed to be on the ground. The ground-level generators were chosen despite having a slightly lower health impact at the MEIR than the podium-level generators because all other sources are ground-level and therefore would have a more conservative cumulative effect on the MEIR.

3.1.2.6 Receptors

In order to evaluate health impacts to on-site and off-site receptors, nearby sensitive receptor populations were identified. Sensitive receptors could include areas with residents, schools, daycare centers, parks and other recreational areas, hospitals, and senior care facilities. Sensitive receptor locations were identified using a search performed by Environmental Data Resources (EDR), as shown in **Appendix G**. The EDR report identified schools, daycare centers, nursing homes, and hospitals near the Project. These locations were modeled as discrete locations. Additionally, residential receptors in the broader West Oakland area were modeled using a fine grid with 20-meter (65.6 feet) spacing within 2,000 meters of the Project site and coarse grid with 50-meter (164 feet) spacing beyond 2,000 meters of the Project site. The coarse grid extends into West Oakland and includes additional areas close to major freeways.

Off-site receptors were modeled at a height of 1.8 m, above terrain height, consistent with the BAAQMD guidance. Onsite receptors were modeled at heights consistent with the number

[84] This sensitivity analysis was performed on a previous version of generator specifications; therefore, results are somewhat different than presented Project results. However, the conclusions drawn from the sensitivity analysis are still valid.

of floors of the building (starting at a height of 1.8 meters, with additional receptors at 3-meter intervals to represent each floor of the building (4.8 m, 7.8 m, etc.) through 103.8 meters.

As discussed previously, maximum average annual dispersion factors will be estimated for each receptor location.

Figure 8 includes a map of both off-site and on-site sensitive receptor locations evaluated in the HRA.

3.1.2.7 Building Downwash

Turbulent eddies can form on the downwind side of buildings and may cause a plume from a stack or point source located near the building to be drawn towards the ground to a greater degree than if the building were not present. This is referred to as the "building downwash" effect. The effect can increase the resulting ground-level pollutant concentrations downwind of a building. Ramboll used the dimensions and locations of all on-site buildings, to allow AERMOD to incorporate algorithms to evaluate the downwash effect on point source dispersion. Point sources were only used to model the Project generators, so building downwash was only evaluated in the Project operational generator modeling. The modeled building locations are presented in **Figure 2**.

3.1.2.8 Concentrations

As discussed previously, emissions will be modeled using the unit rate emission factor method, such that the model estimates dispersion factors based on an emission rate of 1 g/s and the dispersion factors have units of [µg/m^3]/[g/s]. For each modeled construction and operational source group, estimated average emissions were multiplied by the dispersion factors.

3.1.2.9 Modeling Adjustment Factor

OEHHA recommends applying an adjustment factor to the annual average concentration modeled assuming continuous emissions (i.e., 24 hours per day, seven days per week), when the actual emissions are less than 24 hours per day and exposures are concurrent with activities occurring as part of the Project.[85]

Resident children were assumed to be exposed to annual construction and operational emissions (averaged from actual operating hours) 24 hours per day, seven days per week, 350 days per year. This assumption is consistent with the modeled annual average air concentration (24 hours per day, seven days per week). Thus, the annual average concentration was not adjusted for the residential population.

3.2 Risk Characterization Methods

In February 2015, OEHHA released the updated Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, which combines information from previously-released and adopted technical support documents to delineate OEHHA's revised

[85] Cal/EPA, OEHHA. 2015a. Air Toxics Hot Spots Program Risk Assessment Guidelines. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed: April 2019.

risk assessment methodologies based on current science.[86] The BAAQMD has issued Guidelines on adopting the OEHHA 2015 Guidance Manual. This evaluation utilizes the 2015 methodology; details of this methodology are discussed below.

3.2.1 Exposure Assessment

Potentially Exposed Populations: This analysis evaluates on- and off-site sensitive receptors based on OEHHA 2015 Hot Spots Guidelines. Based on the sensitive receptor search for the Project, the following sensitive receptors were identified:

On-site:

- Residents
- Daycare children

Off-Site:

- Residents
- Daycare children
- School children
- Patients in hospitals or medical facilities

A conservative approach of considering all on-site and off-site sensitive receptors as residential receptors was used in this analysis. The exposure rate for the residential scenario is more conservative than those for other sensitive receptor types (i.e., school child, daycare child, and patients) as residents have the highest exposure frequency, exposure time, and exposure duration.[87,88]

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[86] Cal/EPA, OEHHA. 2015b. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Appendix D: Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015gmappendices.pdf. Accessed: April 2019.

[87] USEPA. 2009. Metabolically derived human ventilation rates: A revised approach based upon oxygen consumption rates. EPA/600/R-06/129F.

[88] OEHHA 2015b presents eight-hour breathing rates for sedentary/passive activities, light intensity activities and moderate intensity activities (see Table 5.8), derived from a base USEPA document (USEPA 2009). While OEHHA 2015b recommends that a Tier 1 evaluation of a daycare scenario assume eight hours of moderate intensity activities, the USEPA 2009 base document lists daycare as ranging from a minimum of sedentary & passive activities to a maximum of light intensity activity, with an average of light intensity activities (see USEPA Appendix B, page B-7). According to USEPA 2009, an average child (0-6 years old) spends approximately 14.5 hour/day in sedentary/passive activities (including sleep or nap), 5.8 hours/day in light intensity activities, 3.7 hours/day in moderate intensity activities and 0.2 hours/day in high intensity activities. OEHHA recommends the eight hours of moderate activity as an initial screen for 8-hour exposure duration, even though the USEPA base document indicates that less than half that time would be spent at that level of intensity, with the majority of the balance of the time would be spent in either light intensity or sedentary activities. This results in an overall lower average breathing rate for the 8-hour exposure duration.

Under the construction scenario, assuming most of the sleeping occurs during the night hours, the exposure activities and breathing rate will be the same for the resident child and the daycare child. As construction activities occur during the day, the construction exposures and risks will be the same for the two receptor types assuming they are both present for the construction time and duration. As the daily construction duration is greater than the 8-hour daycare exposure time and the construction duration is greater than the 6-year daycare exposure duration, the residential scenario is more conservative. Under the operational scenario, the resident is

Three exposure scenarios are included in the health risk analysis. For the first exposure scenario, "Scenario 1", off-site residents were evaluated for a health risk analysis of a fetus in its third trimester at the beginning of Project construction and exposed to all construction emissions and approximately 27 years of operational emissions. For the second exposure scenario, "Scenario 2", off-site residents and on-site residents in Phase 1 areas were evaluated for a health risk analysis of a fetus in its third trimester during overlapping Phase 2 construction and operations of Phase 1 land uses and exposed to all subsequent construction emissions and approximately 30 years of operational emissions.[89] Finally, for the third exposure scenario, "Scenario 3", off-site and all on-site residents were both evaluated for a health risk analysis of a fetus in its third trimester during operations following full buildout and exposed to approximately 30 years of subsequent operational emissions.

These three exposure scenarios are reasonable to analyze for a conservative health risk assessment. Given the phased nature of the Project, the construction schedule is not yet finalized and buildout years are subject to change; however, the assumptions analyzed in this health risk assessment are reasonable to assume given the best available information at the time of the analysis. As previously stated in this report, the phasing schedule assumed for the purposes of the CEQA analysis represents an accelerated phasing schedule for the Project for the purposes of conservatively assessing impacts, and construction would most likely not occur at a more rapid pace than is analyzed. Emission factors of chemicals assessed in the HRA are anticipated to be lower in later years with improved on-road vehicle efficiency and cleaner off-road construction equipment; therefore, overall emissions and health impacts would be lower if the schedule was extended.

Exposure Assumptions: The exposure parameters used to estimate excess lifetime cancer risks for exposed populations were obtained using risk assessment guidelines from OEHHA and BAAQMD.[90,91] Exposure assumptions are shown in **Table 63** and **Table 64**.

Calculation of Intake: The dose estimated for each exposure pathway is a function of the concentration of a chemical and the intake of that chemical. The intake factor for inhalation, IF_{inh}, can be calculated as follows:

assumed to be exposed for 30 years, as compared to the daycare child who is assumed to be exposed for 6 years. Under this scenario, the residential scenario is a conservative estimate of the daycare child exposure and risk. In addition, the resident child is assumed to be exposed 24 hours/day, 7 days/week as compared to the daycare child that are assumed to be exposed 8 hours/day and 5 days/week. For all of these reasons, it is most conservative to analyze all sensitive receptors as residents, as they would be exposed to all hours of construction emissions while a daycare child would only be exposed to some of them.

[89] It is assumed that there will be on-site receptors during phases of construction; e.g. when Phase 1 is constructed, it is assumed that the on-site occupants will immediately use the portion of the completed site. Therefore, on-site residents were analyzed commencing with completion of Phase 1 and Phase 2 of construction.

[90] Cal/EPA, OEHHA. 2015b. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Appendix D: Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015gmappendices.pdf. Accessed: April 2019.

[91] BAAQMD. 2016. Health Risk Assessment Guidelines. Air Toxics NSR program. December. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf. Accessed: April 2019.

$$IF_{inh} = \frac{DBR * FAH * EF * ED * CF}{AT}$$

Where:

IF_{inh}	=	Intake Factor for Inhalation (m^3/kg-day)
DBR	=	Daily Breathing Rate (L/kg-day)
FAH	=	Frequency of time at Home (unitless)
EF	=	Exposure Frequency (days/year)
ED	=	Exposure Duration (years)
AT	=	Averaging Time (days)
CF	=	Conversion Factor, 0.001 (m^3/L)

The chemical intake or dose is estimated by multiplying the inhalation intake factor, IF_{inh}, by the chemical concentration in air, C_i. When coupled with the chemical concentration, this calculation is mathematically equivalent to the dose algorithm given in the current OEHHA Hot Spots guidance.[92]

3.2.2 Age Sensitivity Factors

The estimated excess lifetime cancer risks for a resident will be adjusted using age sensitivity factors (ASFs) that account for an "anticipated special sensitivity to carcinogens" of infants and children as recommended in the OEHHA Technical Support Document and OEHHA 2015 Guidance.[93,94] Cancer risk estimates were weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to two years of age and by a factor of three for exposures that occur from two years through 15 years of age, as shown in **Table 65**. No weighting factor (i.e., an ASF of one, which is equivalent to no adjustment) is applied to ages 16 and older.

If Project phasing were to be extended beyond the anticipated buildout schedule, DPM and $PM_{2.5}$ emissions would be spread out and therefore, overall concentrations would be lower during the sensitive age ranges of third trimester of pregnancy to two years of age; therefore, overall emissions and health impacts would be lower if the schedule was extended, and for this reason, the accelerated phasing schedule assumed in this analysis is conservative.

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[92] Cal/EPA, OEHHA. 2015b. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Appendix D: Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015gmappendices.pdf. Accessed: April 2019.

[93] Cal/EPA. 2009. Technical Support Document for Cancer Potency Factors: Methodologies for Derivation, Listing of Available Values, and Adjustment to Allow for Early Life Stage Exposures. May. Available online at: https://oehha.ca.gov/media/downloads/crnr/tsdcancerpotency.pdf.

[94] Cal/EPA, OEHHA. 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Appendix D: Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015gmappendices.pdf. Accessed: April 2019.

3.2.3 Toxicity Assessment

The toxicity assessment characterizes the relationship between the magnitude of exposure and the nature and magnitude of adverse health effects that may result from such exposure. For purposes of calculating exposure criteria to be used in risk assessments, adverse health effects are classified into two broad categories – cancer and non-cancer endpoints. Toxicity values that are used to estimate the likelihood of adverse effects occurring in humans at different exposure levels are identified as part of the toxicity assessment component of a risk assessment.

Ramboll utilized the Cal/EPA-approved inhalation cancer potency factor for DPM to evaluate DPM emitted from construction and operational sources.[95] For gasoline vehicles, exhaust and evaporative TOGs from gasoline-fueled vehicles were evaluated based on the organic chemical profiles from the ARB.[96] The chronic toxicity values for chemicals evaluated in this analysis are summarized in **Table 66**.

3.2.4 Risk Characterization

3.2.4.1 Estimation of Cancer Risks

Excess lifetime cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g. lungs) by the chemical-specific cancer potency factor (CPF).

The equation used to calculate the potential excess lifetime cancer risk for the inhalation pathway is as follows:

$$Riskinh = Ci \; x \; CF \; x \; IFinh \; x \; CPF\neg \; x \; ASF$$

Where:

$Risk_{inh}$	=	Cancer risk; the incremental probability of an individual developing cancer as a result of inhalation exposure to a particular potential carcinogen (unitless)
C_i	=	Annual average air concentration for $chemical_i$ (µg/m^3)
CF	=	Conversion factor (mg/µg)
IF_{inh}	=	Intake factor for inhalation (m^3/kg-day)
CPF_i	=	Cancer potency factor for $chemical_i$ (mg chemical/kg body weight-day)-1
ASF	=	Age sensitivity factor (unitless)

[95] Cal/EPA, OEHHA. 2018. OEHHA/ARB Consolidated Table of Approved Risk Assessment Health Values. May. Available at: https://www.arb.ca.gov/toxics/healthval/contable.pdf. Accessed: April 2019.

[96] Used speciation profile 2111 for gasoline TOG exhaust and profile 422 for gasoline TOG evaporative emissions. Available at: https://ww3.arb.ca.gov/ei/speciate/speciate.htm

3.2.4.2 Estimation of Chronic Noncancer Hazard Indices

The potential for exposure to result in adverse chronic noncancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) to the noncancer chronic reference exposure level (cREL) for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient (HQ). To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the HQs for all chemicals are summed, yielding a HI:

$$HQi = Ci / cREL$$

$$HI = \sum HQ$$

Where:

HI	=	Hazard index
HQi	=	Chronic hazard quotient for chemical i
Ci	=	Annual average concentration of chemical i (µg/m^3)
cRELi	=	Chronic noncancer reference exposure level for chemical i (µg/m^3)

3.3 Health Risk Assessment Results

Health impacts from Project construction and Project operations were added together to estimate the combined health risk impacts of construction activities and Project operation for each Scenario discussed above. For the off-site MEIR, net health impacts are estimated by identifying the sensitive receptor location with the maximum value for Project health impacts minus the existing operational health impact of sources planned for removal at Howard Terminal.

3.3.1 Impacts from the Project

A breakdown of excess lifetime cancer risk from Project construction, operational generators, operational traffic, and removed existing truck activity at Howard Terminal at the MEIR is shown in **Table 69**. The table also shows the Scenario for which the maximum was identified. Similar breakdowns for chronic HI and $PM_{2.5}$ concentration are shown in **Table 70** and **Table 71**, respectively. These tables also show the Scenario for which the maximums were identified, as well as the year for which the maximum occurred since chronic HI and $PM_{2.5}$ concentrations are annual impacts. Locations of the MEIRs are shown in **Figure 9**.

Starting on January 1, 2020, 2019 California Title 24 requires all residential heating/cooling and ventilation systems to have Minimum Efficiency Reporting Value (MERV)-13 filters.[97] As Project construction would begin after January 1, 2020, residential units will have filtration installed. The Project may be required to install MERV-16 filters. MERV-16 is effective at reducing concentrations of PM by 95% or better.[98]

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[97] California Energy Commission. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24, Part 6, and Associated Administrative Regulations in Part 1. Available online at: https://www.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf

[98] National Air Filtration Association (NAFA). 2018. Understanding MERV – October 2018. Available online at https://www.nafahq.org/understanding-merv/. Accessed September 2019.

To understand the effects associated with installing MERV-16 filters, Ramboll ran building simulations to quantify the proportion of air entering a dwelling unit that would pass through the MERV-16 filter. Building simulations for Oakland were run through Integrated Environmental Solutions Virtual Environment (IESVE, version 2018.2.0.0) assuming a ten-minute time step. A constant mechanical ventilation rate was estimated based on American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) minimum ventilation rates in breathing zones[99] and an average of four occupants per room. In the simulations, windows were assumed to be opened when the outdoor temperature was between 16 and 26 degrees Celsius. Total air entering the room was estimated as the sum of mechanical ventilation and any air through the windows or doors. The simulation was repeated for a room modeled at two representative elevations (60 and 80 meters above the ground) and all four cardinal directions. Two elevations were chosen to account for any potential differences associated with height above ground. The percent of air through the filters was then scaled by the minimum MERV-16 efficiency of 95%.[100] The result from each simulation was averaged together to determine an average MERV-16 efficiency of 76%.

While it is expected that exposure to DPM associated with on-road traffic would also decrease, speciated TOG is not filtered by MERV-16 filtration. Ramboll determined the specific fraction of overall health impacts from traffic are from DPM versus speciated organics for each of the three fleets. These results are presented in **Table 68**. For simplicity, the minimum percent contribution of DPM from each fleet across all years is shown.

When accounting for factors such as open windows, infiltration, and ventilation, the health risk reduction from particulate pollution resulting from use of filters is approximately 76%. Health impacts to onsite receptors from construction of later phases and use of emergency generators were reduced by 76% because all sources of health impacts are from DPM. For traffic sources, the 76% reduction from MERV-16 filtration was scaled by the average percent contribution to health impacts of DPM for traffic across all onsite receptors, as shown in **Table 68**.

[99] ASHRAE. Standard 62.1-2016. Ventilation for Acceptable Indoor Air Quality. 2016. Available online at: https://ashrae.iwrapper.com/ViewOnline/Standard_62.1-2016

[100] ASHRAE 52.1 MERV Rating: https://www.nafahq.org/understanding-merv/

4. LOCALIZED CARBON MONOXIDE IMPACTS FROM MOTOR VEHICLE TRAFFIC

The screening level for CO emissions from operational traffic is 44,000 vehicles per hour. The traffic study from Fehr & Peers shows that average hourly trip generation from the Project on local streets is approximately 19,772 vehicles per hour, which is approximately 55% lower than the BAAQMD's screening level.[101] Therefore, operational traffic is a minor contributor to operational CO emissions.

[101] BAAQMD. 2011a. California Environmental Quality Act Air Quality Guidelines. May. Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_May%202011_5_3_11.ashx. Accessed: April 2019.

5. CUMULATIVE ANALYSIS

In addition to the evaluation of an individual project, the BAAQMD CEQA Guidelines recommend a cumulative evaluation of a project which includes other air emissions sources within a "zone of influence" of 1,000 feet surrounding the project. Ramboll evaluated the cumulative health risk impacts associated with Project construction and operation using two methods. First, Ramboll calculated cumulative health impacts using the BAAQMD CEQA Guidelines and existing tools.[102] Second, Ramboll extracted background results from the Final Environmental Impact Report (EIR)for the West Oakland Community Action Plan (West Oakland EIR).[103] These methods and results are discussed below.

5.1 Cumulative Analysis using BAAQMD-Recommended Methods

In accordance with BAAQMD CEQA Guidelines, Ramboll conducted a cumulative HRA for both offsite sensitive receptors and new onsite sensitive receptors created by the Project. The cumulative assessment tabulates the impact of Project-related construction and operational risks plus existing offsite local sources (stationary and mobile) at the offsite and onsite Project MEIR locations for construction. The evaluation requires the identification of any stationary and mobile sources within 1,000 feet of the Project boundary. In addition to the evaluation of each single source, the combined health risk from all TAC and $PM_{2.5}$ sources are evaluated.

Sources evaluated in the cumulative health risk assessment include any BAAQMD permitted stationary source, roadways with over 10,000 vehicles per day, and any other major source of emissions within the zone of influence such as railways. Stationary sources and roadways included in this cumulative analysis are presented in **Table 85** and **Table 86**, respectively. The BAAQMD provides tools with conservative estimates of impacts from these sources, including a stationary source tool,[104] a raster file containing railway screening results, highway screening results, major roadway screening results, and roadway screening tables. BAAQMD's major roadway screening tool includes impacts from all roadways with daily traffic above 30,000 vehicles per day. The roadway screening tables should be used for any roadway between 10,000 vehicles per day and 30,000 vehicles per day.

To determine roadways with more than 10,000 vehicles per day and less than 30,000 vehicles per day, Ramboll used existing traffic volumes provided by Fehr & Peers.[105] Ramboll used volumes that included existing traffic plus traffic anticipated after the development of the Downtown Oakland Specific Plan (DOSP). This is conservative as DOSP volumes are volumes projected for the next 20 years of growth in the downtown West Oakland area.

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[102] BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines. May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: April 2019.

[103] BAAQMD. 2019. "Draft Environmental Impact Report for the AB 617 Owning Our Air: The West Oakland Community Action Plan." July. Available online at: http://www.baaqmd.gov/~/media/files/ab617-community-health/west-oakland/deir/ab617_wo_deir_072519-pdf.pdf?la=en. Accessed August 19, 2019.

[104] Ramboll submitted a Stationary Source Inquiry to BAAQMD to determine that all sources provided in the online tool were up-to-date.

[105] Fehr & Peers. 2020. Memorandum, Subject: Howard Terminal – Air, Noise, and Greenhouse Gas Forecast Inputs. January 27. See Appendix B.

Based on these volumes, 5th Street, north of the Project site, falls into this range, with approximately 13,850 vehicles per day.

The highway screening tool, major roadway screening tool and railway screening tool were used to estimate the health impacts from all highways, major roadways, and railways and combined with the impacts from all other sources at the mitigated operational MEIR.

The combined cancer risk, non-cancer chronic hazard index, and $PM_{2.5}$ concentration from all the sources at the Project MEIR are shown in **Table 87**.

5.2 Cumulative Analysis using West Oakland EIR Results

In addition to the methodology described above, Ramboll also evaluated cumulative operational impacts using background health risk results from the West Oakland Final EIR, published October 2, 2019. Because the West Oakland EIR does not evaluate Chronic HI impacts, the cumulative impact estimates were only estimated for excess lifetime cancer risk and $PM_{2.5}$ concentrations.

The BAAQMD provided Ramboll with modeled 2024 background cancer risk and $PM_{2.5}$ concentration results for all of West Oakland. Ramboll extracted these results at individual Project receptor locations to determine the cumulative cancer risks and $PM_{2.5}$ concentrations associated with background West Oakland sources at the Project MEIRs. A detailed breakdown and summary of impacts are shown in **Table 88** and **Table 89**. The MEIRs shown in the cumulative analysis represent the scenario that included mitigation for offsite and onsite residents. These MEIRs do not reflect the highest impact from the Project and cumulative sources combined, but rather the MEIRs selected from Project impacts only, consistent with BAAQMD CEQA Guidelines. [106] The locations of these MEIRs are shown in **Figure 9**.

The emissions quantification tools and methods used in the West Oakland EIR and this analysis differ slightly; however, these variations are expected to only have minor effects on the results. According to the BAAQMD West Oakland EIR, for on-road vehicle emissions, the BAAQMD used EMFAC2014, whereas this analysis used the newer EMFAC2017. For dispersion modeling meteorological data, the BAAQMD used the Oakland Sewage Treatment Plant for 2014, whereas this analysis used the Oakland International Airport for 2014 through 2018. Five years of off-site meteorological data is typically recommended when on-site data is not available.[107] For dispersion modeling terrain data, BAAQMD utilized the Shuttle Radar Topography Mission digital terrain data and Ramboll utilized the National Elevation Dataset. Health risk variables, such as age sensitivity factors, daily breathing rates, exposure duration, are the same in both analyses.

Modeling source parameters used for construction and operational sources also varied slightly between this analysis and the West Oakland EIR. Construction sources were not modeled in the West Oakland EIR. According to the West Oakland EIR, permitted stationary sources were modeled as point sources, consistent with how permitted stationary sources (i.e., generators) were modeled in this analysis for the Project. Default modeling parameters for standby generators in the West Oakland EIR are the same as those used for the Project

[106] BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines, May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: March 2019.

[107] U.S. EPA's Guideline on Air Quality Models 40 CFR 51, Appendix W (Revised, January 17, 2017)

generators. Additionally, on-road mobile sources were modeled as adjacent volume sources in the West Oakland EIR, as was done in the Project analysis; however, release heights, initial vertical dimension, and initial lateral dimension were slightly different between the two analyses. These variations are not expected to result in a major difference in results.

Finally, truck-related businesses and Port Trucks at terminals (transiting, idling) were modeled as area sources, which is consistent with how existing truck activity at Howard Terminal was modeled in the Project analysis. Release heights and initial vertical dimensions used in the West Oakland EIR analysis and the Project analysis were slightly different; however, these variations are not expected to result in major differences in results.

6. MARITIME RESERVATION SCENARIO

6.1 Maritime Reservation Scenario Description

As discussed above, the Maritime Reservation Scenario involves an alternative site plan for the Project that will be analyzed alongside the Project site plan described above. Under the Term Sheet between the Project sponsor and the Port of Oakland, the Port would have the right to terminate the Project sponsor's development rights to a portion of the Project site located generally within the southwestern corner of the site if the Port deemed that area necessary to accommodate the expansion of the turning basin that is used to turn large vessels within Oakland's Inner Harbor. Under this scenario, the turning basin would be expanded as part of a separate project.

Under the Term Sheet, the Port of Oakland could, at any point within the next 10 years, choose to exercise its option and take back up to approximately 10 acres of the site from the Project sponsor, as shown in **Figure 10**. As a result, the Project site plan would be modified, and the proposed development would be denser, fitting the same development program (i.e., the ballpark and mix of other uses proposed) onto the smaller site.

The Port of Oakland has not proposed, designed, approved, or secured permitting for an expanded turning basin and the impacts of the expansion are not considered in this AQTR. If the Port were to exercise its option and take back a portion of the Project site from the Project sponsor, the Port would analyze the potential impacts of expanding the turning basin as a separate project at that time.

Changes to the Project site plan that would occur with the Maritime Reservation Scenario would occur within the area of the Project site that would be developed after Phase 1. The Maritime Reservation Scenario would distribute the Project's development program differently within the altered site configuration. Proposed uses affected in the area that would be reserved for the expanded turning basin include public open space within the Waterfront Park; portions of the proposed extensions of Filbert Street, Myrtle Street and Market Street leading to the water; public trust related uses on Blocks 8 and 16; and mixed-use development on Block 15 and a portion of Blocks 12.

Following is a list of characteristics of the Maritime Reservation Scenario that differ from the Project and that form the basis for the analysis herein:

- The Project Site boundary would be changed in the southwest corner of the site;
- The Project Site acreage would be reduced from 55 to approximately 45 acres (an approximate 10-acre reduction);
- Blocks 8, 15, and 16 would be eliminated and Block 12 would be reduced in size;
- The Waterfront Park would be reduced from 10.5 acres to approximately 6.9 acres; and
- While the maximum building heights would not change, the overall site density/intensity within those maximum heights would be increased, since the Project site would be approximately 10 acres smaller and the development program would remain unchanged.

This AQTR will discuss the air quality, greenhouse gas, and health risk effects of the Maritime Reservation Scenario that are different from those identified for the Project. Again, this analysis does not analyze the construction or operational impacts of the turning basin

expansion itself; that is an independent project initiated by the Port that would be addressed separately.

According to the Project sponsor, since all of the square footage of the Project is being preserved (in a smaller footprint) in the Maritime Reservation Scenario, the land uses (shown in **Table 1**), activities, attendance, and population data (shown in **Table 2**), and construction schedule (shown in **Table 3**), are the same as the Project. The construction equipment list (shown in **Table 4** and **Table 5**) , and mobile trips associated with hauling, vendor deliveries, and workers are the same, except the emissions from these sources were scaled for horizontal development of Phase 2 by the change in site acreage for Phase 2.

Because land uses and activities are the same for the Maritime Reservation Scenario and the Project, operations between the two scenarios are generally assumed to remain the same, with the exception of generators. The Maritime Reservation Scenario will have fewer non-ballpark buildings than the Project with more square footage each; therefore fewer generators are required. Because the maximum heights of the buildings remains the same as the Project, the maximum size of the generators also remains the same as the Project. This is described further in **Section 6.2.2**.

6.2 Maritime Reservation Scenario CAP and GHG Emissions

6.2.1 Construction CAP and GHG Emissions

As described above, the construction schedule and equipment list (types, horsepower, etc. but not emissions) for the Maritime Reservation Scenario were assumed to be the same as the Project. Construction emissions for the Maritime Reservation Scenario were calculated by scaling Project emissions by the change in acreage for on-road vehicles and off-road equipment for horizontal development.[108] Construction scaling factors are shown in **Table 72**. Architectural coating and vertical building construction phases are not anticipated to change with this scenario since overall building square footage will be preserved; therefore, these emissions are not scaled. Paving off-gassing emissions from the parking lot are also conservatively not scaled, but paving emissions for the roadways are scaled. For GHG emissions, electric equipment and water use emissions are conservatively not scaled.

As with the Project, the mitigated emissions assume Tier 4 off-road equipment for most equipment (exceptions noted in **Table 4**), as well as super-compliant low VOC paint for indoor architectural coatings. Summaries of the unmitigated and mitigated construction Maritime Reservation Scenario CAP emissions are provided in **Table 73** and **Table 74**, respectively. A summary of the Maritime Reservation Scenario construction GHG emissions is provided in **Table 75**.

6.2.2 Operational CAP and GHG Emissions

As discussed above, operational emissions are expected to be very similar to the Project operational emissions, since the overall population and activities will be identical. Therefore, the only changes to operational emissions are assumed to be changes to the number of onsite emergency generators, since there will be fewer non-ballpark buildings than the Project.

[108] Note that the acreage of Phase 1 does not change between the Project and Maritime Reservation Scenario, thus construction emissions do not change. The 10 acre decrease in land use between the Project and Maritime Reservation Scenario impacts Phase 2 only, resulting in a scaling factor of 0.67.

A list of generators and their respective horsepowers were provided by the Project sponsor for the Maritime Reservation Scenario. As with the Project, the mitigated generators assume 20 hours of operation per year and operation on the rooftop. Details of these generators, as well as the unmitigated and mitigated generator emissions from the Maritime Reservation Scenario are provided in **Table 76** and **Table 77**, respectively.

Summaries of the unmitigated and mitigated operational Maritime Reservation Scenario CAP and GHG emissions are provided in **Table 78** and **Table 79**, respectively.

6.2.3 Net New Overlapping Construction and Operational CAP Emissions

As was done for the Project, construction and operational emissions were summed together during years when they occur simultaneously. Summaries of the unmitigated and mitigated net new overlapping construction and operational CAP emissions for the Maritime Reservation Scenario are given in **Table 80** and **Table 81**.

6.3 Maritime Reservation Scenario Health Risk Analysis

6.3.1 Maritime Reservation Scenario HRA Methodology Differences

Methods used in the health risk analysis for the Maritime Reservation Scenario are the same as those used for the Project, with the few exceptions noted below. Where exceptions are not noted, it can be assumed that methods follow the Project HRA methods.

Although construction of the Maritime Reservation Scenario could take up to 10 years to construct, Ramboll conservatively assumed that the construction schedule would mimic the Project schedule, which is based on seven years of construction. Assuming a shorter time period for construction is conservative for the reasons discussed in **Section 3.2.1**.

6.3.1.1 Toxic Air Contaminant Emissions

All construction and operational sources of emissions included in the Project HRA were also included in the Maritime Reservation Scenario HRA, with the exception of operational generators, which there are fewer generators in the Maritime Reservation Scenario. Differences in CAP emissions, which directly convert to DPM emissions used in the HRA, are noted in **Section 6.2** above.

6.3.1.2 Air Dispersion Modeling and Risk Characterization Methods

Air dispersion modeling and risk characterization methods used for the Maritime Reservation Scenario are identical to those used for the Project, with the exception of the following slight differences in emission rates and source parameters:

- Emission Rates: As discussed above, the Maritime Reservation Scenario operations include 15 emergency diesel generators, while the Project operations include 17.
- Source Parameters: Modeled construction area sources are smaller for the Maritime Reservation Scenario than for the Project, due to the smaller footprint of the Maritime Reservation Scenario relative to the Project. This is shown in **Figure 10**. All other source parameters should be identical to those modeled for the Project.

6.3.2 Maritime Reservation Scenario HRA Results

Health impacts from Maritime Reservation Scenario construction and operations were added together to estimate the combined health risk impacts for each Scenario discussed in the Project HRA section. A summary of excess lifetime cancer risk from the Maritime Reservation Scenario is shown in **Table 82**. Maximum non-cancer chronic HI and $PM_{2.5}$ concentration

results are shown in **Table 83** and **Table 84**, respectively. Locations of the MEIRs are shown in **Figure 11.**

Ramboll analyzed the cumulative impacts at the Maritime Reservation Scenario onsite and offsite MEIRs using BAAQMD-recommended methods. Stationary sources and roadways included in this cumulative analysis are presented in **Table 90** and **Table 91**, respectively. The combined cancer risk, non-cancer chronic hazard index, and $PM_{2.5}$ concentration from all the sources at the Maritime Reservation Scenario MEIRs are shown in **Table 92**. In addition to the BAAQMD-recommended methodology, Ramboll also evaluated cumulative operational impacts using background health risk results determined in the West Oakland Final EIR, published October 2, 2019. A detailed breakdown and summary of these impacts at the Maritime Reservation Scenario MEIR are shown in **Table 93** and **Table 94**.

7. PROJECT VARIANTS

7.1 Project Variants Descriptions

The Project may include one or more variants, which are Project elements that may or may not be proposed as part of the Project for particular reasons. Both variants are described briefly below. The locations of the variants relative to the Project site are depicted in **Figure 12**. Additional details regarding these variants, including construction schedules, equipment lists, and trip generations, are shown in **Table 95**, **Table 96**, and **Table 99**, respectively. These details were provided by the Project sponsor.

7.1.1 Peaker Power Plant

The Peaker Power Plant variant would implement the planned conversion of the existing Oakland Power Plant (now referred to as the "Peaker Power Plant") in the historic PG&E Station C facility from using jet fuel for peak power generation to a battery energy storage system.

The site of this variant is on the Project site, fronting Embarcadero West between Martin Luther King Way and Jefferson Street, and includes the associated fuel storage tank east of Jefferson Streets. The variant involves alterations to the existing power plant building, demolition of the existing fuel tank, and construction of a mixed-use building on the fuel tank parcel.

This is a variant in this EIR because the Oakland A's do not control the site, although they have entered into an agreement with the Peaker Power Plant's owner, who believes that the increased energy demand associated with the Project will make the conversion to battery storage economically feasible.

7.1.2 Aerial Gondola

The Aerial Gondola variant would include the Project as well as a new aerial gondola above and along Washington Street, extending from 10th Street in downtown Oakland to Jack London Square. The gondola would be a mass transit option for people going to the Project site on a daily basis and for events. The gondola would transport people from downtown Oakland near the 12th Street BART Station and Oakland Convention Center to Jack London Square at the foot of Washington Street. The gondola is proposed to traverse over the skyway between the courthouse and police building at Washington and 6th Street, over the Nimitz Freeway I-880, and over the railroad tracks. This variant could be implemented with the Project in Phase 1 (by opening day of the ballpark) or before Full Buildout.

7.2 Project Variant Emissions

7.2.1 Construction CAP and GHG Emissions

If implemented, both Project Variants will potentially result in increased one-time construction CAP and GHG emissions. These increases are anticipated to be minimal relative to the overall Project lifetime CAP and GHG emissions. Construction emissions from each variant were quantified using the same methods used for the Project, which are consistent with CalEEMod® methodology. According to the Project Sponsor, the mixed-use building proposed to be constructed on the fuel tank parcel site would be part of the overall land use program of the Project (if constructed) and would therefore not add additional construction emissions; building construction activity would already be accounted for in construction of the overall land use program for the Project.

Construction schedules, equipment lists, and trip generation rates were provided for each variant by the Project sponsor and are shown in **Table 95**, **Table 96**, and **Table 99**, respectively. Water truck emissions and the associated water use emissions are shown in **Table 97** and **Table 98**, respectively. Electric construction equipment and resulting GHG emissions are shown in **Table 100**.

A summary of Project Variant construction CAP emissions is presented in **Table 101** and a summary of Project Variant construction GHG emission is presented in **Table 102**.

7.2.2 Operational CAP and GHG Emissions

The Aerial Gondola and Peaker Power Plant variants are expected to have substantial reductions in CAP emissions and are therefore quantified. Additionally, the Aerial Gondola and Peaker Power Plant variants have significant potential to reduce GHG emissions from the Project, by either reducing VMT, in the case of the Aerial Gondola variant, or by reducing consumption of fossil fuels, in the case of the Peaker Power Plant variant.

The Aerial Gondola variant would result in new CAP and GHG emissions associated with electricity use at the three gondola stations: Jack London Station, 10th Street Station, and Tower 3rd Street Station. The total electricity use rates at each of the three stations was estimated by SCJ Alliance.[109] GHG emissions from this electricity use were calculated using the 2027 electricity use emission factor. The increase in emissions due to electricity use at the gondola stations is shown in **Table 103**.

The Aerial Gondola variant would also result in new CAP and GHG emissions associated with the operation of generators at the three gondola stations: Jack London Square, 10th Street Station, and Tower 3rd Street Station. As described further in **Section 3.1**, operation of emergency generators also results in the emissions of DPM, a recognized TAC in California. DPM emissions were assumed to be equivalent to PM_{10} emissions from diesel-powered generator exhaust.

Unmitigated emissions were calculated assuming that the new Aerial Gondola variant generators could operate for up to 50 hours per year for maintenance purposes, which is consistent with the maximum allowed testing time from the ATCM for Stationary Compression Ignition Engines (17 CCR 93115).[110] For this analysis we conservatively assumed the highest limit allowed under the ATCM in the unmitigated scenario.

Aerial gondola generator emissions were also calculated both for a mitigated scenario assuming generators are equipped with Tier 4 engines and 20 hours per year operation for routine testing and maintenance. Tier 4 engines can be used in on-site emergency generators to achieve reductions in DPM emissions, as well as NOx and ROG reductions, for engines larger than 25 HP. The use of Tier 4 engines also has health risk benefits due to DPM emission reductions, as discussed further below. Generator emission factors and resulting emissions for both scenarios are shown in **Table 35** and **Table 104**, respectively.

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[109] SCJ Alliance Consulting Services. 2019. Oakland Gondola Electric Service. Technical Memorandum to Noah Rosen, Oakland A's, et. al., from James K Bunch. April 3.

[110] California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf

The Aerial Gondola variant would also result in avoided CAP and GHG emissions associated with a reduction of vehicle miles traveled using on-road vehicles. According to Fehr & Peers,[111] between 2% and 13% of non-delivery vehicle trips were assumed to be replaced by gondola trips, depending on land use. The reduction in CAP, including fugitive dust, and GHG emissions due to the decrease in on-road vehicle miles traveled is shown in **Table 105**.

The Peaker Power Plant variant avoided CAP and GHG emissions would be associated with the discontinuation of fuel combustion for power generation and the installation of battery storage. The direct avoided emissions were calculated based on the average annual Peaker Power Plant electricity generation and fuel consumption for 2010 to 2018[112] and the difference in GHG intensity between the Peaker Power Plant (2010-2018 average) and the GHG intensity of the energy mix that is replacing it. Based on conversations with ARB and updated information from Vistra, the Peaker Power Plant operator, we understand that the energy supplied to the battery energy storage system (ESS) is from the grid. For this calculation, it is assumed that the carbon intensity of the electricity replacement is equal to the grid-averaged carbon intensity of electricity in the operating year, as calculated in **Table 21**.

This is adjusted for in the calculation of indirect GHG emissions, which represents the avoided GHG emissions that would not occur across the grid as the battery energy storage system would provide improvements to grid reliability, promote the transition to more renewably sourced electricity, and eliminate the need for additional fossil fuel peaker plant operation. This calculation assumes that the battery storage system stores electricity from the grid during off-peak periods when renewable power sources such as solar and wind power are in peak generation and is based on average renewable curtailment rates from the California Independent System Operator (CAISO) in the period from May 2014 through August 2019. [113] The battery energy storage system is assumed to be fully charged to its maximum capacity of 360 MWh/day[114] using solar and wind power that would have otherwise been curtailed during peak curtailment months and proportionally lower charge rates during other months of the year. This is a conservative estimate as it is based on historical curtailment. As California increases solar and wind generation capacity, the battery energy storage system could potentially be fully charged using renewable sources all year, even in the historically low-curtailment months. Details of these calculations are shown in **Table 106**, **Table 107**, and **Table 108**.

Additionally, a mixed-use building is proposed as part of the Peaker Power Plant variant in the location of the existing fuel tank parcel. Based on its proposed height, this building would require an emergency generator. The size of the generator was provided by the Project sponsor. Unmitigated and mitigated emissions were calculated for this generator using the same assumptions described above for the Project (see **Section 2.4.9**). According to the Project Sponsor, the mixed-use building proposed to be constructed on the fuel tank parcel

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[111] Fehr & Peers. 2020. Memorandum, Subject: Howard Terminal – Air, Noise, and Greenhouse Gas Forecast Inputs. January 27. See Appendix B.

[112] Data from U.S. Energy Information Administration Form EIA-923 detailed data for 2010-2018 (https://www.eia.gov/electricity/data/eia923/) for Dynegy Oakland Power Plant.

[113] Monthly curtailment data available online at: http://www.caiso.com/informed/Pages/ManagingOversupply.aspx (Accessed: September 2019).

[114] According to Vistra, the new battery storage facility will have capacity for up to 90 MW for 4 hours.

site would be part of the overall land use program of the Project (if constructed) and would therefore not add additional operational emissions beyond what was already calculated for the Project; operational emissions would already be accounted for in operational emissions calculated for the overall land use program for the Project. Overall, the Peaker Power Plant variant would result in an annual CAP and GHG emissions reduction, as shown in **Table 109**.

A summary of Project variant operational CAP and GHG emissions relative to Project emissions is shown in **Table 110**.

7.3 Project Variant Health Risk Analysis

7.3.1 Project Variant HRA Methodology Differences

Methods used in the health risk analysis for each Project Variant are the same as those used for the Project, with the few exceptions noted below. Where exceptions are not noted, it can be assumed that methods follow the Project HRA methods.

7.3.1.1 Toxic Air Contaminant Emissions

As with the Project, construction sources include off-road diesel construction equipment and on-road diesel hauling trucks.

Operation of the Oakland Peaker Power Plant under the Peaker Power Plant variant would result in reduced health impacts in the surrounding community due to the shutdown of existing fossil fueled power generation. Because the Oakland Peaker Power Plant existing operations were modeled in the West Oakland EIR (under the name Dynegy), operational health risks were pulled directly using the methods described in the Cumulative HRA section above. Therefore, Ramboll did not calculate TACs, perform dispersion modeling, or calculate health risks from this source but instead used results provided by the BAAQMD.

Additionally, as discussed above, the Oakland Peaker Power Plant Variant fuel tank parcel may be developed with a mixed-use building and associated emergency generator. The Aerial Gondola Variant will also have three emergency generators associated with its operation, as discussed above. Ramboll calculated TAC emissions from each Variant's generators, performed dispersion modeling, and calculated health risks using the same methods described above for both the unmitigated and mitigated Project generators.

Finally, operational traffic was not calculated for either variant. Traffic from the Peaker Power Plant Variant is not expected to be significant enough to include in health risk calculations since it is not anticipated to generate more than 1,000 vehicles per day (the conservative volume at which impacts were evaluated for the Project). A reduction in traffic from the Aerial Gondola is expected; however it is expected to be a minimal decrease and was not included in this analysis as a conservative assumption.

7.3.1.2 Air Dispersion Modeling and Risk Characterization Methods

Differences between the Project and Project Variants dispersion modeling and risk characterization methods are noted below:

- Emission Rates: Emitting activities were modeled to reflect the actual hours of construction and operation. According to the Project sponsor, construction of the Project will mostly likely occur between the hours of 7 am and 7 pm. No nighttime construction was included in the Variant analysis.

  As was done for the Project construction, for annual average ambient air concentrations, the estimated annual average dispersion factors are multiplied by the annual average

emission rates. The emission rates will vary day to day, with some days having no emissions. For simplicity, the model will assume a constant emission rate during the entire year for construction. For construction, the equipment is expected to operate on average 8 hours per day, but these 8 hours can occur anytime in the 12-hour window from 7 am to 7 pm. Because the exact timing of when the equipment will operate is not known, the 8 hours of emissions were averaged over these 12 hours of meteorology utilizing the AERMOD EMISFACT option, which allows for the modeling of variable emission rates. The average emission rate from construction will be calculated by taking the total mass of emissions and dividing by the hours considered in the model. Furthermore, construction is largely expected to occur on weekdays, but weekend meteorology is included in the dispersion model, as was done for the Project.

Emission rates for the generators were calculated using the same methods as those used for Project generators.

- Source parameters: Modeled construction sources included on-site activity only. Area polygon sources were used to represent the on-site construction activity in AERMOD for each Variant; these are shown in **Figure 12**. The area polygon source size and number of vertices are dependent on the specific configuration of each source. All other source parameters match those used in the Project construction area source modeling. Additionally, point sources were used for the Variant generators. Variant generators were assumed to be at ground level for the Aerial Gondola and on the roof for the Peaker Power Plant fuel tank parcel mixed-use building. All other source parameters are consistent with those used for the Project generators. Because the fuel tank parcel would be an additional on-site building, building downwash was remodeled for all Project generators to account for any potential downwash effects from the new parcel.
- Exposure Assessment: The Project Variant construction schedules are shown in **Table 95.** Because all variant construction ends prior to Phase 1 buildout, the exposure scenarios evaluated for the Project Variants were the same as were estimated for the Project. Even though the fuel tank parcel construction ends before the start of Phase 1 Buildout, it was assumed that residents of this building would move in at the same time as the rest of the Phase 1 residents.

7.3.2 Project Variant HRA Results

The combined maximum result of the Project and Gondola Variant excess lifetime cancer risk, non-cancer chronic HI, and $PM_{2.5}$ concentrations are shown in **Table 111**, **Table 112**, and **Table 113**, respectively. Locations of the MEIRs are shown in **Figure 14**.

The combined maximum result of the Project and Peaker Power Plant Variant excess lifetime cancer risk, non-cancer chronic HI, and $PM_{2.5}$ concentrations are shown in **Table 114**, **Table 115**, and **Table 116**, respectively. Locations of the MEIRs are shown in **Figure 13**.

The combined maximum result of the Project, Gondola Variant, and Peaker Power Plant Variant excess lifetime cancer risk, non-cancer chronic HI, and $PM_{2.5}$ concentrations are shown in **Table 117**, **Table 118**, and **Table 119**, respectively.

Cumulative impacts for the Project Variants were also evaluated. Cumulative results at the Project + Aerial Gondola MEIR are shown in **Table 120**, **Table 121**, and **Table 122**, while cumulative results using background values from the 2024 West Oakland EIR are shown in **Table 123** and **Table 124**. Results of the cumulative analysis using BAAQMD-recommended methods at the Project + Peaker Power Plant MEIR are shown in **Table 125**, **Table 126**, and

Table 127 while 2024 West Oakland EIR cumulative impacts at the MEIR are shown in **Table 128** and **Table 129**.

8. PROJECT ALTERNATIVES

Four Project Alternatives were identified for the Project. The Alternatives are described below, along with a description of the emissions and health risks of each relative to the Project.

8.1 Alternative 1: No Project Alternative

The No Project Alternative assumes that the Project is not constructed and that existing truck activity at Howard Terminal continues. The analysis assumes that there are no emissions or health risks associated with the Project, and instead quantifies emissions and health risks from existing operations at Howard Terminal.

8.1.1 Alternative 1 CAP and GHG Emissions

CAP and GHG emissions for the No Project Alternative were quantified using 2018 Howard Terminal gate transaction data provided by Port of Oakland and represents all gate transactions. Emissions from existing truck activity at Howard Terminal are based on the Howard Terminal truck trips estimated from gate transactions that are currently being generated, as provided by the Port of Oakland. According to the Port data, emissions include truck time in the queue, in terminal idling, and in terminal driving. A summary of these emissions is shown in **Table 131**.

8.1.2 Alternative 1 HRA

Health risks from the existing Howard Terminal truck activity were quantified for the Project Analysis to determine the net Project health impacts at off-site receptors, as discussed in the sections above. Existing Howard Terminal truck activity was modeled as an area source covering the full Project site with release parameters similar to on-road haul trucks, discussed in **Section 3.1.2.4**. Modeling parameters are shown in **Table 62** and exposure parameters are shown in **Table 64**. Emissions used to calculate health risks are shown in **Table 131**. The health risks due to the emissions from existing truck parking uses currently located at Howard Terminal are quantified in **Table 132**. Even if truck activity is relocated to other areas of the Port or in the vicinity of the Project, this activity is unlikely to impact health risk results of the Project since impacts are localized (generally within 1,000 feet of the Project sources).

8.2 Alternative 2: Off-Site (Coliseum Area) Alternative

The Off-Site (Coliseum Area) Alternative assumes that Howard Terminal would remain in its current use and the Project sponsor would construct a new ballpark and mixed-use development at the site of the Oakland Coliseum as envisioned in the City's adopted Coliseum Area Specific Plan. This analysis is included in the City of Oakland Coliseum District Specific Plan EIR certified in 2015.[115] No additional analyses were conducted for this Alternative in this technical report.

8.3 Alternative 3: Reduced Project Alternative

The Reduced Project Alternative assumes that the ballpark, hotel, and performance venue are constructed during the same time periods assumed for the Project. In addition to these land uses, this alternative also assumes that residential and commercial land uses, including

[115] City of Oakland, Coliseum Area Specific Plan, *Draft Environmental Impact Report, Volume I and II,* dated August 2014.

offices, retail, and restaurant spaces, as well as parking garages, will be constructed in both Phase 1 and Phase 2 with reduced square footage relative to the Project. The reduced square footage analyzed for this alternative was a 77 percent reduction relative to the Project.

8.3.1 Reduced Project Alternative CAP and GHG Emissions

Construction CAP and GHG emissions were quantified using the same methods used for Project construction emissions. Ramboll assumed grading, site preparation, and site utilities emissions would remain the same since the overall building footprint of the this alternative would be the same as the Project. All other subphases were scaled based on the reduced square footage to obtain emissions for each land use separately. Ramboll assumed the parking garage is attributed to 50% commercial and 50% residential land uses.

Operational CAP and GHG emissions were quantified using the same methods used for the Project operational emissions. Ramboll scaled emissions based on square footage and VMT to obtain emissions for each land use separately.

Emissions associated with the ballpark, hotel, and performance venue are fixed since these land uses will not be reduced, whereas the emissions associated with residential and commercial area vary depending on the percent reduction determined for this alternative. A reduction of 77 percent for the commercial and residential square footage was analyzed for this alternative.

A summary of these emissions is shown in **Table 133**.

8.3.2 Reduced Project Alternative HRA

The Reduced Project Alternative assumes that construction will be built out using the same schedule as the Project; therefore, health risk exposure parameters are the same as the Project. Since emissions are lower for this Alternative than for the Project, but all other factors are held constant, health risk impacts for this Alternative will be the same or lower than the Project health risk impacts. Therefore, specific health risks for the Reduced Project Alternative were not quantified.

8.4 Alternative 4: Grade Separation Alternative

Under the Grade Separation Alternative, the Project would be constructed at the Project site and would be revised to include construction of a grade-separated crossing of the railroad tracks for vehicles accessing the site. There are two potential locations for the grade-separated vehicular crossing, one at Market Street and one at Brush Street, as well as two possible designs for each location – an underpass or an overcrossing. Each of these four scenarios was analyzed.

The Grade Separation Alternative would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site.

Construction schedules, equipment lists, and trip generation rates were provided for the Grade Separation Alternative by the Project sponsor and are shown in **Table 134**, **Table 135**, and **Table 138**, respectively.

8.4.1 Grade Separation Alternative CAP and GHG Emissions

Substantial additional excavation and construction would be required to build the grade separated crossing, increasing the amount of construction equipment and construction truck traffic to and from the site. Construction CAP and GHG emissions from this alternative were

quantified using the same methods used for Project construction emissions. Water truck emissions were estimated separately as **Table 136** and **Table 137**.

According to the transportation engineers, changes in local traffic circulation with this alternative would not result in a mode shift and the same vehicle trip reduction measures would apply to this alternative; therefore, VMT of the Grade Separation Alternative would be very similar to the Project. No other operational emission sources would be impacted by this alternative. Therefore, operational CAP and GHG emissions for this alternative are assumed to be equal to the Project operational CAP and GHG emissions.

These emissions are summarized for unmitigated CAPs and mitigated CAPs in **Table 139** and **Table 140**, respectively. GHG emissions from the Grade Separation Alternative are summarized in **Table 141**.

8.4.2 Grade Separation Alternative HRA

8.4.2.1 Grade Separation Alternative HRA Methodology Differences

Methods used in the health risk analysis for each possible Grade Separation Alternative are the same as those used for the Project, with the few exceptions noted below. Where exceptions are not noted, it can be assumed that methods follow the Project HRA methods.

8.4.2.2 Toxic Air Contaminant Emissions

As with the Project, construction sources include off-road diesel construction equipment and on-road diesel hauling trucks. Construction TACs were quantified and a construction HRA was performed, as discussed further below.

None of the traffic changes associated with the Grade Separation Alternative are expected to be significant enough to include in health risk calculations since they would not generate more than 1,000 vehicles per day (the conservative volume at which impacts were evaluated for the Project). In addition, the Grade Separation Alternative is not expected to increase traffic volumes beyond what is produced in that area due to the Project. Therefore, Ramboll did not calculate TACs, perform dispersion modeling, or calculate health risks from the change in traffic associated with this alternative. Instead, Ramboll conservatively assumed that health impacts from Project traffic would be unaffected by this alternative.

Additionally, there are no changes to the Project emergency generators or additional other operational sources of TACs.

8.4.2.3 Air Dispersion Modeling and Risk Characterization Methods

Differences between the Project and the Grade Separation Alternative dispersion modeling and risk characterization methods are noted below:

- Emission Rates: Emitting activities were modeled to reflect the actual hours of construction and operation. According to the Project sponsor, construction of this Alternative will mostly likely occur between the hours of 7 am and 7 pm. No nighttime construction was included in the Grade Separation analysis.

  As was done for Project construction, the estimated annual average dispersion factors are multiplied by the annual average emission rates to obtain annual average ambient air concentrations. The emission rates will vary day to day, with some days having no emissions. For simplicity, the model will assume a constant emission rate during the entire year for construction. For construction, the equipment is expected to operate on average 8 hours per day, but these 8 hours can occur anytime in the 12-hour window

from 7 am to 7 pm. Because the exact timing of when the equipment will operate is not known, the 8 hours of emissions were averaged over these 12 hours of meteorology utilizing the AERMOD EMISFACT option, which allows for the modeling of variable emission rates. The average emission rate from construction will be calculated by taking the total mass of emissions and dividing by the hours considered in the model. Furthermore, construction is largely expected to occur on weekdays, but weekend meteorology is included in the dispersion model, as was done for the Project.

- Source parameters: Modeled construction sources included on-site activity and off-site construction hauling activity, consistent with the Project construction analysis. Area polygon sources were used to represent the on-site activity in AERMOD for each option of the Grade Separation Alternative; these are shown in **Figure 15**. The area polygon source size and number of vertices are dependent on the specific configuration of each source. All other source parameters match those used in the Project construction area source modeling. Hauling routes and breakdowns of emissions along these routes were identical to the Project.
- Exposure Assessment: The Grade Separation Alternative construction takes place during 2021-2023 for overpasses and during 2021-2024 for underpasses, as shown in **Table 134.** Health effects from overpass construction in the Grade Separation Alternatives were evaluated for off-site receptors for Scenario 1 only. Scenario 1 accounts for a fetus in its third trimester at the beginning of Project construction and exposed to all construction emissions and approximately 27 years of operational emissions at off-site receptor locations. Health effects from underpass construction in the Grade Separation Alternatives were evaluated for both off-site receptors and on-site receptors for Scenario 1 and Scenario 2. Scenario 2 accounts for a fetus in its third trimester at the beginning of Phase 1 operation in 2024. Scenario 2 receptors would overlap with underpass construction for approximately five months. Scenario 3 was not evaluated since both overpass and underpass construction would be finished prior to the start of that Scenario.

8.4.3 Grade Separation Alternative HRA Results

Impacts from the four Grade Separation Alternatives were added to the Project to determine the combined maximum impact from the Project and each possible Grade Separation Alternative. These are shown for excess lifetime cancer risk, non-cancer chronic HI, and $PM_{2.5}$ concentrations in **Table 142**, **Table 143**, and **Table 144**, respectively. Locations of the MEIRs are shown in **Figure 16**.

Cumulative impacts at the Grade Separation Alternative MEIR were also evaluated. Cumulative results determined using BAAQMD-recommended methodology at the Project + Grade Separation Alternative MEIR are shown in **Table 145**, **Table 146**, and **Table 147**. Cumulative results determined using background values from the 2024 West Oakland EIR at the MEIR are shown in **Table 148** and **Table 149**.

TABLES

Table 1
Land Use Summary for Existing Conditions and Proposed Project
Oakland Waterfront Ballpark District Project
Oakland, California

Land Use[1]	CalEEMod® Land Use	Size	Units	Square Footage
Existing Conditions and A's Related Existing Conditions (2018)				
Coliseum Ballpark	--	1,400	ksf	1,400,000
A's Headquarters[2]	General Office Building	40	ksf	40,000
Ballpark Parking	Parking Lot	10,000	spaces	3,000,000
Phase 1 Buildout Conditions[3,4] (2023)				
Howard Terminal Ballpark	--	1,200	ksf	1,200,000
Office	General Office Building	250	ksf	250,000
Retail	Regional Shopping Center	30	ksf	30,000
Residential	High Rise Apartment	540	units	594,000
Performance Venue[5]	Arena	0	seats	0
Hotel	Hotel	400	rooms	280,000
Parking Garages	Enclosed Parking Garage with Elevators	1,240	spaces	372,000
Ballpark Parking[5]	Enclosed Parking Garage with Elevators	0	spaces	0
Full Project Buildout Conditions[3,4] (2027)				
Howard Terminal Ballpark	--	1,200	ksf	1,200,000
Office	General Office Building	1,500	ksf	1,500,000
Retail	Regional Shopping Center	270	ksf	270,000
Residential	High Rise Apartment	3,000	units	3,300,000
Performance Venue	Arena	3,500	seats	50,000
Hotel	Hotel	400	rooms	280,000
Parking Garages	Enclosed Parking Garage with Elevators	6,900	spaces	2,070,000
Ballpark Parking	Enclosed Parking Garage with Elevators	2,000	spaces	600,000

Notes:

1. Land uses analyzed based on Project square footages provided by the Athletics.
2. The Athletics' headquarters is currently located in Jack London Square. The headquarters will be relocated to the new Howard Terminal ballpark land use and is therefore not separately listed under the Project conditions.
3. Phase 1 and Full Buildout conditions were provided by the Athletics and represent a reasonable and accelerated phasing schedule for the purposes of conservatively assessing impacts.
4. The land use program at Howard Terminal will also include interim surface parking during Phase 1, which will be replaced during phased development.
5. The Performance Venue and Ballpark Parking are not built out as part of Phase 1 and are shown as zero.

Abbreviations:

ksf - 1,000 square feet

Table 2
Activity, Attendance, and Population Data for Existing Conditions and Proposed Project
Oakland Waterfront Ballpark District Project
Oakland, California

Activity, Attendance, and Population Data[1]				
Event Type			**Quantity**	**Units**
Existing Conditions (2018)				
MLB Uses	A's Games	Weekday Evening	41	games/yr
		Weekday Day	14	games/yr
		Weekend	27	games/yr
	Attendees per Game[2]		22,671	attendees/game
Other Events			47,500	attendees/event
			2	events/yr
NFL Games			54,664	attendees/game
			9	games/yr
Arena Management			50	employees
Sports Team Management[3]			235	employees
A's Related Existing Conditions (2018)				
MLB Uses	A's Games	Weekday Evening	41	games/yr
		Weekday Day	14	games/yr
		Weekend	27	games/yr
	Attendees per Game[2]		22,671	attendees/game
Arena Management			50	employees
Sports Team Management[3]			235	employees
Phase 1 Buildout (2023)[4]				
MLB Uses	A's Games	Weekday Evening	41	games/yr
		Weekday Day	14	games/yr
		Weekend	27	games/yr
	Attendees per Game		35,000	attendees/game
Events	Concerts		35,000	attendees/event
			9	events/yr
	Other Events		7,500	attendees/event
			35	events/yr
	Corporate/Community Events		2,000	attendees/event
			100	events/yr
	Plaza Events		4,000	attendees/event
			16	events/yr
Arena Management			50	employees
Sports Team Management			235	employees
Office			1,111	employees
Retail			60	employees
Residential			1080	residents
			17	employees
Performance Venue[5]			--	employees
Hotel			360	employees
Parking and Other			18	employees

Table 2
Activity, Attendance, and Population Data for Existing Conditions and Proposed Project
Oakland Waterfront Ballpark District Project
Oakland, California

Activity, Attendance, and Population Data[1]				
Event Type			**Quantity**	**Units**
Full Project Buildout Conditions (2027)				
MLB Uses	A's Games	Weekday Evening	41	games/yr
		Weekday Day	14	games/yr
		Weekend	27	games/yr
	Attendees per Game		35,000	attendees/game
Events	Concerts		35,000	attendees/event
			9	events/yr
	Other Events		7,500	attendees/event
			35	events/yr
	Corporate/Community Events		2,000	attendees/event
			100	events/yr
	Plaza Events		4,000	attendees/event
			16	events/yr
Arena Management			50	employees
Sports Team Management			235	employees
Office			6,667	employees
Retail			540	employees
Residential			6000	residents
			94	employees
Performance Venue			200	employees
Hotel			360	employees
Parking and Other			33	employees

Notes:

1. Number of events, attendance, and population data provided by the Project Sponsor.
2. A 30-year average was used for Attendees per Game for Existing Conditions and A's Related Existing Conditions.
3. The Athletics' headquarters is currently located in Jack London Square. The headquarters will be relocated to the new Howard Terminal ballpark land use and is therefore not separately listed under the Project conditions.
4. Since the new ballpark will be fully built out during Phase 1, attendance and population data are assumed to be the same at Phase 1 Buildout and Full Buildout.
5. The Performance Venue is not built out as part of Phase 1 and is shown as zero.

Abbreviations:

MLB - Major League Baseball

yr - year

Table 3
Project Construction Phasing Schedule
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area[1]	Construction Activity	Construction[2]					Operations
		Phase Start Date	Phase End Date	Number Work Days[3]	Days per Week	Hours per Day[4]	Start Date
Phase 1	Demolition	9/1/2020	11/9/2020	50	5	8	-
Phase 2	Demolition	11/10/2020	1/18/2021	50	5	8	-
DDC Area	Geotechnical Work	11/10/2020	4/15/2021	113	5	8	-
DPC Area	Geotechnical Work	11/10/2020	4/15/2021	113	5	8	-
Offsite Improvements: Grids 1-19[1,5]	Demolition	-	-	152	5	8	-
	Construct Curb, Gutter, Sidewalk, Ramps	-	-	307	5	8	-
	New / Modified Traffic Signal	-	-	485	5	8	-
	Street Lighting	-	-	240	5	8	-
	Paving	-	-	117	5	8	-
	Striping	-	-	104	5	8	-
Phase 1 Ballpark and Mixed-Use Development	Cut Off Wall	1/2/2021	3/2/2021	44	5	8	-
	Grading and Site Preparation	3/5/2021	11/23/2021	188	5	8	Opening Day Program: 4/20/2023 Mixed-Use Program: 12/2/2023
	Grading and Site Preparation Remediation	4/1/2021	5/15/2021	32	5	8	
	Crane Removal Demolition	6/22/2021	12/8/2021	122	5	8	
	Site Utilities	11/24/2021	4/28/2022	112	5	8	
	Ballpark Building Construction	4/12/2021	4/19/2023	633	6	8	
	Mixed Use Building Construction	11/24/2021	12/1/2023	528	5	8	
	Architectural Coating	2/15/2022	12/1/2023	469	5	8	
	Paving	7/1/2022	9/30/2022	66	5	8	-
	Pedestrian Bike Overpass Grading and Site Preparation[1]	7/14/2022	9/7/2022	40	5	8	-
	Pedestrian Bike Overpass Site Utilities[1]	7/14/2022	9/7/2022	40	5	8	-
	Pedestrian Bike Overpass Tower Construction[1]	9/8/2022	3/22/2023	140	5	8	-
	Pedestrian Bike Overpass Sitework[1]	3/23/2023	5/17/2023	40	5	8	-
Phase 2 Mixed-Use Development	Grading and Site Preparation	12/4/2023	8/19/2024	186	5	8	Full Masterplan: 9/2/2027
	Grading and Site Preparation Remediation	1/1/2024	2/15/2024	34	5	8	
	Site Utilities	8/20/2024	2/5/2025	122	5	8	
	Mixed Use Building Construction	8/20/2024	9/1/2027	792	5	8	
	Paving	7/1/2025	1/1/2026	133	5	8	
	Architectural Coating	6/20/2025	9/1/2027	574	5	8	

Notes:

1. Construction areas were provided by the Athletics and are shown in Figures 2A and 2B. The Offsite Improvements phase and the Pedestrian Bike Overpass in Phase 1 are mitigation measures and are only constructed in the Mitigated Scenario.
2. Construction schedule provided by the Athletics.
3. Ballpark Building Construction will have 6 work days per week; all other activities are assumed to occur 5 days per week based on information from the Project sponsor.
4. Emissions were estimated assuming a maximum of 8 hours per day of operation; however, for dispersion modelling purposes, Phase 1 construction was modeled during a full 24 hour period to account for the various times when construction could occur (as described further in Table 4). Phase 2 construction was modelled during daytime hours (7am to 7pm).
5. Phase start and end dates vary by grid, but all construction occurs between 2/1/2021 and 9/21/2021. The number of days is the total for all grids.

Abbreviations:

DDC - Deep Dynamic Compaction

DPC - Direct Power Compaction

Table 4
Project Construction Off-Road Equipment List
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Equipment Type[1,2]	CalEEMod® Equipment Type	Fuel[1]	Number[1]	HP[1]	kW[1]	Load Factor[3]	Equipment Start Date[1]	Equipment End Date[1]	Number of Days	Hours per Day[1]	Utilizations for Duration[1,4]	Unmitigated Equipment Tier[5]	Mitigated Equipment Tier[5]	Percent of Night Work[6]
Phase 1	Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	--	0.73	9/1/2020	11/9/2020	50	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Excavators	Excavators	Diesel	6	158	--	0.38	9/1/2020	11/9/2020	50	8	80%	Fleet-Average Tier	Tier 4 Final	0%
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	--	0.37	9/1/2020	11/9/2020	50	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Crushing / Proc. Equipment	Crushing/Proc. Equipment	Diesel	1	85	--	0.78	9/1/2020	11/9/2020	50	8	75%	Fleet-Average Tier	Tier 4 Final	0%
Phase 2	Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	--	0.73	11/10/2020	1/18/2021	50	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Excavators	Excavators	Diesel	6	158	--	0.38	11/10/2020	1/18/2021	50	8	80%	Fleet-Average Tier	Tier 4 Final	0%
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	--	0.37	11/10/2020	1/18/2021	50	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Crushing / Proc. Equipment	Crushing/Proc. Equipment	Diesel	1	85	--	0.78	11/10/2020	1/18/2021	50	8	75%	Fleet-Average Tier	Tier 4 Final	0%
Offsite Improvements: Grids 1-19[7,8]	Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	--	0.73	--	--	23	8	100%	--	Tier 4 Final	0%
		Excavators	Excavators	Diesel	1	158	--	0.38	--	--	130	8	100%	--	Tier 4 Final	0%
		Tractors/Loaders/Dump Truck	Tractors/Loaders/Backhoes	Diesel	2	97	--	0.37	--	--	130	8	33%	--	Tier 4 Final	0%
	Construct Curb, Gutter, Sidewalk, Ramps	Road Compactor	Plate Compactors	Diesel	1	100	--	0.43	--	--	31	8	50%	--	Tier 4 Final	0%
		Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	--	0.73	--	--	31	8	50%	--	Tier 4 Final	0%
		Concrete Truck	Off-Highway Trucks	Diesel	2	300	--	0.38	--	--	31	8	100%	--	Tier 4 Final	0%
	New / Modified Traffic Signal	Crane	Cranes	Diesel	1	175	--	0.29	--	--	25	8	100%	--	Tier 4 Final	0%
		Hole trencher	Trenchers	Diesel	1	175	--	0.50	--	--	49	8	100%	--	Tier 4 Final	0%
		Excavators	Excavators	Diesel	1	158	--	0.38	--	--	97	8	50%	--	Tier 4 Final	0%
		Concrete Truck	Off-Highway Trucks	Diesel	1	300	--	0.38	--	--	49	8	50%	--	Tier 4 Final	0%
	Street Lighting	Crane	Cranes	Diesel	1	175	--	0.29	--	--	23	8	100%	--	Tier 4 Final	0%
		Hole trencher	Trenchers	Diesel	1	175	--	0.50	--	--	46	8	100%	--	Tier 4 Final	0%
		Excavators	Excavators	Diesel	1	158	--	0.38	--	--	120	8	100%	--	Tier 4 Final	0%
		Concrete Truck	Off-Highway Trucks	Diesel	1	300	--	0.38	--	--	24	8	50%	--	Tier 4 Final	0%
	Paving	Road Compactor	Plate Compactors	Diesel	1	100	--	0.43	--	--	117	8	50%	--	Tier 4 Final	0%
		Tractors/Loaders/Dump Truck	Tractors/Loaders/Backhoes	Diesel	1	97	--	0.37	--	--	117	8	75%	--	Tier 4 Final	0%
	Striping	Construction Vehicle	Off-Highway Trucks	Diesel	1	100	--	0.38	--	--	104	8	100%	--	Tier 4 Final	0%
DDC	Geotechnical Work	Excavators	Excavators	Diesel	2	158	--	0.38	11/10/2020	4/15/2021	113	8	90%	Fleet-Average Tier	Tier 4 Final	0%
		Dozer	Rubber Tired Loaders	Diesel	1	215	--	0.36	11/10/2020	4/15/2021	113	8	33%	Fleet-Average Tier	Tier 4 Final	0%
		Cranes	Cranes	Diesel	4	226	--	0.29	11/10/2020	4/15/2021	113	8	90%	Fleet-Average Tier	Tier 3	0%
		Water Trucks	Off-Highway Trucks	Diesel	3	402	--	0.38	11/10/2020	4/15/2021	113	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Generators	Generator Sets	Diesel	2	84	--	0.74	11/10/2020	4/15/2021	113	8	70%	Fleet-Average Tier	Tier 4 Final	0%
DPC	Geotechnical Work	Excavators	Excavators	Diesel	2	158	--	0.38	11/10/2020	4/15/2021	113	8	90%	Fleet-Average Tier	Tier 4 Final	0%
		Dozer	Rubber Tired Loaders	Diesel	1	215	--	0.36	11/10/2020	4/15/2021	113	8	33%	Fleet-Average Tier	Tier 4 Final	0%
		Cranes	Cranes	Diesel	4	226	--	0.29	11/10/2020	4/15/2021	113	8	90%	Fleet-Average Tier	Tier 3	0%
		Water Trucks	Off-Highway Trucks	Diesel	2	402	--	0.38	11/10/2020	4/15/2021	113	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Generators	Generator Sets	Diesel	1	84	--	0.74	11/10/2020	4/15/2021	113	8	70%	Fleet-Average Tier	Tier 4 Final	0%
Phase 1	Cut Off Wall	Drill	Bore/Drill Rigs	Diesel	2	433	--	0.50	1/2/2021	3/2/2021	44	8	90%	Fleet-Average Tier	Tier 4 Final	5%
		Gradall Type Forklifts	Forklifts	Diesel	2	111	--	0.20	1/2/2021	3/2/2021	44	8	90%	Fleet-Average Tier	Tier 4 Final	5%
		Manlift	Aerial Lifts	Diesel	2	58	--	0.31	1/2/2021	3/2/2021	44	8	75%	Fleet-Average Tier	Tier 4 Final	5%
		Cranes	Cranes	Diesel	2	286	--	0.29	1/2/2021	3/2/2021	44	8	90%	Fleet-Average Tier	Tier 4 Final	5%
		Excavators	Excavators	Diesel	2	189	--	0.38	1/2/2021	3/2/2021	44	8	75%	Fleet-Average Tier	Tier 4 Final	5%
		Rubber Tired Loaders	Rubber Tired Loaders	Diesel	2	90	--	0.36	1/2/2021	3/2/2021	44	8	70%	Fleet-Average Tier	Tier 4 Final	5%
	Grading and Site Preparation	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	20	97	--	0.37	3/5/2021	5/23/2021	56	8	90%	Fleet-Average Tier	Tier 4 Final	20%
		Scrapers/Blades/Rollers	Scrapers	Diesel	10	500	--	0.48	3/5/2021	5/23/2021	56	8	90%	Fleet-Average Tier	Tier 4 Final	20%
		Water Trucks	Off-Highway Trucks	Diesel	5	402	--	0.38	3/5/2021	5/23/2021	56	8	75%	Fleet-Average Tier	Tier 4 Final	20%
		Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	5/24/2021	11/23/2021	132	8	100%	Fleet-Average Tier	Tier 4 Final	5%
		Generators	Generator Sets	Diesel	3	84	--	0.74	3/5/2021	4/11/2021	26	8	70%	Fleet-Average Tier	Tier 4 Final	20%
	Grading and Site Preparation Remediation	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	--	0.37	4/1/2021	5/15/2021	32	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Scrapers/Blades/Rollers	Scrapers	Diesel	3	500	--	0.48	4/1/2021	5/15/2021	32	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	4/1/2021	5/15/2021	32	8	75%	Fleet-Average Tier	Tier 4 Final	0%
	Crane Removal Demolition	Cranes	Cranes	Diesel	2	226	--	0.29	6/22/2021	12/8/2021	122	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Excavators	Excavators	Diesel	4	158	--	0.38	6/22/2021	12/8/2021	122	8	75%	Fleet-Average Tier	Tier 4 Final	0%
	Site Utilities	Excavators	Excavators	Diesel	4	162	--	0.38	11/24/2021	4/28/2022	112	8	95%	Fleet-Average Tier	Tier 4 Final	15%
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	1	97	--	0.37	11/24/2021	4/28/2022	112	8	100%	Fleet-Average Tier	Tier 4 Final	15%
		Rubber Tired Loaders	Rubber Tired Loaders	Diesel	2	199	--	0.36	11/24/2021	4/28/2022	112	8	100%	Fleet-Average Tier	Tier 4 Final	15%
		Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	11/24/2021	4/28/2022	112	8	75%	Fleet-Average Tier	Tier 4 Final	15%

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Table 4
Project Construction Off-Road Equipment List
Oakland Waterfront Ballpark District Project
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Construction Area	Construction Activity	Equipment Type[1,2]	CalEEMod® Equipment Type	Fuel[1]	Number[1]	HP[1]	kW[1]	Load Factor[3]	Equipment Start Date[1]	Equipment End Date[1]	Number of Days	Hours per Day[1]	Utilizations for Duration[1,4]	Unmitigated Equipment Tier[5]	Mitigated Equipment Tier[5]	Percent of Night Work[6]
Phase 1	Ballpark Building Construction	Pile Driving Rigs	Bore/Drill Rigs	Diesel	4	206	--	0.50	4/12/2021	6/1/2021	44	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Gradall-type Forklifts	Forklifts	Diesel	4	93	--	0.20	4/12/2021	6/1/2021	44	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Concrete Boom Pumps	Other Construction Equipment	Diesel	2	480	--	0.42	4/12/2021	8/19/2022	425	8	15%	Fleet-Average Tier	Tier 4 Final	33%
		Bobcat	Rubber Tired Loaders	Diesel	2	71	--	0.36	4/12/2021	4/19/2022	320	8	90%	Fleet-Average Tier	Tier 4 Final	5%
		Small Excavator	Excavators	Diesel	2	404	--	0.38	4/12/2021	10/12/2021	158	8	90%	Fleet-Average Tier	Tier 4 Final	10%
		Large Excavator	Excavators	Diesel	2	523	--	0.38	4/12/2021	10/12/2021	158	8	90%	Fleet-Average Tier	Tier 4 Final	10%
		Crawler Cranes	Cranes	Diesel	4	530	--	0.29	10/12/2021	7/12/2022	235	8	95%	Fleet-Average Tier	Tier 4 Final	10%
		Mobile Cranes	Cranes	Diesel	4	530	--	0.29	4/1/2022	1/1/2023	236	8	85%	Fleet-Average Tier	Tier 4 Final	2%
		Gradall-type Forklifts	Forklifts	Diesel	6	93	--	0.20	4/12/2021	4/1/2023	618	8	100%	Fleet-Average Tier	Tier 4 Final	4%
		Cutting/chopping saws	Other Construction Equipment	Electric	15	--	5	0.42	4/12/2021	4/1/2023	618	8	100%	--	--	2%
		Air Compressors	Air Compressors	Electric	4	--	7.5	0.48	4/1/2021	1/1/2023	549	8	75%	--	--	10%
		Drywall stud impact guns	Other Construction Equipment	Electric	25	--	1	0.42	4/1/2022	2/1/2023	263	8	100%	--	--	5%
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	--	0.42	10/1/2022	3/1/2023	130	8	20%	Fleet-Average Tier	Tier 4 Final	10%
		Bobcat	Rubber Tired Loaders	Diesel	2	71	--	0.36	10/1/2022	3/1/2023	130	8	90%	Fleet-Average Tier	Tier 4 Final	10%
		Small Excavator	Excavators	Diesel	2	404	--	0.38	10/1/2022	3/1/2023	130	8	90%	Fleet-Average Tier	Tier 4 Final	5%
		Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	4/29/2022	4/19/2023	305	8	90%	Fleet-Average Tier	Tier 4 Final	10%
		Generators	Generator Sets	Diesel	6	84	--	0.74	4/12/2021	4/19/2023	633	8	70%	Fleet-Average Tier	Tier 4 Final	10%
Phase 1	Mixed Use Building Construction	Pile Driving Rigs	Bore/Drill Rigs	Diesel	2	206	--	0.50	11/24/2021	6/1/2022	136	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Gradall-type Forklifts	Forklifts	Diesel	2	93	--	0.20	11/24/2021	6/1/2022	136	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	--	0.42	1/1/2022	9/28/2022	193	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Bobcat	Rubber Tired Loaders	Diesel	2	71	--	0.36	1/1/2022	9/28/2022	193	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Small Excavator	Excavators	Diesel	2	404	--	0.38	1/1/2022	5/11/2022	93	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Large Excavator	Excavators	Diesel	2	523	--	0.38	1/1/2022	5/10/2023	353	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Tower Cranes	Cranes	Electric	2	--	179	0.29	12/1/2021	2/1/2023	306	8	100%	--	--	0%
		Mobile Cranes	Cranes	Diesel	2	530	--	0.29	5/1/2022	12/1/2023	415	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Gradall-type Forklifts	Forklifts	Diesel	6	93	--	0.20	11/24/2021	12/1/2023	528	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Cutting/chopping saws	Other Construction Equipment	Electric	15	--	5	0.42	11/24/2021	12/1/2023	528	8	75%	--	--	0%
		Air Compressors	Air Compressors	Diesel	2	125	--	0.48	11/24/2021	12/1/2023	528	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Air Compressors	Air Compressors	Electric	2	--	7.5	0.48	11/24/2021	12/1/2023	528	8	75%	--	--	0%
		Tile cutting saws	Other Construction Equipment	Electric	10	--	5	0.42	10/1/2022	12/1/2023	305	8	50%	--	--	0%
		Drywall stud impact guns	Other Construction Equipment	Electric	25	--	1	0.42	9/1/2022	12/1/2023	327	8	50%	--	--	0%
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	--	0.42	1/1/2023	12/1/2023	240	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Bobcat	Rubber Tired Loaders	Diesel	2	71	--	0.36	1/1/2023	12/1/2023	240	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Small Excavator	Excavators	Diesel	2	404	--	0.38	1/1/2023	12/1/2023	240	8	50%	Fleet-Average Tier	Tier 4 Final	0%
		Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	4/20/2023	12/1/2023	162	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Generators	Generator Sets	Diesel	6	84	--	0.74	4/20/2023	12/1/2023	162	8	70%	Fleet-Average Tier	Tier 4 Final	0%
	Architectural Coating	Air Compressors	Air Compressors	Diesel	3	125	--	0.48	2/15/2022	12/1/2023	469	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Air Compressors	Air Compressors	Electric	3	--	7.5	0.48	2/15/2022	12/1/2023	469	8	100%	--	--	0%
	Paving	Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	7/1/2022	9/30/2022	66	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Pavers	Pavers	Diesel	2	130	--	0.42	7/1/2022	9/30/2022	66	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Paving Equipment	Paving Equipment	Diesel	2	132	--	0.36	7/1/2022	9/30/2022	66	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Rollers	Rollers	Diesel	2	80	--	0.38	7/1/2022	9/30/2022	66	8	75%	Fleet-Average Tier	Tier 4 Final	0%
	Pedestrian Bike Overpass Grading and Site Preparation[8]	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	1	97	--	0.37	7/14/2022	9/7/2022	40	8	100%	--	Tier 4 Final	0%
		Scrapers/Blades/Rollers	Scrapers	Diesel	1	500	--	0.48	7/14/2022	9/7/2022	40	8	80%	--	Tier 4 Final	0%
		Water Trucks	Off-highway trucks	Diesel	1	402	--	0.38	7/14/2022	9/7/2022	40	8	80%	--	Tier 4 Final	0%
		Generators	Generator Sets	Diesel	1	84	--	0.74	7/14/2022	9/7/2022	40	8	80%	--	Tier 4 Final	0%
	Pedestrian Bike Overpass Site Utilities[8]	Excavators	Excavators	Diesel	2	162	--	0.38	7/14/2022	9/7/2022	40	8	75%	--	Tier 4 Final	0%
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	1	97	--	0.37	7/14/2022	9/7/2022	40	8	75%	--	Tier 4 Final	0%
		Rubber Tired Loaders	Rubber Tired Loaders	Diesel	1	199	--	0.36	7/14/2022	9/7/2022	40	8	75%	--	Tier 4 Final	0%
		Water Trucks	Off-highway trucks	Diesel	1	402	--	0.38	7/14/2022	9/7/2022	40	8	75%	--	Tier 4 Final	0%
	Pedestrian Bike Overpass Tower Construction[8]	Pile Driving Rigs	Bore/Drill Rigs	Diesel	1	206	--	0.50	9/8/2022	3/22/2023	140	8	15%	--	Tier 4 Final	0%
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	--	0.42	9/8/2022	3/22/2023	140	8	10%	--	Tier 4 Final	0%
		Bobcat	Rubber Tired Loaders	Diesel	1	71	--	0.36	9/8/2022	3/22/2023	140	8	25%	--	Tier 4 Final	0%
		Small Excavator	Excavators	Diesel	1	404	--	0.38	9/8/2022	3/22/2023	140	8	35%	--	Tier 4 Final	0%
		Mobile Cranes	Cranes	Diesel	1	530	--	0.29	9/8/2022	3/22/2023	140	8	30%	--	Tier 4 Final	0%
		Gradall-type Forklifts	Forklifts	Diesel	1	93	--	0.20	9/8/2022	3/22/2023	140	8	50%	--	Tier 4 Final	0%
		Cutting/chopping saws	Other Construction Equipment	Electric	1	--	5.0	0.42	9/8/2022	3/22/2023	140	8	3%	--	--	0%
	Pedestrian Bike Overpass Sitework[8]	Water Trucks	Off-highway trucks	Diesel	1	402	--	0.38	3/23/2023	5/17/2023	40	8	75%	--	Tier 4 Final	0%
		Pavers	Pavers	Diesel	1	130	--	0.42	3/23/2023	5/17/2023	40	8	13%	--	Tier 4 Final	0%
		Paving Equipment	Paving Equipment	Diesel	1	132	--	0.36	3/23/2023	5/17/2023	40	8	13%	--	Tier 4 Final	0%
		Rollers	Rollers	Diesel	1	80	--	0.38	3/23/2023	5/17/2023	40	8	13%	--	Tier 4 Final	0%

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Construction Area	Construction Activity	Equipment Type[1,2]	CalEEMod® Equipment Type	Fuel[1]	Number[1]	HP[1]	kW[1]	Load Factor[3]	Equipment Start Date[1]	Equipment End Date[1]	Number of Days	Hours per Day[1]	Utilizations for Duration[1,4]	Unmitigated Equipment Tier[5]	Mitigated Equipment Tier[5]	Percent of Night Work[6]
Phase 2	Grading and Site Preparation	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	20	97	--	0.37	12/4/2023	2/15/2024	54	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Scrapers/Blades/Rollers	Scrapers	Diesel	20	500	--	0.48	12/4/2023	2/15/2024	54	8	90%	Fleet-Average Tier	Tier 4 Final	0%
		Water Trucks	Off-Highway Trucks	Diesel	10	402	--	0.38	12/4/2023	2/15/2024	54	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Water Trucks	Off-Highway Trucks	Diesel	2	402	--	0.38	2/16/2024	8/19/2024	132	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Generators	Generator Sets	Diesel	6	84	--	0.74	12/4/2023	8/19/2024	186	8	70%	Fleet-Average Tier	Tier 4 Final	0%
	Grading and Site Preparation Remediation	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	--	0.37	1/1/2024	2/15/2024	34	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Scrapers/Blades/Rollers	Scrapers	Diesel	3	500	--	0.48	1/1/2024	2/15/2024	34	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	1/1/2024	2/15/2024	34	8	75%	Fleet-Average Tier	Tier 4 Final	0%
	Site Utilities	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	1	97	--	0.37	8/20/2024	2/5/2025	122	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Rubber Tired Loaders	Rubber Tired Loaders	Diesel	2	199	--	0.36	8/20/2024	2/5/2025	122	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Water Trucks	Off-Highway Trucks	Diesel	2	402	--	0.38	8/20/2024	2/5/2025	122	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Generators	Generator Sets	Diesel	6	84	--	0.74	8/20/2024	2/5/2025	122	8	70%	Fleet-Average Tier	Tier 4 Final	0%
	Mixed Use Building Construction	Pile Driving Rigs	Bore/Drill Rigs	Diesel	2	206	--	0.50	8/20/2024	8/20/2025	262	8	90%	Fleet-Average Tier	Tier 4 Final	0%
		Gradall-type Forklifts	Forklifts	Diesel	2	93	--	0.20	8/20/2024	8/20/2025	262	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Concrete Boom Pumps	Other Construction Equipment	Diesel	4	480	--	0.42	8/20/2024	8/20/2025	262	8	40%	Fleet-Average Tier	Tier 4 Final	0%
		Bobcat	Rubber Tired Loaders	Diesel	4	71	--	0.36	8/20/2024	5/1/2025	183	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Small Excavator	Excavators	Diesel	4	404	--	0.38	8/20/2024	5/1/2025	183	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Large Excavator	Excavators	Diesel	4	523	--	0.38	8/20/2024	4/1/2025	161	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Tower Cranes	Cranes	Electric	8	--	179	0.29	5/1/2025	11/1/2026	392	8	100%	--	--	0%
		Mobile Cranes	Cranes	Diesel	8	530	--	0.29	11/1/2025	6/1/2027	412	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Gradall-type Forklifts	Forklifts	Diesel	15	93	--	0.20	8/20/2024	8/1/2027	769	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Cutting/chopping saws	Other Construction Equipment	Electric	45	--	5	0.42	4/1/2025	8/1/2027	609	8	100%	--	--	0%
		Air Compressors	Air Compressors	Diesel	5	125	--	0.48	10/1/2025	8/1/2027	478	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Air Compressors	Air Compressors	Electric	5	--	7.5	0.48	10/1/2025	8/1/2027	478	8	75%	--	--	0%
		Tile cutting saws	Other Construction Equipment	Electric	35	--	5	0.42	4/1/2025	8/1/2027	609	8	100%	--	--	0%
		Drywall stud impact guns	Other Construction Equipment	Electric	75	--	1	0.42	4/1/2025	8/1/2027	609	8	100%	--	--	0%
		Concrete Boom Pumps	Other Construction Equipment	Diesel	3	480	--	0.42	8/1/2026	8/1/2027	260	8	40%	Fleet-Average Tier	Tier 4 Final	0%
		Bobcat	Rubber Tired Loaders	Diesel	6	71	--	0.36	8/1/2026	8/1/2027	260	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Small Excavator	Excavators	Diesel	6	404	--	0.38	8/1/2026	8/1/2027	260	8	80%	Fleet-Average Tier	Tier 4 Final	0%
		Water Trucks	Off-Highway Trucks	Diesel	2	402	--	0.38	2/6/2025	7/1/2027	626	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Generators	Generator Sets	Diesel	6	84	--	0.74	2/6/2025	9/1/2027	670	8	70%	Fleet-Average Tier	Tier 4 Final	0%
	Paving	Water Trucks	Off-Highway Trucks	Diesel	1	402	--	0.38	7/1/2025	1/2/2026	134	8	100%	Fleet-Average Tier	Tier 4 Final	0%
		Pavers	Pavers	Diesel	2	130	--	0.42	7/1/2025	1/2/2026	134	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Paving Equipment	Paving Equipment	Diesel	2	132	--	0.36	7/1/2025	1/2/2026	134	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Rollers	Rollers	Diesel	2	80	--	0.38	7/1/2025	1/2/2026	134	8	75%	Fleet-Average Tier	Tier 4 Final	0%
	Architectural Coating	Air Compressors	Air Compressors	Diesel	3	125	--	0.48	6/20/2025	9/1/2027	574	8	75%	Fleet-Average Tier	Tier 4 Final	0%
		Air Compressors	Air Compressors	Electric	3	--	7.5	0.48	6/20/2025	9/1/2027	574	8	75%	--	--	0%

Notes:

1. Construction equipment list, fuel, size in HP or kW, start and end dates, hours of operation per day, and utilization were provided by the Project sponsor.
2. Water truck emissions are shown in Table 6.
3. Equipment load factors were estimated from the Air Resource Board's OFFROAD database.
4. Utilizations for duration represent the usage percentage during the indicated equipment date range. Utilization percentage is multiplied by the number of hours per day in the calculation of off-road emissions.
5. Mitigation assumes Tier 4 Final engines, except as shown above. Dashes indicate there is no applicable tier due to the equipment being electric and/or used for the construction of the Offsite Improvements phase or the Pedestrian Bike Overpass area of Phase 1 which are mitigation measures and are only constructed during the mitigated scenario.
6. The percent of night work represents a reasonable estimate for the average amount of time the equipment would be used at night. Based on information provided by the Project Sponsor, the first night shift would occur from 7pm-1am and would be responsible for 90% of nighttime construction. The second shift would occur from 1am-7am and would be responsible for 10% of nighttime construction.
7. Equipment start and end dates vary by grid for Offsite Construction. All emissions would occur during between 2/1/2021 and 9/21/2021.
8. Construction of the Pedestrian Bike Overpass in Phase 1 and the Offsite Improvement Phase are only included in the mitigated scenario.

Abbreviations:

CalEEMod - California Emissions Estimator Model
DDC - Deep Dynamic Compaction
DPC - Direct Power Compaction
HP - horsepower
kW - kilowatts

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Table 5
Project Construction Off-Road Electric Equipment Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Equipment Type[1]	CalEEMod® Equipment Type	Fuel[1]	Number[1]	HP[1]	kW[1]	Load Factor[2]	Equipment Start Date[1]	Equipment End Date[1]	Number of Days	Hours per Day[1]	Utilizations for Duration[1]	Electricity Usage[3] (kWh)
Phase 1	Ballpark Building Construction	Cutting/chopping saws	Other Construction Equipment	Electric	15	6.7	5	0.42	4/12/2021	4/1/2023	618	8	100%	154,030
		Air Compressors	Air Compressors	Electric	4	10	7.5	0.48	4/1/2021	1/1/2023	549	8	75%	47,162
		Drywall stud impact guns	Other Construction Equipment	Electric	25	1.3	1	0.42	4/1/2022	2/1/2023	263	8	100%	21,850
	Mixed Use Building Construction	Tower Cranes	Cranes	Electric	2	240	179	0.29	12/1/2021	2/1/2023	306	8	100%	252,486
		Cutting/chopping saws	Other Construction Equipment	Electric	15	6.7	5	0.42	11/24/2021	12/1/2023	528	8	75%	98,699
		Air Compressors	Air Compressors	Electric	2	10	7.5	0.48	11/24/2021	12/1/2023	528	8	75%	22,679
		Tile cutting saws	Other Construction Equipment	Electric	10	6.7	5	0.42	10/1/2022	12/1/2023	305	8	50%	25,339
		Drywall stud impact guns	Other Construction Equipment	Electric	25	1.3	1	0.42	9/1/2022	12/1/2023	327	8	50%	13,584
	Architectural Coating	Air Compressors	Air Compressors	Electric	3	10	7.5	0.48	2/15/2022	12/1/2023	469	8	100%	40,289
	Pedestrian Bike Overpass Tower Construction	Cutting/chopping saws	Other Construction Equipment	Electric	1	6.7	5.0	0.42	9/8/2022	3/22/2023	140	8	3%	70
Phase 2	Mixed Use Building Construction	Tower Cranes	Cranes	Electric	8	240	179	0.29	5/1/2025	11/1/2026	392	8	100%	1,293,786
		Cutting/chopping saws	Other Construction Equipment	Electric	45	6.7	5	0.42	4/1/2025	8/1/2027	609	8	100%	455,361
		Air Compressors	Air Compressors	Electric	5	10	7.5	0.48	10/1/2025	8/1/2027	478	8	75%	51,328
		Tile cutting saws	Other Construction Equipment	Electric	35	6.7	5	0.42	4/1/2025	8/1/2027	609	8	100%	354,170
		Drywall stud impact guns	Other Construction Equipment	Electric	75	1.3	1	0.42	4/1/2025	8/1/2027	609	8	100%	151,787
	Architectural Coating	Air Compressors	Air Compressors	Electric	3	10	7.5	0.48	6/20/2025	9/1/2027	574	8	75%	36,982
													Total	3,019,602

Construction Area	Construction Activity	Year	Electricity Usage[4] (kWh)	Emissions (MT/year)[5,6]			
				CO_2	CH_4	N_2O	CO_2e
Phase 1	Ballpark Building Construction	2021	76,821	10	0.0010	2.1E-04	10
		2022	124,727	17	0.0016	3.5E-04	17
		2023	21,494	2.9	2.8E-04	6.0E-05	2.9
	Mixed Use Building Construction	2021	24,589	3.3	3.2E-04	6.9E-05	3.3
		2022	285,045	38	0.0037	8.0E-04	39
		2023	103,154	14	0.0014	2.9E-04	14
	Architectural Coating	2022	19,713	2.7	2.6E-04	5.5E-05	2.7
		2023	20,576	2.8	2.7E-04	5.8E-05	2.8
	Pedestrian Bike Overpass Tower Construction[7]	2022	41	0.0056	5.4E-07	1.2E-07	0.0056
		2023	29	0.0039	3.8E-07	8.0E-08	0.0039
Phase 2	Mixed Use Building Construction	2025	894,716	121	0.012	0.0025	122
		2026	1,156,250	156	0.015	0.0032	157
		2027	255,467	34	0.0034	7.1E-04	35
	Architectural Coating	2025	8,981	1.2	1.2E-04	2.5E-05	1.2
		2026	16,810	2.3	2.2E-04	4.7E-05	2.3
		2027	11,191	1.5	1.5E-04	3.1E-05	1.5
		Total	3,019,602			**Total**	411

Notes:

1. Construction equipment list, fuel, size in HP or kW, start and end dates, hours of operation per day, and utilization were provided by the Project sponsor. Utilization refers to the percentage of the phase that equipment is expected to be in use.
2. Equipment load factors were estimated from the Air Resource Board's OFFROAD database.
3. Electricity Usage was calculated using the following equation:

   Electricity Usage = Σ(N * kW * LF * Hr * U)

   N: number of Equipment Pieces
   kW: equipment power
   LF: Load Factor
   U: Utilization
4. Electricity usage split by year using phase length.
5. Greenhouse gas emission factor calculations are shown in Table 21. For CO_2, the 2020 emission factor was conservatively used (297 lb/MWh) for all construction years. For CH_4 and N_2O, the CalEEMod default factors were used (0.029, and 0.00617 lb/MWh, respectively).
6. Global warming potentials used in the calculation of CO2e are 1, 25 and 298 for CO2, CH4 and N2O, respectively, and are from IPCC AR4.
7. The Pedestrian Bike Overpass in Phase 1 is a mitigation measure and is only constructed in the Mitigated scenario.

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Table 5
Project Construction Off-Road Electric Equipment Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

CalEEMod - California Emissions Estimator Model
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
HP - horsepower
IPCC AR4 - Intergovernmental Panel on Climate Change Fourth Assessment Report
KWh - kilowatt hour(s)
lb - pound(s)
LF - load factor
MT - metric ton(s)
MWh - megawatt hour(s)
N_2O - nitrous oxide

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Available online
IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. Available online at: https://www.ipcc.ch/report/ar4/wg1/

Table 6
Project Construction Water Truck Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Water Truck Use Data[1]				Water Truck Emissions[2,3]						
			Hours	Starts	Miles	Idle-hrs	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2	CH_4	CO_2e
							(lbs)				(MT)		
DPC	Geotechnical Work	2020	456	456	4,560	15	11	78	3.2	2.3	9.3	2.3E-04	9.4
		2021	900	900	9,000	30	17	139	5.5	3.7	18	3.5E-04	18
DDC	Geotechnical Work	2020	684	684	6,840	23	16	117	4.9	3.5	14	3.4E-04	14
		2021	1,350	1,350	13,500	45	25	208	8.2	5.5	27	5.3E-04	27
Phase 1	Grading and Site Prep	2021	2,736	2,736	27,360	91	51	422	17	11	55	0.0011	55
	Grading and Site Prep Remediation	2021	192	192	1,920	6.4	3.6	30	1.2	0.79	3.9	7.5E-05	3.9
	Site Utilities	2021	162	162	1,620	5.4	3.0	25	1.0	0.66	3.3	6.3E-05	3.3
		2022	510	510	5,100	17	4.2	65	2.1	1.2	10	8.9E-05	10
	Ballpark Building Construction	2022	1,526	1,526	15,264	51	13	194	6.3	3.4	30	2.7E-04	30
		2023	670	670	6,696	22	0.57	72	2.2	0.94	13	1.2E-05	13
	Mixed Use Building Construction	2023	1,296	1,296	12,960	43	1.1	140	4.2	1.8	25	2.3E-05	25
	Paving	2022	528	528	5,280	18	4.4	67	2.2	1.2	10	9.2E-05	10
	Pedestrian Bike Overpass Grading and Site Preparation	2022	256	256	2,560	8.5	2.1	32	1.1	0.58	5.1	4.5E-05	5.1
	Pedestrian Bike Overpass Site Utilities	2022	240	240	2,400	8.0	2.0	30	1.0	0.54	4.7	4.2E-05	4.7
	Pedestrian Bike Overpass Sitework	2023	240	240	2,400	8.0	0.21	26	0.78	0.34	4.6	4.3E-06	4.6
Phase 2	Grading and Site Prep	2023	1,260	1,260	12,600	42	1.1	136	4.1	1.8	24	2.3E-05	24
		2024	1,980	1,980	19,800	66	1.7	216	6.4	2.8	38	3.5E-05	38
	Grading and Site Prep Remediation	2024	204	204	2,040	6.8	0.17	22	0.66	0.29	3.9	3.6E-06	3.9
	Site Utilities	2024	1,552	1,552	15,520	52	1.3	170	5.1	2.2	29	2.8E-05	29
		2025	400	400	4,000	13	0.34	44	1.3	0.56	7.5	7.1E-06	7.5
	Mixed Use Building Construction	2025	2,820	2,820	28,200	94	2.4	312	9.2	4.0	53	5.0E-05	53
		2026	3,132	3,132	31,320	104	2.6	350	10	4.4	57	5.5E-05	57
		2027	1,548	1,548	15,480	52	1.3	174	5.0	2.2	28	2.7E-05	28
	Paving	2025	1,064	1,064	10,640	35	0.90	118	3.5	1.5	20	1.9E-05	20
		2026	8.0	8.0	80	0.27	0.0067	0.89	0.026	0.011	0.15	1.4E-07	0.15

Notes:

1. Water truck usage data comes from the following assumptions:
   - Number of water trucks and schedule are provided in Table 4.
   - Hours are calculated as number of equipment * utilization percent * number of construction days * hours/day * load factor as provided in Table 4.
   - Starts are calculated as hours * 1 start/hour.
   - Miles are calculated as hours * 10 miles per hour.
   - Idle-hrs are calculated as starts * 1 idle/start * 2 minutes/idle. Idling is restricted to 2 minutes/idle.
2. Emission factors are located in Table 9 under the fleet mix "Water Trucks". Water trucks are assumed to be similar to medium heavy duty trucks (MHDT).
3. Global warming potentials used in the calculation of CO_2e are 1 and 25 for CO_2 and CH_4, respectively.

Abbreviations:

CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide Equivalents
DDC - Deep Dynamic Compaction
DPC - Direct Power Compaction
hrs - hours
lb - pound
MT - metric ton
NOx - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
ROG - reactive organic gases

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Table 7
Project Construction Water Use Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Number of Work Days	Average Acreage Needing Water[1] (acres)	Water Usage[2] (gal/acre/day)	Number of Water Trucks	Utilization (%)	Total Water Usage (million gal)	Outdoor Water Electric Intensity Factor[3] (kWh/million gal)	Electricity Usage (MWh)	Total CO_2e Emissions[4] (MT)
DDC	Geotechnical work	2020	38	37	8,000	3	75%	11	3,500	39	5.3
		2021	75	37	8,000	3	75%	22		77	11
DPC	Geotechnical work	2020	38	9.3	8,000	2	75%	2.8		10	1.3
		2021	75	9.3	8,000	2	75%	5.6		20	2.7
Phase 1	Grading and Site Preparation	2021	56	31	8,000	5	75%	14		49	6.7
		2021	132	31	8,000	1	100%	33		116	16
	Grading and Site Preparation Remediation	2021	32	31	8,000	1	75%	8.0		28	3.8
	Site Utilities	2021	28	31	4,000	1	75%	3.5		12.3	1.7
		2022	84	31	4,000	1	75%	11		37	5.0
	Ballpark Building Construction	2022	176	14	4,000	1	90%	10		34	4.6
		2023	78	14	4000	1	90%	4.3		15	2.1
	Mixed Use Building Construction	2023	162	18	4,000	1	100%	11		40	5.4
	Paving	2022	65	31	4,000	1	100%	8.1		29	3.9
	Pedestrian Bike Overpass Grading and Site Preparation[5]	2022	40	1.2	8,000	1	80%	0.39		1.4	0.19
	Pedestrian Bike Overpass Site Utilities[5]	2022	40	1.2	4,000	1	75%	0.19		0.68	0.093
	Pedestrian Bike Overpass Sitework[5]	2023	40	1.2	4,000	1	75%	0.19		0.68	0.093
Phase 2	Grading and Site Preparation	2023	20	17	8,000	10	75%	2.7		9	1.3
		2024	34	17	8,000	10	75%	4.5		16	2.1
		2024	132	17	8,000	2	100%	18		61	8.3
	Grading and Site Preparation Remediation	2024	34	17	8,000	1	75%	4.5		16	2.1
	Site Utilities	2024	96	17	4,000	2	100%	6.4		22	3.0
		2025	26	17	4,000	2	100%	1.7		6	0.82
	Mixed Use Building Construction	2025	235	17	4,000	2	75%	16		55	7.4
		2026	261	17	4,000	2	75%	17		61	8.3
		2027	130	17	4,000	2	75%	8.6		30	4.1
	Paving	2025	132	17	4,000	1	100%	8.8		31	4.2
		2026	2	17	4,000	1	100%	0.13		0.46	0.063

Notes:

1. Acreage is the total acreage of the phase area.
2. Water Usage was provided by Devcon on 8/22/2019.
3. Electric intensity factors were taken from Table 9.2 in Appendix D of the CalEEMod® User's Guide as the sum of supply water, treat water and distribute water electric intensity factors. Since the water use reported here is only for fugitive dust control, indoor water use-related emissions and wastewater treatment-related emissions are not estimated here.
4. Greenhouse gas emission factor calculations are shown in Table 21. For CO_2, the 2020 emission factor was conservatively used (297 lb/MWh) for all construction years. For CH_4 and N_2O, the CalEEMod® default factors were used (0.029, and 0.00617 lb/MWh, respectively).
5. The Pedestrian Bike Overpass in Phase 1 is a mitigation measure and is only constructed in the Mitigated Scenario.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CO_2e - Carbon dioxide-equivalent
gal - Gallons
kWh - kilowatt-hours
MWh - megawatt-hours
MT - Metric Tons

References:

CalEEMod® User's Guide (Available online at: http://www.aqmd.gov/caleemod/user's-guide)
PG&E, Pacific Gas and Electric - Gas and power company for California (https://www.pge.com/)

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Table 8
Project Construction Trip Generation Rates
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area and Activity	Construction One-Way Trips per Type and Activity[1]		
	Worker	Vendor	Hauling
DDC Area			
Geotechnical Work	4,520	1,130	--
DPC Area			
Geotechnical Work	4,520	1,130	--
Offsite Improvements: Grids 1-19			
Demolition	1,520	--	--
Construct Curb, Gutter, Sidewalk, Ramps	3,070	--	5,418
New / Modified Traffic Signal	4,850	--	677
Street Lighting	2,400	--	1,199
Paving	585	--	--
Striping	312	--	--
Phase 1			
Demolition	2,000	--	54
Cut Off Wall	2,200	--	1,245
Grading and Site Preparation	9,400	--	26,217
Grading and Site Preparation Remediation	480	--	18,000
Crane Removal Demolition	3,660	--	--
Site Utilities	8,960	2,240	--
Ballpark Building Construction	778,590	121,536	--
Mixed Use Building Construction	316,800	50,688	--
Architectural Coating	343,308	--	--
Paving	1,980	--	--
Pedestrian Bike Overpass Grading and Site Preparation[2]	2,000	--	358
Pedestrian Bike Overpass Site Utilities[2]	1,200	160	80
Pedestrian Bike Overpass Tower Construction[2]	11,200	2,240	--
Pedestrian Bike Overpass Sitework[2]	1,600	480	80
Phase 2			
Demolition	3,000	--	54
Grading and Site Preparation	14,880	--	15,673
Grading and Site Preparation Remediation	510	--	18,000
Site Utilities	14,640	1,952	--
Mixed Use Building Construction	633,600	326,304	--
Paving	3,990	--	--
Architectural Coating	229,600	--	--
Total One-Way Trips	**2,405,375**	**507,860**	**87,055**
	3,000,290		

Trip Length Assumptions (miles)[3]	10.8	7.3	20, 41, 50
Fleet Mix Assumptions[4]	50% LDA, 25% LDT1, and 25% LDT2, consistent with CalEEMod®	T6 (MHDT) and T7 (HHDT), consistent with CalEEMod®	T7 (HHDT), consistent with CalEEMod®

Notes:

1. Worker, vendor and hauling trips for each activity were provided by the Project sponsor.
2. The Pedestrian Bike Overpass in Phase 1 and the Offsite Improvements Phase are mitigation measures and are only included in the Mitigated Scenario.
3. CalEEMod® default trip lengths were used for worker and vendor trips. Hauling trip lengths represent the distance to the facility if known. For Grading and Site Prep Remediation, 50% of export trips would go to Livermore, a distance of 41 miles from the site, and 50% of export trips would go to Buttonwillow, which is outside of the San Francisco Bay Area Air Basin so a distance of 50 miles to the edge of the boundary was used. For the Cutoff Wall, 6.7% of import trips would be from Montana or Wyoming, which is outside of the San Francisco Bay Area Air Basin so a distance of 50 miles to the edge of the boundary was used for those trips. The CalEEMod® default hauling trip length (20 miles) was assumed for all other subphases, as well as for any remaining trips in the subphases mentioned.
4. CalEEMod® default fleet mix assumptions were used for each trip type.

Abbreviations:

CalEEMod® - California Emissions Estimator Model

LDA - All Passenger Vehicles

LDT1 - All Light-Duty Trucks in Weight Class 0-37,50 lbs

LDT2 - Gas, Diesel Light-Duty Trucks in Weight Class 3,751-5,750 lbs

MHDT - Gas, Diesel Medium-Heavy-Duty vehicles in Weight Class 12,001-33,000 lbs

HHDT- Gas, Diesel Heavy-Heavy-Duty vehicles in Weight Class 33,001-60,000 lbs

Table 9
Project Construction Onroad Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2020	LD_Mix	0.068	g/trip	DIURN	ROG	Gas
2020	LD_Mix	0.16	g/trip	HOTSOAK	ROG	Gas
2020	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2020	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2020	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2020	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2020	LD_Mix	0.063	g/trip	RESTLOSS	ROG	Gas
2020	LD_Mix	0.083	g/mile	RUNEX	NOx	Gas
2020	LD_Mix	0.0018	g/mile	RUNEX	PM_{10}	Gas
2020	LD_Mix	0.0016	g/mile	RUNEX	$PM_{2.5}$	Gas
2020	LD_Mix	0.019	g/mile	RUNEX	ROG	Gas
2020	LD_Mix	0.058	g/mile	RUNLOSS	ROG	Gas
2020	LD_Mix	0.29	g/trip	STREX	NOx	Gas
2020	LD_Mix	0.0023	g/trip	STREX	PM_{10}	Gas
2020	LD_Mix	0.0021	g/trip	STREX	$PM_{2.5}$	Gas
2020	LD_Mix	0.38	g/trip	STREX	ROG	Gas
2021	LD_Mix	0.063	g/trip	DIURN	ROG	Gas
2021	LD_Mix	0.15	g/trip	HOTSOAK	ROG	Gas
2021	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2021	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2021	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2021	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2021	LD_Mix	0.060	g/trip	RESTLOSS	ROG	Gas
2021	LD_Mix	0.072	g/mile	RUNEX	NOx	Gas
2021	LD_Mix	0.0017	g/mile	RUNEX	PM_{10}	Gas
2021	LD_Mix	0.0015	g/mile	RUNEX	$PM_{2.5}$	Gas
2021	LD_Mix	0.016	g/mile	RUNEX	ROG	Gas
2021	LD_Mix	0.056	g/mile	RUNLOSS	ROG	Gas
2021	LD_Mix	0.27	g/trip	STREX	NOx	Gas
2021	LD_Mix	0.0021	g/trip	STREX	PM_{10}	Gas
2021	LD_Mix	0.0020	g/trip	STREX	$PM_{2.5}$	Gas
2021	LD_Mix	0.35	g/trip	STREX	ROG	Gas
2022	LD_Mix	0.059	g/trip	DIURN	ROG	Gas
2022	LD_Mix	0.14	g/trip	HOTSOAK	ROG	Gas
2022	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2022	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2022	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2022	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2022	LD_Mix	0.056	g/trip	RESTLOSS	ROG	Gas
2022	LD_Mix	0.062	g/mile	RUNEX	NOx	Gas
2022	LD_Mix	0.0016	g/mile	RUNEX	PM_{10}	Gas
2022	LD_Mix	0.0015	g/mile	RUNEX	$PM_{2.5}$	Gas
2022	LD_Mix	0.014	g/mile	RUNEX	ROG	Gas
2022	LD_Mix	0.053	g/mile	RUNLOSS	ROG	Gas
2022	LD_Mix	0.25	g/trip	STREX	NOx	Gas
2022	LD_Mix	0.0020	g/trip	STREX	PM_{10}	Gas
2022	LD_Mix	0.0019	g/trip	STREX	$PM_{2.5}$	Gas
2022	LD_Mix	0.32	g/trip	STREX	ROG	Gas
2023	LD_Mix	0.055	g/trip	DIURN	ROG	Gas
2023	LD_Mix	0.13	g/trip	HOTSOAK	ROG	Gas
2023	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2023	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2023	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2023	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2023	LD_Mix	0.053	g/trip	RESTLOSS	ROG	Gas
2023	LD_Mix	0.054	g/mile	RUNEX	NOx	Gas
2023	LD_Mix	0.0015	g/mile	RUNEX	PM_{10}	Gas
2023	LD_Mix	0.0014	g/mile	RUNEX	$PM_{2.5}$	Gas
2023	LD_Mix	0.012	g/mile	RUNEX	ROG	Gas
2023	LD_Mix	0.051	g/mile	RUNLOSS	ROG	Gas
2023	LD_Mix	0.23	g/trip	STREX	NOx	Gas
2023	LD_Mix	0.0020	g/trip	STREX	PM_{10}	Gas
2023	LD_Mix	0.0018	g/trip	STREX	$PM_{2.5}$	Gas
2023	LD_Mix	0.29	g/trip	STREX	ROG	Gas
2024	LD_Mix	0.051	g/trip	DIURN	ROG	Gas
2024	LD_Mix	0.12	g/trip	HOTSOAK	ROG	Gas
2024	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2024	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2024	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2024	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2024	LD_Mix	0.051	g/trip	RESTLOSS	ROG	Gas
2024	LD_Mix	0.048	g/mile	RUNEX	NOx	Gas
2024	LD_Mix	0.0014	g/mile	RUNEX	PM_{10}	Gas
2024	LD_Mix	0.0013	g/mile	RUNEX	$PM_{2.5}$	Gas
2024	LD_Mix	0.010	g/mile	RUNEX	ROG	Gas
2024	LD_Mix	0.049	g/mile	RUNLOSS	ROG	Gas
2024	LD_Mix	0.22	g/trip	STREX	NOx	Gas
2024	LD_Mix	0.0019	g/trip	STREX	PM_{10}	Gas
2024	LD_Mix	0.0017	g/trip	STREX	$PM_{2.5}$	Gas
2024	LD_Mix	0.26	g/trip	STREX	ROG	Gas
2025	LD_Mix	0.049	g/trip	DIURN	ROG	Gas
2025	LD_Mix	0.11	g/trip	HOTSOAK	ROG	Gas
2025	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2025	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2025	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2025	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2025	LD_Mix	0.048	g/trip	RESTLOSS	ROG	Gas
2025	LD_Mix	0.043	g/mile	RUNEX	NOx	Gas
2025	LD_Mix	0.0014	g/mile	RUNEX	PM_{10}	Gas
2025	LD_Mix	0.0013	g/mile	RUNEX	$PM_{2.5}$	Gas
2025	LD_Mix	0.0092	g/mile	RUNEX	ROG	Gas

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Oakland Waterfront Ballpark District Project
Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2025	LD_Mix	0.048	g/mile	RUNLOSS	ROG	Gas
2025	LD_Mix	0.20	g/trip	STREX	NOx	Gas
2025	LD_Mix	0.0018	g/trip	STREX	PM_{10}	Gas
2025	LD_Mix	0.0017	g/trip	STREX	$PM_{2.5}$	Gas
2025	LD_Mix	0.24	g/trip	STREX	ROG	Gas
2026	LD_Mix	0.046	g/trip	DIURN	ROG	Gas
2026	LD_Mix	0.11	g/trip	HOTSOAK	ROG	Gas
2026	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2026	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2026	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2026	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2026	LD_Mix	0.046	g/trip	RESTLOSS	ROG	Gas
2026	LD_Mix	0.039	g/mile	RUNEX	NOx	Gas
2026	LD_Mix	0.0013	g/mile	RUNEX	PM_{10}	Gas
2026	LD_Mix	0.0012	g/mile	RUNEX	$PM_{2.5}$	Gas
2026	LD_Mix	0.0081	g/mile	RUNEX	ROG	Gas
2026	LD_Mix	0.046	g/mile	RUNLOSS	ROG	Gas
2026	LD_Mix	0.19	g/trip	STREX	NOx	Gas
2026	LD_Mix	0.0017	g/trip	STREX	PM_{10}	Gas
2026	LD_Mix	0.0016	g/trip	STREX	$PM_{2.5}$	Gas
2026	LD_Mix	0.22	g/trip	STREX	ROG	Gas
2027	LD_Mix	0.043	g/trip	DIURN	ROG	Gas
2027	LD_Mix	0.10	g/trip	HOTSOAK	ROG	Gas
2027	LD_Mix	0.037	g/mile	PMBW	PM_{10}	Gas
2027	LD_Mix	0.016	g/mile	PMBW	$PM_{2.5}$	Gas
2027	LD_Mix	0.0080	g/mile	PMTW	PM_{10}	Gas
2027	LD_Mix	0.0020	g/mile	PMTW	$PM_{2.5}$	Gas
2027	LD_Mix	0.044	g/trip	RESTLOSS	ROG	Gas
2027	LD_Mix	0.035	g/mile	RUNEX	NOx	Gas
2027	LD_Mix	0.0013	g/mile	RUNEX	PM_{10}	Gas
2027	LD_Mix	0.0012	g/mile	RUNEX	$PM_{2.5}$	Gas
2027	LD_Mix	0.0071	g/mile	RUNEX	ROG	Gas
2027	LD_Mix	0.045	g/mile	RUNLOSS	ROG	Gas
2027	LD_Mix	0.18	g/trip	STREX	NOx	Gas
2027	LD_Mix	0.0017	g/trip	STREX	PM_{10}	Gas
2027	LD_Mix	0.0015	g/trip	STREX	$PM_{2.5}$	Gas
2027	LD_Mix	0.20	g/trip	STREX	ROG	Gas
2020	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel
2020	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2020	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2020	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2020	MHDT/HHDT	3.9	g/mile	RUNEX	NOx	Diesel
2020	MHDT/HHDT	0.081	g/mile	RUNEX	PM_{10}	Diesel
2020	MHDT/HHDT	0.077	g/mile	RUNEX	$PM_{2.5}$	Diesel
2020	MHDT/HHDT	0.19	g/mile	RUNEX	ROG	Diesel
2020	MHDT/HHDT	1.5	g/trip	STREX	NOx	Diesel
2020	MHDT/HHDT	3.5	g/trip	IDLEX	NOx	Diesel
2020	MHDT/HHDT	0.24	g/trip	IDLEX	ROG	Diesel
2020	MHDT/HHDT	0.0078	g/trip	IDLEX	PM_{10}	Diesel
2020	MHDT/HHDT	0.0075	g/trip	IDLEX	$PM_{2.5}$	Diesel
2021	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel
2021	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2021	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2021	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2021	MHDT/HHDT	3.4	g/mile	RUNEX	NOx	Diesel
2021	MHDT/HHDT	0.066	g/mile	RUNEX	PM_{10}	Diesel
2021	MHDT/HHDT	0.063	g/mile	RUNEX	$PM_{2.5}$	Diesel
2021	MHDT/HHDT	0.15	g/mile	RUNEX	ROG	Diesel
2021	MHDT/HHDT	1.7	g/trip	STREX	NOx	Diesel
2021	MHDT/HHDT	3.4	g/trip	IDLEX	NOx	Diesel
2021	MHDT/HHDT	0.24	g/trip	IDLEX	ROG	Diesel
2021	MHDT/HHDT	0.0055	g/trip	IDLEX	PM_{10}	Diesel
2021	MHDT/HHDT	0.0053	g/trip	IDLEX	$PM_{2.5}$	Diesel
2022	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel
2022	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2022	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2022	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2022	MHDT/HHDT	2.8	g/mile	RUNEX	NOx	Diesel
2022	MHDT/HHDT	0.036	g/mile	RUNEX	PM_{10}	Diesel
2022	MHDT/HHDT	0.034	g/mile	RUNEX	$PM_{2.5}$	Diesel
2022	MHDT/HHDT	0.082	g/mile	RUNEX	ROG	Diesel
2022	MHDT/HHDT	1.9	g/trip	STREX	NOx	Diesel
2022	MHDT/HHDT	3.4	g/trip	IDLEX	NOx	Diesel
2022	MHDT/HHDT	0.23	g/trip	IDLEX	ROG	Diesel
2022	MHDT/HHDT	0.0022	g/trip	IDLEX	PM_{10}	Diesel
2022	MHDT/HHDT	0.0021	g/trip	IDLEX	$PM_{2.5}$	Diesel
2023	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel
2023	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2023	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2023	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2023	MHDT/HHDT	2.1	g/mile	RUNEX	NOx	Diesel
2023	MHDT/HHDT	0.016	g/mile	RUNEX	PM_{10}	Diesel
2023	MHDT/HHDT	0.016	g/mile	RUNEX	$PM_{2.5}$	Diesel
2023	MHDT/HHDT	0.017	g/mile	RUNEX	ROG	Diesel
2023	MHDT/HHDT	2.2	g/trip	STREX	NOx	Diesel
2023	MHDT/HHDT	3.0	g/trip	IDLEX	NOx	Diesel
2023	MHDT/HHDT	0.23	g/trip	IDLEX	ROG	Diesel
2023	MHDT/HHDT	0.0014	g/trip	IDLEX	PM_{10}	Diesel
2023	MHDT/HHDT	0.0014	g/trip	IDLEX	$PM_{2.5}$	Diesel
2024	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel

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Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2024	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2024	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2024	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2024	MHDT/HHDT	2.1	g/mile	RUNEX	NOx	Diesel
2024	MHDT/HHDT	0.017	g/mile	RUNEX	PM_{10}	Diesel
2024	MHDT/HHDT	0.016	g/mile	RUNEX	$PM_{2.5}$	Diesel
2024	MHDT/HHDT	0.017	g/mile	RUNEX	ROG	Diesel
2024	MHDT/HHDT	2.2	g/trip	STREX	NOx	Diesel
2024	MHDT/HHDT	3.0	g/trip	IDLEX	NOx	Diesel
2024	MHDT/HHDT	0.23	g/trip	IDLEX	ROG	Diesel
2024	MHDT/HHDT	0.0014	g/trip	IDLEX	PM_{10}	Diesel
2024	MHDT/HHDT	0.0013	g/trip	IDLEX	$PM_{2.5}$	Diesel
2025	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel
2025	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2025	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2025	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2025	MHDT/HHDT	2.1	g/mile	RUNEX	NOx	Diesel
2025	MHDT/HHDT	0.017	g/mile	RUNEX	PM_{10}	Diesel
2025	MHDT/HHDT	0.016	g/mile	RUNEX	$PM_{2.5}$	Diesel
2025	MHDT/HHDT	0.017	g/mile	RUNEX	ROG	Diesel
2025	MHDT/HHDT	2.2	g/trip	STREX	NOx	Diesel
2025	MHDT/HHDT	3.0	g/trip	IDLEX	NOx	Diesel
2025	MHDT/HHDT	0.23	g/trip	IDLEX	ROG	Diesel
2025	MHDT/HHDT	0.0013	g/trip	IDLEX	PM_{10}	Diesel
2025	MHDT/HHDT	0.0012	g/trip	IDLEX	$PM_{2.5}$	Diesel
2026	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel
2026	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2026	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2026	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2026	MHDT/HHDT	2.1	g/mile	RUNEX	NOx	Diesel
2026	MHDT/HHDT	0.016	g/mile	RUNEX	PM_{10}	Diesel
2026	MHDT/HHDT	0.016	g/mile	RUNEX	$PM_{2.5}$	Diesel
2026	MHDT/HHDT	0.017	g/mile	RUNEX	ROG	Diesel
2026	MHDT/HHDT	2.2	g/trip	STREX	NOx	Diesel
2026	MHDT/HHDT	2.9	g/trip	IDLEX	NOx	Diesel
2026	MHDT/HHDT	0.23	g/trip	IDLEX	ROG	Diesel
2026	MHDT/HHDT	0.0013	g/trip	IDLEX	PM_{10}	Diesel
2026	MHDT/HHDT	0.0012	g/trip	IDLEX	$PM_{2.5}$	Diesel
2027	MHDT/HHDT	0.10	g/mile	PMBW	PM_{10}	Diesel
2027	MHDT/HHDT	0.041	g/mile	PMBW	$PM_{2.5}$	Diesel
2027	MHDT/HHDT	0.024	g/mile	PMTW	PM_{10}	Diesel
2027	MHDT/HHDT	0.0060	g/mile	PMTW	$PM_{2.5}$	Diesel
2027	MHDT/HHDT	2.1	g/mile	RUNEX	NOx	Diesel
2027	MHDT/HHDT	0.016	g/mile	RUNEX	PM_{10}	Diesel
2027	MHDT/HHDT	0.016	g/mile	RUNEX	$PM_{2.5}$	Diesel
2027	MHDT/HHDT	0.017	g/mile	RUNEX	ROG	Diesel
2027	MHDT/HHDT	2.2	g/trip	STREX	NOx	Diesel
2027	MHDT/HHDT	2.9	g/trip	IDLEX	NOx	Diesel
2027	MHDT/HHDT	0.23	g/trip	IDLEX	ROG	Diesel
2027	MHDT/HHDT	0.0012	g/trip	IDLEX	PM_{10}	Diesel
2027	MHDT/HHDT	0.0012	g/trip	IDLEX	$PM_{2.5}$	Diesel
2020	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2020	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2020	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2020	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2020	HHDT	4.4	g/mile	RUNEX	NOx	Diesel
2020	HHDT	0.071	g/mile	RUNEX	PM_{10}	Diesel
2020	HHDT	0.068	g/mile	RUNEX	$PM_{2.5}$	Diesel
2020	HHDT	0.16	g/mile	RUNEX	ROG	Diesel
2020	HHDT	1.7	g/trip	STREX	NOx	Diesel
2020	HHDT	6.1	g/trip	IDLEX	NOx	Diesel
2020	HHDT	0.47	g/trip	IDLEX	ROG	Diesel
2020	HHDT	0.013	g/trip	IDLEX	PM_{10}	Diesel
2020	HHDT	0.012	g/trip	IDLEX	$PM_{2.5}$	Diesel
2021	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2021	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2021	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2021	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2021	HHDT	4.0	g/mile	RUNEX	NOx	Diesel
2021	HHDT	0.059	g/mile	RUNEX	PM_{10}	Diesel
2021	HHDT	0.057	g/mile	RUNEX	$PM_{2.5}$	Diesel
2021	HHDT	0.13	g/mile	RUNEX	ROG	Diesel
2021	HHDT	1.8	g/trip	STREX	NOx	Diesel
2021	HHDT	6.1	g/trip	IDLEX	NOx	Diesel
2021	HHDT	0.46	g/trip	IDLEX	ROG	Diesel
2021	HHDT	0.0087	g/trip	IDLEX	PM_{10}	Diesel
2021	HHDT	0.0083	g/trip	IDLEX	$PM_{2.5}$	Diesel
2022	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2022	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2022	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2022	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2022	HHDT	3.4	g/mile	RUNEX	NOx	Diesel
2022	HHDT	0.035	g/mile	RUNEX	PM_{10}	Diesel
2022	HHDT	0.034	g/mile	RUNEX	$PM_{2.5}$	Diesel
2022	HHDT	0.081	g/mile	RUNEX	ROG	Diesel
2022	HHDT	2.0	g/trip	STREX	NOx	Diesel
2022	HHDT	6.0	g/trip	IDLEX	NOx	Diesel
2022	HHDT	0.46	g/trip	IDLEX	ROG	Diesel
2022	HHDT	0.0031	g/trip	IDLEX	PM_{10}	Diesel

Table 9
Project Construction Onroad Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2022	HHDT	0.0029	g/trip	IDLEX	$PM_{2.5}$	Diesel
2023	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2023	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2023	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2023	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2023	HHDT	2.6	g/mile	RUNEX	NOx	Diesel
2023	HHDT	0.025	g/mile	RUNEX	PM_{10}	Diesel
2023	HHDT	0.024	g/mile	RUNEX	$PM_{2.5}$	Diesel
2023	HHDT	0.023	g/mile	RUNEX	ROG	Diesel
2023	HHDT	2.3	g/trip	STREX	NOx	Diesel
2023	HHDT	5.6	g/trip	IDLEX	NOx	Diesel
2023	HHDT	0.46	g/trip	IDLEX	ROG	Diesel
2023	HHDT	0.0024	g/trip	IDLEX	PM_{10}	Diesel
2023	HHDT	0.0023	g/trip	IDLEX	$PM_{2.5}$	Diesel
2024	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2024	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2024	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2024	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2024	HHDT	2.6	g/mile	RUNEX	NOx	Diesel
2024	HHDT	0.026	g/mile	RUNEX	PM_{10}	Diesel
2024	HHDT	0.025	g/mile	RUNEX	$PM_{2.5}$	Diesel
2024	HHDT	0.023	g/mile	RUNEX	ROG	Diesel
2024	HHDT	2.3	g/trip	STREX	NOx	Diesel
2024	HHDT	5.5	g/trip	IDLEX	NOx	Diesel
2024	HHDT	0.45	g/trip	IDLEX	ROG	Diesel
2024	HHDT	0.0023	g/trip	IDLEX	PM_{10}	Diesel
2024	HHDT	0.0022	g/trip	IDLEX	$PM_{2.5}$	Diesel
2025	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2025	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2025	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2025	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2025	HHDT	2.6	g/mile	RUNEX	NOx	Diesel
2025	HHDT	0.026	g/mile	RUNEX	PM_{10}	Diesel
2025	HHDT	0.024	g/mile	RUNEX	$PM_{2.5}$	Diesel
2025	HHDT	0.023	g/mile	RUNEX	ROG	Diesel
2025	HHDT	2.3	g/trip	STREX	NOx	Diesel
2025	HHDT	5.5	g/trip	IDLEX	NOx	Diesel
2025	HHDT	0.45	g/trip	IDLEX	ROG	Diesel
2025	HHDT	0.0023	g/trip	IDLEX	PM_{10}	Diesel
2025	HHDT	0.0022	g/trip	IDLEX	$PM_{2.5}$	Diesel
2026	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2026	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2026	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2026	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2026	HHDT	2.6	g/mile	RUNEX	NOx	Diesel
2026	HHDT	0.025	g/mile	RUNEX	PM_{10}	Diesel
2026	HHDT	0.024	g/mile	RUNEX	$PM_{2.5}$	Diesel
2026	HHDT	0.023	g/mile	RUNEX	ROG	Diesel
2026	HHDT	2.3	g/trip	STREX	NOx	Diesel
2026	HHDT	5.4	g/trip	IDLEX	NOx	Diesel
2026	HHDT	0.45	g/trip	IDLEX	ROG	Diesel
2026	HHDT	0.0022	g/trip	IDLEX	PM_{10}	Diesel
2026	HHDT	0.0021	g/trip	IDLEX	$PM_{2.5}$	Diesel
2027	HHDT	0.061	g/mile	PMBW	PM_{10}	Diesel
2027	HHDT	0.026	g/mile	PMBW	$PM_{2.5}$	Diesel
2027	HHDT	0.036	g/mile	PMTW	PM_{10}	Diesel
2027	HHDT	0.0089	g/mile	PMTW	$PM_{2.5}$	Diesel
2027	HHDT	2.6	g/mile	RUNEX	NOx	Diesel
2027	HHDT	0.025	g/mile	RUNEX	PM_{10}	Diesel
2027	HHDT	0.024	g/mile	RUNEX	$PM_{2.5}$	Diesel
2027	HHDT	0.023	g/mile	RUNEX	ROG	Diesel
2027	HHDT	2.3	g/trip	STREX	NOx	Diesel
2027	HHDT	5.4	g/trip	IDLEX	NOx	Diesel
2027	HHDT	0.45	g/trip	IDLEX	ROG	Diesel
2027	HHDT	0.0022	g/trip	IDLEX	PM_{10}	Diesel
2027	HHDT	0.0021	g/trip	IDLEX	$PM_{2.5}$	Diesel
2020	LD_Mix	0.0045	g/mile	RUNEX	CH_4	Gas
2020	LD_Mix	308	g/mile	RUNEX	CO_2	Gas
2020	LD_Mix	0.0070	g/mile	RUNEX	N_2O	Gas
2020	LD_Mix	0.078	g/trip	STREX	CH_4	Gas
2020	LD_Mix	66	g/trip	STREX	CO_2	Gas
2020	LD_Mix	0.033	g/trip	STREX	N_2O	Gas
2021	LD_Mix	0.0039	g/mile	RUNEX	CH_4	Gas
2021	LD_Mix	300	g/mile	RUNEX	CO_2	Gas
2021	LD_Mix	0.0063	g/mile	RUNEX	N_2O	Gas
2021	LD_Mix	0.072	g/trip	STREX	CH_4	Gas
2021	LD_Mix	64	g/trip	STREX	CO_2	Gas
2021	LD_Mix	0.031	g/trip	STREX	N_2O	Gas
2022	LD_Mix	0.0034	g/mile	RUNEX	CH_4	Gas
2022	LD_Mix	291	g/mile	RUNEX	CO_2	Gas
2022	LD_Mix	0.0057	g/mile	RUNEX	N_2O	Gas
2022	LD_Mix	0.067	g/trip	STREX	CH_4	Gas
2022	LD_Mix	63	g/trip	STREX	CO_2	Gas
2022	LD_Mix	0.030	g/trip	STREX	N_2O	Gas
2023	LD_Mix	0.0030	g/mile	RUNEX	CH_4	Gas
2023	LD_Mix	283	g/mile	RUNEX	CO_2	Gas
2023	LD_Mix	0.0052	g/mile	RUNEX	N_2O	Gas

Table 9
Project Construction Onroad Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2023	LD_Mix	0.061	g/trip	STREX	CH_4	Gas
2023	LD_Mix	61	g/trip	STREX	CO_2	Gas
2023	LD_Mix	0.029	g/trip	STREX	N_2O	Gas
2024	LD_Mix	0.0026	g/mile	RUNEX	CH_4	Gas
2024	LD_Mix	275	g/mile	RUNEX	CO_2	Gas
2024	LD_Mix	0.0048	g/mile	RUNEX	N_2O	Gas
2024	LD_Mix	0.057	g/trip	STREX	CH_4	Gas
2024	LD_Mix	59	g/trip	STREX	CO_2	Gas
2024	LD_Mix	0.027	g/trip	STREX	N_2O	Gas
2025	LD_Mix	0.0023	g/mile	RUNEX	CH_4	Gas
2025	LD_Mix	266	g/mile	RUNEX	CO_2	Gas
2025	LD_Mix	0.0045	g/mile	RUNEX	N_2O	Gas
2025	LD_Mix	0.053	g/trip	STREX	CH_4	Gas
2025	LD_Mix	57	g/trip	STREX	CO_2	Gas
2025	LD_Mix	0.026	g/trip	STREX	N_2O	Gas
2026	LD_Mix	0.0021	g/mile	RUNEX	CH_4	Gas
2026	LD_Mix	259	g/mile	RUNEX	CO_2	Gas
2026	LD_Mix	0.0042	g/mile	RUNEX	N_2O	Gas
2026	LD_Mix	0.049	g/trip	STREX	CH_4	Gas
2026	LD_Mix	56	g/trip	STREX	CO_2	Gas
2026	LD_Mix	0.025	g/trip	STREX	N_2O	Gas
2027	LD_Mix	0.0019	g/mile	RUNEX	CH_4	Gas
2027	LD_Mix	252	g/mile	RUNEX	CO_2	Gas
2027	LD_Mix	0.0040	g/mile	RUNEX	N_2O	Gas
2027	LD_Mix	0.045	g/trip	STREX	CH_4	Gas
2027	LD_Mix	54	g/trip	STREX	CO_2	Gas
2027	LD_Mix	0.024	g/trip	STREX	N_2O	Gas
2020	MHDT/HHDT	0.0088	g/mile	RUNEX	CH_4	Diesel
2020	MHDT/HHDT	1,302	g/mile	RUNEX	CO_2	Diesel
2020	MHDT/HHDT	0.20	g/mile	RUNEX	N_2O	Diesel
2020	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2020	MHDT/HHDT	609	g/trip	IDLEX	CO_2	Diesel
2020	MHDT/HHDT	0.10	g/trip	IDLEX	N_2O	Diesel
2021	MHDT/HHDT	0.0071	g/mile	RUNEX	CH_4	Diesel
2021	MHDT/HHDT	1,278	g/mile	RUNEX	CO_2	Diesel
2021	MHDT/HHDT	0.20	g/mile	RUNEX	N_2O	Diesel
2021	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2021	MHDT/HHDT	613	g/trip	IDLEX	CO_2	Diesel
2021	MHDT/HHDT	0.10	g/trip	IDLEX	N_2O	Diesel
2022	MHDT/HHDT	0.0038	g/mile	RUNEX	CH_4	Diesel
2022	MHDT/HHDT	1,244	g/mile	RUNEX	CO_2	Diesel
2022	MHDT/HHDT	0.20	g/mile	RUNEX	N_2O	Diesel
2022	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2022	MHDT/HHDT	621	g/trip	IDLEX	CO_2	Diesel
2022	MHDT/HHDT	0.10	g/trip	IDLEX	N_2O	Diesel
2023	MHDT/HHDT	7.9E-04	g/mile	RUNEX	CH_4	Diesel
2023	MHDT/HHDT	1,189	g/mile	RUNEX	CO_2	Diesel
2023	MHDT/HHDT	0.19	g/mile	RUNEX	N_2O	Diesel
2023	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2023	MHDT/HHDT	598	g/trip	IDLEX	CO_2	Diesel
2023	MHDT/HHDT	0.094	g/trip	IDLEX	N_2O	Diesel
2024	MHDT/HHDT	7.9E-04	g/mile	RUNEX	CH_4	Diesel
2024	MHDT/HHDT	1,171	g/mile	RUNEX	CO_2	Diesel
2024	MHDT/HHDT	0.18	g/mile	RUNEX	N_2O	Diesel
2024	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2024	MHDT/HHDT	587	g/trip	IDLEX	CO_2	Diesel
2024	MHDT/HHDT	0.092	g/trip	IDLEX	N_2O	Diesel
2025	MHDT/HHDT	7.9E-04	g/mile	RUNEX	CH_4	Diesel
2025	MHDT/HHDT	1,151	g/mile	RUNEX	CO_2	Diesel
2025	MHDT/HHDT	0.18	g/mile	RUNEX	N_2O	Diesel
2025	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2025	MHDT/HHDT	575	g/trip	IDLEX	CO_2	Diesel
2025	MHDT/HHDT	0.090	g/trip	IDLEX	N_2O	Diesel
2026	MHDT/HHDT	7.9E-04	g/mile	RUNEX	CH_4	Diesel
2026	MHDT/HHDT	1,130	g/mile	RUNEX	CO_2	Diesel
2026	MHDT/HHDT	0.18	g/mile	RUNEX	N_2O	Diesel
2026	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2026	MHDT/HHDT	563	g/trip	IDLEX	CO_2	Diesel
2026	MHDT/HHDT	0.089	g/trip	IDLEX	N_2O	Diesel
2027	MHDT/HHDT	7.8E-04	g/mile	RUNEX	CH_4	Diesel
2027	MHDT/HHDT	1,107	g/mile	RUNEX	CO_2	Diesel
2027	MHDT/HHDT	0.17	g/mile	RUNEX	N_2O	Diesel
2027	MHDT/HHDT	0.011	g/trip	IDLEX	CH_4	Diesel
2027	MHDT/HHDT	552	g/trip	IDLEX	CO_2	Diesel
2027	MHDT/HHDT	0.087	g/trip	IDLEX	N_2O	Diesel
2020	HHDT	0.0075	g/mile	RUNEX	CH_4	Diesel
2020	HHDT	1,518	g/mile	RUNEX	CO_2	Diesel
2020	HHDT	0.24	g/mile	RUNEX	N_2O	Diesel
2020	HHDT	0.022	g/trip	IDLEX	CH_4	Diesel
2020	HHDT	1,129	g/trip	IDLEX	CO_2	Diesel
2020	HHDT	0.18	g/trip	IDLEX	N_2O	Diesel
2021	HHDT	0.0061	g/mile	RUNEX	CH_4	Diesel

Table 9
Project Construction Onroad Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2021	HHDT	1,491	g/mile	RUNEX	CO_2	Diesel
2021	HHDT	0.23	g/mile	RUNEX	N_2O	Diesel
2021	HHDT	0.022	g/trip	IDLEX	CH_4	Diesel
2021	HHDT	1,138	g/trip	IDLEX	CO_2	Diesel
2021	HHDT	0.18	g/trip	IDLEX	N_2O	Diesel
2022	HHDT	0.0038	g/mile	RUNEX	CH_4	Diesel
2022	HHDT	1,452	g/mile	RUNEX	CO_2	Diesel
2022	HHDT	0.23	g/mile	RUNEX	N_2O	Diesel
2022	HHDT	0.021	g/trip	IDLEX	CH_4	Diesel
2022	HHDT	1,155	g/trip	IDLEX	CO_2	Diesel
2022	HHDT	0.18	g/trip	IDLEX	N_2O	Diesel
2023	HHDT	0.0011	g/mile	RUNEX	CH_4	Diesel
2023	HHDT	1,380	g/mile	RUNEX	CO_2	Diesel
2023	HHDT	0.22	g/mile	RUNEX	N_2O	Diesel
2023	HHDT	0.021	g/trip	IDLEX	CH_4	Diesel
2023	HHDT	1,111	g/trip	IDLEX	CO_2	Diesel
2023	HHDT	0.17	g/trip	IDLEX	N_2O	Diesel
2024	HHDT	0.0011	g/mile	RUNEX	CH_4	Diesel
2024	HHDT	1,360	g/mile	RUNEX	CO_2	Diesel
2024	HHDT	0.21	g/mile	RUNEX	N_2O	Diesel
2024	HHDT	0.021	g/trip	IDLEX	CH_4	Diesel
2024	HHDT	1,091	g/trip	IDLEX	CO_2	Diesel
2024	HHDT	0.17	g/trip	IDLEX	N_2O	Diesel
2025	HHDT	0.0011	g/mile	RUNEX	CH_4	Diesel
2025	HHDT	1,334	g/mile	RUNEX	CO_2	Diesel
2025	HHDT	0.21	g/mile	RUNEX	N_2O	Diesel
2025	HHDT	0.021	g/trip	IDLEX	CH_4	Diesel
2025	HHDT	1,069	g/trip	IDLEX	CO_2	Diesel
2025	HHDT	0.17	g/trip	IDLEX	N_2O	Diesel
2026	HHDT	0.0011	g/mile	RUNEX	CH_4	Diesel
2026	HHDT	1,308	g/mile	RUNEX	CO_2	Diesel
2026	HHDT	0.21	g/mile	RUNEX	N_2O	Diesel
2026	HHDT	0.021	g/trip	IDLEX	CH_4	Diesel
2026	HHDT	1,047	g/trip	IDLEX	CO_2	Diesel
2026	HHDT	0.16	g/trip	IDLEX	N_2O	Diesel
2027	HHDT	0.0011	g/mile	RUNEX	CH_4	Diesel
2027	HHDT	1,279	g/mile	RUNEX	CO_2	Diesel
2027	HHDT	0.20	g/mile	RUNEX	N_2O	Diesel
2027	HHDT	0.021	g/trip	IDLEX	CH_4	Diesel
2027	HHDT	1,025	g/trip	IDLEX	CO_2	Diesel
2027	HHDT	0.16	g/trip	IDLEX	N_2O	Diesel
2018	Water Truck	1.6	g/mile	RUNEX	ROG	Diesel
2018	Water Truck	1.2	g/idle-hr	IDLEX	ROG	Diesel
2018	Water Truck	8.8	g/mile	RUNEX	NOx	Diesel
2018	Water Truck	0.26	g/start	STREX	NOx	Diesel
2018	Water Truck	77	g/idle-hr	IDLEX	NOx	Diesel
2018	Water Truck	0.29	g/mile	RUNEX	PM_{10}	Diesel
2018	Water Truck	0.33	g/idle-hr	IDLEX	PM_{10}	Diesel
2018	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2018	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2018	Water Truck	0.27	g/mile	RUNEX	$PM_{2.5}$	Diesel
2018	Water Truck	0.32	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2018	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2018	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2018	Water Truck	2,067	g/mile	RUNEX	CO_2	Diesel
2018	Water Truck	6,831	g/idle-hr	IDLEX	CO_2	Diesel
2018	Water Truck	0.072	g/mile	RUNEX	CH_4	Diesel
2018	Water Truck	0.056	g/idle-hr	IDLEX	CH_4	Diesel
2019	Water Truck	1.3	g/mile	RUNEX	ROG	Diesel
2019	Water Truck	1.1	g/idle-hr	IDLEX	ROG	Diesel
2019	Water Truck	8.2	g/mile	RUNEX	NOx	Diesel
2019	Water Truck	0.30	g/start	STREX	NOx	Diesel
2019	Water Truck	71	g/idle-hr	IDLEX	NOx	Diesel
2019	Water Truck	0.23	g/mile	RUNEX	PM_{10}	Diesel
2019	Water Truck	0.27	g/idle-hr	IDLEX	PM_{10}	Diesel
2019	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2019	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2019	Water Truck	0.22	g/mile	RUNEX	$PM_{2.5}$	Diesel
2019	Water Truck	0.26	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2019	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2019	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2019	Water Truck	2,047	g/mile	RUNEX	CO_2	Diesel
2019	Water Truck	6,774	g/idle-hr	IDLEX	CO_2	Diesel
2019	Water Truck	0.061	g/mile	RUNEX	CH_4	Diesel
2019	Water Truck	0.050	g/idle-hr	IDLEX	CH_4	Diesel
2020	Water Truck	1.1	g/mile	RUNEX	ROG	Diesel
2020	Water Truck	0.93	g/idle-hr	IDLEX	ROG	Diesel
2020	Water Truck	7.5	g/mile	RUNEX	NOx	Diesel
2020	Water Truck	0.33	g/start	STREX	NOx	Diesel
2020	Water Truck	66	g/idle-hr	IDLEX	NOx	Diesel
2020	Water Truck	0.18	g/mile	RUNEX	PM_{10}	Diesel
2020	Water Truck	0.21	g/idle-hr	IDLEX	PM_{10}	Diesel
2020	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2020	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2020	Water Truck	0.17	g/mile	RUNEX	$PM_{2.5}$	Diesel

Table 9
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Oakland Waterfront Ballpark District Project
Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2020	Water Truck	0.20	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2020	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2020	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2020	Water Truck	2,027	g/mile	RUNEX	CO_2	Diesel
2020	Water Truck	6,706	g/idle-hr	IDLEX	CO_2	Diesel
2020	Water Truck	0.050	g/mile	RUNEX	CH_4	Diesel
2020	Water Truck	0.043	g/idle-hr	IDLEX	CH_4	Diesel
2021	Water Truck	0.84	g/mile	RUNEX	ROG	Diesel
2021	Water Truck	0.85	g/idle-hr	IDLEX	ROG	Diesel
2021	Water Truck	6.8	g/mile	RUNEX	NOx	Diesel
2021	Water Truck	0.36	g/start	STREX	NOx	Diesel
2021	Water Truck	60	g/idle-hr	IDLEX	NOx	Diesel
2021	Water Truck	0.13	g/mile	RUNEX	PM_{10}	Diesel
2021	Water Truck	0.18	g/idle-hr	IDLEX	PM_{10}	Diesel
2021	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2021	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2021	Water Truck	0.13	g/mile	RUNEX	$PM_{2.5}$	Diesel
2021	Water Truck	0.17	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2021	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2021	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2021	Water Truck	1,995	g/mile	RUNEX	CO_2	Diesel
2021	Water Truck	6,601	g/idle-hr	IDLEX	CO_2	Diesel
2021	Water Truck	0.039	g/mile	RUNEX	CH_4	Diesel
2021	Water Truck	0.039	g/idle-hr	IDLEX	CH_4	Diesel
2022	Water Truck	0.37	g/mile	RUNEX	ROG	Diesel
2022	Water Truck	0.69	g/idle-hr	IDLEX	ROG	Diesel
2022	Water Truck	5.5	g/mile	RUNEX	NOx	Diesel
2022	Water Truck	0.42	g/start	STREX	NOx	Diesel
2022	Water Truck	51	g/idle-hr	IDLEX	NOx	Diesel
2022	Water Truck	0.045	g/mile	RUNEX	PM_{10}	Diesel
2022	Water Truck	0.10	g/idle-hr	IDLEX	PM_{10}	Diesel
2022	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2022	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2022	Water Truck	0.043	g/mile	RUNEX	$PM_{2.5}$	Diesel
2022	Water Truck	0.10	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2022	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2022	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2022	Water Truck	1,953	g/mile	RUNEX	CO_2	Diesel
2022	Water Truck	6,455	g/idle-hr	IDLEX	CO_2	Diesel
2022	Water Truck	0.017	g/mile	RUNEX	CH_4	Diesel
2022	Water Truck	0.032	g/idle-hr	IDLEX	CH_4	Diesel
2023	Water Truck	0.037	g/mile	RUNEX	ROG	Diesel
2023	Water Truck	0.53	g/idle-hr	IDLEX	ROG	Diesel
2023	Water Truck	4.7	g/mile	RUNEX	NOx	Diesel
2023	Water Truck	0.52	g/start	STREX	NOx	Diesel
2023	Water Truck	39	g/idle-hr	IDLEX	NOx	Diesel
2023	Water Truck	0.0052	g/mile	RUNEX	PM_{10}	Diesel
2023	Water Truck	0.032	g/idle-hr	IDLEX	PM_{10}	Diesel
2023	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2023	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2023	Water Truck	0.0050	g/mile	RUNEX	$PM_{2.5}$	Diesel
2023	Water Truck	0.031	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2023	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2023	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2023	Water Truck	1,907	g/mile	RUNEX	CO_2	Diesel
2023	Water Truck	6,200	g/idle-hr	IDLEX	CO_2	Diesel
2023	Water Truck	0.0017	g/mile	RUNEX	CH_4	Diesel
2023	Water Truck	0.025	g/idle-hr	IDLEX	CH_4	Diesel
2024	Water Truck	0.037	g/mile	RUNEX	ROG	Diesel
2024	Water Truck	0.53	g/idle-hr	IDLEX	ROG	Diesel
2024	Water Truck	4.8	g/mile	RUNEX	NOx	Diesel
2024	Water Truck	0.52	g/start	STREX	NOx	Diesel
2024	Water Truck	38	g/idle-hr	IDLEX	NOx	Diesel
2024	Water Truck	0.0052	g/mile	RUNEX	PM_{10}	Diesel
2024	Water Truck	0.028	g/idle-hr	IDLEX	PM_{10}	Diesel
2024	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2024	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2024	Water Truck	0.0049	g/mile	RUNEX	$PM_{2.5}$	Diesel
2024	Water Truck	0.027	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2024	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2024	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2024	Water Truck	1,876	g/mile	RUNEX	CO_2	Diesel
2024	Water Truck	6,123	g/idle-hr	IDLEX	CO_2	Diesel
2024	Water Truck	0.0017	g/mile	RUNEX	CH_4	Diesel
2024	Water Truck	0.025	g/idle-hr	IDLEX	CH_4	Diesel
2025	Water Truck	0.036	g/mile	RUNEX	ROG	Diesel
2025	Water Truck	0.52	g/idle-hr	IDLEX	ROG	Diesel
2025	Water Truck	4.8	g/mile	RUNEX	NOx	Diesel
2025	Water Truck	0.52	g/start	STREX	NOx	Diesel
2025	Water Truck	36	g/idle-hr	IDLEX	NOx	Diesel
2025	Water Truck	0.0051	g/mile	RUNEX	PM_{10}	Diesel
2025	Water Truck	0.025	g/idle-hr	IDLEX	PM_{10}	Diesel
2025	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2025	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2025	Water Truck	0.0049	g/mile	RUNEX	$PM_{2.5}$	Diesel
2025	Water Truck	0.024	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2025	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel

Table 9
Project Construction Onroad Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Fleet Mix[1]	Emission Factor[2]	Units	Type	Pollutant	Fuel Type Restriction[3]
2025	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2025	Water Truck	1,845	g/mile	RUNEX	CO_2	Diesel
2025	Water Truck	6,046	g/idle-hr	IDLEX	CO_2	Diesel
2025	Water Truck	0.0017	g/mile	RUNEX	CH_4	Diesel
2025	Water Truck	0.024	g/idle-hr	IDLEX	CH_4	Diesel
2026	Water Truck	0.036	g/mile	RUNEX	ROG	Diesel
2026	Water Truck	0.52	g/idle-hr	IDLEX	ROG	Diesel
2026	Water Truck	4.9	g/mile	RUNEX	NOx	Diesel
2026	Water Truck	0.52	g/start	STREX	NOx	Diesel
2026	Water Truck	35	g/idle-hr	IDLEX	NOx	Diesel
2026	Water Truck	0.0050	g/mile	RUNEX	PM_{10}	Diesel
2026	Water Truck	0.022	g/idle-hr	IDLEX	PM_{10}	Diesel
2026	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2026	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2026	Water Truck	0.0048	g/mile	RUNEX	$PM_{2.5}$	Diesel
2026	Water Truck	0.021	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2026	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2026	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2026	Water Truck	1,814	g/mile	RUNEX	CO_2	Diesel
2026	Water Truck	5,972	g/idle-hr	IDLEX	CO_2	Diesel
2026	Water Truck	0.0017	g/mile	RUNEX	CH_4	Diesel
2026	Water Truck	0.024	g/idle-hr	IDLEX	CH_4	Diesel
2027	Water Truck	0.036	g/mile	RUNEX	ROG	Diesel
2027	Water Truck	0.52	g/idle-hr	IDLEX	ROG	Diesel
2027	Water Truck	4.9	g/mile	RUNEX	NOx	Diesel
2027	Water Truck	0.52	g/start	STREX	NOx	Diesel
2027	Water Truck	35	g/idle-hr	IDLEX	NOx	Diesel
2027	Water Truck	0.0049	g/mile	RUNEX	PM_{10}	Diesel
2027	Water Truck	0.019	g/idle-hr	IDLEX	PM_{10}	Diesel
2027	Water Truck	0.012	g/mile	PMTW	PM_{10}	Diesel
2027	Water Truck	0.13	g/mile	PMBW	PM_{10}	Diesel
2027	Water Truck	0.0047	g/mile	RUNEX	$PM_{2.5}$	Diesel
2027	Water Truck	0.018	g/idle-hr	IDLEX	$PM_{2.5}$	Diesel
2027	Water Truck	0.0030	g/mile	PMTW	$PM_{2.5}$	Diesel
2027	Water Truck	0.056	g/mile	PMBW	$PM_{2.5}$	Diesel
2027	Water Truck	1,783	g/mile	RUNEX	CO_2	Diesel
2027	Water Truck	5,895	g/idle-hr	IDLEX	CO_2	Diesel
2027	Water Truck	0.0017	g/mile	RUNEX	CH_4	Diesel
2027	Water Truck	0.024	g/idle-hr	IDLEX	CH_4	Diesel

Notes

1. CalEEMod® default fleet mixes were used for Worker (LD_Mix), Vendor (MHDT/HHDT), and Hauling (HHDT) trips. The water truck fleet was assumed to be 100% MHDT.

2. For Worker, Vendor, and Hauling emission factors, EMFAC2017 was run for each year of construction. Annual number of trips and VMT were output by vehicle class and fuel for Alameda County and averaged across model years for EMFAC 2007 vehicle classes for a specific fuel type. From these, emission factors were calculated by dividing the emissions by either the number of trips or the VMT, where appropriate. Emission factors were calculated using the equations below:

   $E_{g/mi} = E / VMT$

   $E_{g/trip} = E / T$

   Where $E_{g/mi}$ is the emission factor in g/mi, $E_{g/trip}$ is the emission factor in g/trip, VMT is annual vehicle miles traveled and T is the annual number of trips.

   For the Water Truck fleet, EMFAC2017 was run in emissions rates mode and output by vehicle class and fuel for Alameda County and averaged across model years for EMFAC 2007 vehicle classes for a specific fuel type.

3. LD_Mix was assumed to be 100% gasoline vehicles and MHDT/HHDT and HHDT were assumed to be 100% diesel vehicles.

Abbreviations

CalEEMod® - California Emissions Estimator Model
CH_4 - Methane
CO_2 - Carbon Dioxide
DIURN - Diurnal Evaporative HC Emissions
g - grams
HC - hydrocarbon
HHDT - heavy heavy duty truck
HOTSOAK - Hotsoak Evaporative HC Emissions
IDLEX - Idle Exhaust Emissions
LD_mix - Light duty mix
MHDT - medium heavy duty truck
N_2O - Nitrous Oxide
NOx - Oxides of Nitrogen
$PM_{2.5}$ - particulate matter less than 2.5 microns
PM_{10} - particulate matter less than 10 microns
PMBW - Break Wear Particulate Matter Emissions
PMTW - Tire Wear Particulate Matter Emissions
RESTLOSS - Resting Evaporative Loss
ROG - Reactive Organic Gases
RUNEX - Running Exhaust Emissions
RUNLOSS - Running Loss Evaporative HC Emissions
STREX - Start Exhaust Tailpipe Emissions

Table 10
Project Construction Entrained Dust Emission Factor
Oakland Waterfront Ballpark District Project
Oakland, California

Road Dust Equation[1]

E [lb/VMT] = k*(sL)^0.91 * (W)^1.02 * (1-P/4N)

Parameters	Value
E = annual average emission factor in the same units as k	[calculated]
k = particle size multiplier for particle size range	
PM_{10} (lb/VMT)	0.0022
$PM_{2.5}$ (lb/VMT)	3.3E-04
sL = roadway silt loading [grams per square meter - g/m^2]	0.032
W = average weight of vehicles traveling the road [tons]	2.4
P = number of "wet" days in county with at least 0.01 in of precipitation during the annual averaging period	61
N = number of days in the averaging period	365

Trip Type-Specific Emission Factors	
PM_{10} Emission Factor [g/VMT]	0.10
$PM_{2.5}$ Emission Factor [g/VMT]	0.015

Notes:

1. Road dust equation and parameters are from the California Air Resources Board's (ARB) 2018 Miscellaneous Process Methodology 7.9 for Entrained Road Travel, Paved Road Dust. The silt loading emission factor conservatively assumes all roads are major roadways, even though most of the routes are freeways. The number of "wet" days for Alameda county is from ARB 2018. This is slightly lower than the default from CalEEMod® Appendix D Table 1.1 (63 days), which was based on older historic data and would result in slightly lower emissions. Other parameters are from ARB 2018. $PM_{2.5}$ is assumed to be 15% of PM_{10} based on paved road dust sampling in California (ARB Speciation Profile #471), which is a more representative fraction than provided in the older AP-42 fugitive dust methodology as discussed in ARB 2018 (page 10).

Abbreviations:

ARB - California Air Resources Board
CalEEMod® - California Emissions Estimator Model
EMFAC - EMission FACtor Model
g - gram
lb - pound
$PM_{2.5}$ - particulate matter less than 2.5 microns
PM_{10} - particulate matter less than 10 microns
VMT - vehicle miles traveled

EMFAC Vehicle Category Abbreviations:

LDA - All Passenger Vehicles
LDT1 - All Light-Duty Trucks in Weight Class 0-3750 lbs
LDT2 - Gas, Diesel Light-Duty Trucks
in Weight Class 3751-5750 lbs
MHDT - Gas, Diesel Medium-Heavy-Duty vehicles
in Weight Class 12001-33000 lbs
HHDT- Gas, Diesel Heavy-Heavy-Duty vehicles
in Weight Class 33001-60000 lbs

References:

California ARB. 2018. Miscellaneous Processes Methodologies - Paved Entrained Road Dust. Available online at: https://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2018.pdf

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 11
Unmitigated Project Construction Architectural Coating Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Venue	Floor Area[1] (square feet)	Building Surface Area[2] (square feet)	Application Rate	Indoor Paint VOC EF[3] (g/L)	Outdoor Paint VOC EF[3] (g/L)	Architectural Coating VOC emissions[4] (lb)
Phase 1	Ballpark[5]	--	930,000	100%	100	150	5,007
	Office	250,000	500,000	100%	100	150	2,608
	Retail	30,000	60,000	100%	100	150	313
	Residential	624,000	1,684,800	100%	100	150	8,787
	Hotel	280,000	560,000	100%	100	150	2,921
	Interim Parking[6]	1,050,000	63,000	100%	--	150	438
	Parking Garage	372,000	22,320	100%	--	150	155
Phase 2	Ballpark Parking	600,000	36,000	100%	100	150	188
	Office	1,250,000	2,500,000	100%	100	150	13,038
	Retail	240,000	480,000	100%	100	150	2,503
	Residential	2,676,000	7,225,200	100%	100	150	37,682
	Performance Venue	50,000	100,000	100%	100	150	522
	Parking Garage	2,298,000	137,880	100%	--	150	959

Notes:

1. Floor area by phase provided by Project sponsor.
2. Ballpark building surface area provided by Project sponsor (see Footnote 5). For all other land uses, consistent with CalEEMod®, residential building surface area is assumed to be 2.7 times the floor area, and non-residential 2 times the floor area. Also consistent with CalEEMod®, the interim parking lot painted area is assumed to be 6% of the total surface area. Building area (for all land uses except for the ballpark) is assumed to be 75% indoors and 25% outdoors, consistent with CalEEMod®.
3. Paint VOC content is consistent with BAAQMD Regulation 8 Rule 3 (Architectural Coatings). Based on this regulation, the analysis assumes emission factors of 100 g/L for flat paints, generally used indoors, and 150 g/L for all other architectural coatings. Parking garages and interim parking are assumed to have no indoor surfaces.
4. Uses CalEEMod® assumption that 1 gallon of paint covers 180 square feet.
5. There are no default values specific to a ballpark stadium in CalEEMod®; therefore, the Project sponsor estimated the areas of the ballpark that would need to be coated: approximately 630,000 square feet of interior area and 300,000 square feet of exterior area. Many of exterior structural components would be purchased pre-coated which reduces the amount of coating for exterior area.
6. There are 3,500 interim surface parking spaces associated with Phase 1 (Ballpark).

Abbreviations:

CalEEMod® - California Emissions Estimator Model
EF - Emission Factor
g - grams
L - liter
lb - pound
VOC - Volatile Organic Compound

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 12
Mitigated Project Construction Architectural Coating Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Venue	Floor Area[1] (square feet)	Building Surface Area[2] (square feet)	Application Rate	Indoor Paint VOC EF[3] (g/L)	Outdoor Paint VOC EF[3] (g/L)	Architectural Coating VOC emissions[4] (lb)
Phase 1	Ballpark[5]	--	930,000	100%	10	150	2,378
	Office	250,000	500,000	100%	10	150	1,043
	Retail	30,000	60,000	100%	10	150	125
	Residential	624,000	1,684,800	100%	10	150	3,515
	Hotel	280,000	560,000	100%	10	150	1,168
	Interim Parking[6]	1,050,000	63,000	100%	--	150	438
	Parking Garage	372,000	22,320	100%	--	150	155
Phase 2	Ballpark Parking	600,000	36,000	100%	10	150	75
	Office	1,250,000	2,500,000	100%	10	150	5,215
	Retail	240,000	480,000	100%	10	150	1,001
	Residential	2,676,000	7,225,200	100%	10	150	15,073
	Performance Venue	50,000	100,000	100%	10	150	209
	Parking Garage	2,298,000	137,880	100%	--	150	959

Notes:

1. Floor area by phase provided by Project sponsor.
2. Ballpark building surface area provided by Project sponsor (see Footnote 5). For all other land uses, consistent with CalEEMod®, residential building surface area is assumed to be 2.7 times the floor area, and non-residential 2 times the floor area. Also consistent with CalEEMod®, the interim parking lot painted area is assumed to be 6% of the total surface area. Building area (for all land uses except for the ballpark) is assumed to be 75% indoors and 25% outdoors, consistent with CalEEMod®.
3. Paint VOC content is consistent with or more stringent than BAAQMD Regulation 8 Rule 3 (Architectural Coatings). Emissions are estimated assuming that indoor painting will utilize "super-compliant" VOC architectural coatings that meet the more stringent limits in South Coast Air Quality Management District Rule 1113. For outdoor paint, assumes use of coatings with VOC content of 150 g/L, consistent with BAAQMD requirements. Parking garages and interim parking are assumed to have no indoor surfaces.
4. Uses CalEEMod® assumption that 1 gallon of paint covers 180 square feet.
5. There are no default values specific to a ballpark stadium in CalEEMod®; therefore, the Project sponsor estimated the areas of the ballpark that would need to be coated: approximately 630,000 square feet of interior area and 300,000 square feet of exterior area. Many of exterior structural components would be purchased pre-coated which reduces the amount of coating for exterior area.
6. There are 3,500 interim surface parking spaces associated with Phase 1 (Ballpark).

Abbreviations:

CalEEMod® - California Emissions Estimator Model
EF - Emission Factor
g - grams
L - liter
lb - pound
VOC - Volatile Organic Compound

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 13
Project Construction Asphalt Paving Off-Gassing Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Venue[1]	Floor Area (square feet)	Asphalt-Paved Area (acre)	Off-Gassing Emission Factor[2] (lb/acre)	Off-Gassing Emissions (lb/phase)
Phase 1	Interim Parking	1,050,000	24	2.62	63
	Onsite Streets	180,589	4.1	2.62	10.9
Phase 2	Onsite Streets	363,914	8.4	2.62	22

Notes:

1. Below-grade and above-grade parking structures are assumed to have no asphalt paving. Only surface parking and the streets are assumed to have asphalt paving. Parking square footage is based on information provided by the Project sponsor.
2. Emission factor is from CalEEMod® User's Guide, Appendix A.

Abbreviations:

CalEEMod® - California Emissions Estimator Model

lb - pound

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 14
Summary of Unmitigated Project Construction Criteria Air Pollutant Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Annual Emissions[1] (lb/year)			
			ROG	NOx	PM_{10} (exhaust)	PM_{25} (exhaust)
DPC Ground Improvement Area	Geotechnical Work	2020	110	1,144	49	44
		2021	195	2,028	84	77
DDC Ground Improvement Area	Geotechnical Work	2020	126	1,275	55	51
		2021	223	2,264	96	88
Offsite Improvements[2]: Grids 1-19	Demolition	2021	--	--	--	--
	Construct Curb, Gutter, Sidewalk, Ramps	2021	--	--	--	--
	New / Modified Traffic Signal	2021	--	--	--	--
	Street Lighting	2021	--	--	--	--
	Paving	2021	--	--	--	--
	Striping	2021	--	--	--	--
Phase 1	Demolition	2020	118	1,033	56	52
	Cut Off Wall	2021	132	1,479	57	52
	Grading and Site Preparation	2021	1,106	14,931	495	454
	Grading and Site Preparation Remediation	2021	327	7,008	140	132
	Crane Removal Demolition	2021	169	1,663	74	68
	Site Utilities	2021	59	552	23	21
		2022	157	1,412	57	51
	Ballpark Building Construction	2021	2,162	14,926	617	582
		2022	2,812	20,401	801	751
		2023	542	3,038	110	105
	Mixed Use Building Construction	2021	111	682	29	27
		2022	1,251	8,580	344	320
		2023	1,277	9,132	374	352
	Architectural Coating	2022	10,589	1,766	81	80
		2023	11,050	1,650	75	74
	Paving	2022	138	615	30	27
	Pedestrian Bike Overpass Grading and Site Preparation[2]	2022	--	--	--	--
	Pedestrian Bike Overpass Site Utilities[2]	2022	--	--	--	--
	Pedestrian Bike Overpass Tower Construction[2]	2022	--	--	--	--
		2023	--	--	--	--
	Pedestrian Bike Overpass Sitework[2]	2023	--	--	--	--
Phase 2	Demolition	2020	92	787	42	40
		2021	27	224	12	11
	Grading and Site Preparation	2023	502	5,296	215	196
		2024	978	11,297	393	365
	Grading and Site Preparation Remediation	2024	166	4,900	81	75
	Site Utilities	2024	210	1,879	72	68
		2025	51	444	16	15
	Mixed Use Building Construction	2024	902	7,588	270	249
		2025	1,966	17,432	576	535
		2026	2,788	24,707	896	834
		2027	1,791	15,534	562	524
	Paving	2025	122	969	45	40
		2026	0.92	7.3	0.34	0.30
	Architectural Coating	2025	13,512	539	24	23
		2026	25,358	999	44	44
		2027	16,897	659	29	29

Year	Summary of Annual Average Daily Emissions by Year[1,3]			
	ROG	NOx	PM_{10} (exhaust)	PM_{25} (exhaust)
	(lb/day)			
2020	5.1	48	2.3	2.1
2021	16	**166**	5.9	5.4
2022	**56**	**113**	4.5	4.2
2023	51	**72**	2.9	2.7
2024	8.7	**99**	3.1	2.9
2025	**60**	**75**	2.5	2.4
2026	**108**	**99**	3.6	3.4
2027	**107**	**93**	3.4	3.2

Notes:

1. Unmitigated emissions assume fleet-average equipment tiers for each calendar year. The emissions above include emissions from diesel off-road equipment, gasoline and diesel on-road equipment, and off-gassing emissions from paving and architectural coating.
2. The Offsite Improvements phase and the Pedestrian Bike Overpass in Phase 1 are mitigation measures and are only included in the Mitigated scenario, as shown in Table 15.
3. Emissions are averaged over 260 working days per year for all phases and subphases except Phase 1 Ballpark Building Construction, which is averaged over 312 working days per year to account for 6 days/week of construction activity. Emissions in 2020 and 2027 are averaged over the fraction of the year there will be construction (88 days, and 174 days, respectively).

Abbreviations:

DDC - Deep Dynamic Compaction
DPC - Direct Power Compaction
lb - pound
NOx - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
ROG - reactive organic gases

Table 15
Summary of Mitigated Project Construction Criteria Air Pollutant Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Annual Emissions[1] (lb/year)			
			ROG	NOx	PM_{10} (exhaust)	PM_{25} (exhaust)
DPC Ground Improvement Area	Geotechnical Work	2020	43	505	19	18
		2021	79	976	36	34
DDC Ground Improvement Area	Geotechnical Work	2020	50	552	20	19
		2021	91	1,060	39	36
Offsite Improvements[2]: Grids 1-19	Demolition	2021	18	60	1.8	1.8
	Construct Curb, Gutter, Sidewalk, Ramps	2021	55	1,085	16	15
	New / Modified Traffic Signal	2021	31	193	3.6	3.5
	Street Lighting	2021	30	299	5.2	5.1
	Paving	2021	12	27	0.82	0.82
	Striping	2021	5.2	19	0.57	0.57
Phase 1	Demolition	2020	30	118	3.4	3.4
	Cut Off Wall	2021	53	471	8.4	8.3
	Grading and Site Preparation	2021	427	6,207	109	100
	Grading and Site Preparation Remediation	2021	220	5,597	82	78
	Crane Removal Demolition	2021	47	164	4.96	4.95
	Site Utilities	2021	23	119	3.3	2.9
		2022	64	334	8.3	7.3
	Ballpark Building Construction	2021	1,286	5,241	98	95
		2022	1,632	6,437	111	105
		2023	376	1,417	19	17
	Mixed Use Building Construction	2021	72	269	5.2	5.0
		2022	711	2,865	50	48
		2023	646	2,728	48	45
	Architectural Coating	2022	4,830	531	13	12
		2023	5,028	516	13	13
	Paving	2022	98	130	4.1	3.1
	Pedestrian Bike Overpass Grading and Site Preparation[2]	2022	21	148	3.27	2.76
	Pedestrian Bike Overpass Site Utilities[2]	2022	13	87	2.24	1.78
	Pedestrian Bike Overpass Tower Construction[2]	2022	35	168	2.80	2.75
		2023	23	105	1.65	1.62
	Pedestrian Bike Overpass Sitework[2]	2023	6	64	1.16	0.70
Phase 2	Demolition	2020	26	91	2.6	2.6
		2021	7.9	28	0.81	0.81
	Grading and Site Preparation	2023	123	649	20	18
		2024	289	3,276	54	50
	Grading and Site Preparation Remediation	2024	79	3,851	38	36
	Site Utilities	2024	76	453	12	9.0
		2025	20	118	3.1	2.3
	Mixed Use Building Construction	2024	472	3,372	45	45
		2025	1,016	7,701	103	96
		2026	1,247	9,127	137	129
		2027	824	6,511	89	85
	Paving	2025	60	243	7.3	5.3
		2026	0.45	1.8	0.055	0.040
	Architectural Coating	2025	5,607	168	4.7	4.5
		2026	10,514	301	8.7	8.4
		2027	7,001	194	5.7	5.5

Year	Summary of Annual Average Daily Emissions by Year[1,3] (lb/day)			
	ROG	NOx	PM_{10} (exhaust)	PM_{25} (exhaust)
2020	1.7	14	0.51	0.48
2021	8.6	**81**	1.5	1.4
2022	27	37	0.68	0.64
2023	24	20	0.38	0.35
2024	3.5	42	0.58	0.54
2025	26	32	0.46	0.42
2026	45	36	0.56	0.53
2027	45	39	0.54	0.52

Notes:

1. Mitigated construction emissions reflect all Tier 4 Final off-road construction equipment, except as noted in Table 4, as well as super-compliant VOC coatings on interior surfaces. The emissions above include emissions from diesel off-road equipment, gasoline and diesel on-road equipment, and off-gassing emissions from paving and architectural coating.
2. The Offsite Improvements phase and the Pedestrian Bike Overpass in Phase 1 are mitigation measures and are only included in the Mitigated scenario.
3. Emissions are averaged over 260 working days per year for all phases and subphases except Phase 1 Ballpark Building Construction, which is averaged over 312 working days per year to account for 6 days/week of construction activity. Emissions in 2020 and 2027 are averaged over the fraction of the year there will be construction (88 days, and 174 days, respectively).

Abbreviations:

DDC - Deep Dynamic Compaction
DPC - Direct Power Compaction
lb - pound
NOx - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
ROG - reactive organic gases

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Table 16
Summary of Project Construction Greenhouse Gas Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Annual Emissions[1,2,3]	
			Unmitigated	Mitigated
			(Metric Tons)	
			CO_2e	CO_2e
DPC Ground Improvement Area	Geotechnical Work	2020	81	81
		2021	159	159
DDC Ground Improvement Area	Geotechnical Work	2020	97	97
		2021	191	191
Offsite Improvements[3]: Grids 1-19	Demolition	2021	--	53
	Construct Curb, Gutter, Sidewalk, Ramps	2021	--	220
	New / Modified Traffic Signal	2021	--	81
	Street Lighting	2021	--	99
	Paving	2021	--	25
	Striping	2021	--	16
Phase 1	Demolition	2020	96	96
	Cut Off Wall	2021	179	179
	Grading and Site Preparation	2021	1,575	1,575
	Grading and Site Preparation Remediation	2021	1,048	1,048
	Crane Removal Demolition	2021	142	142
	Site Utilities	2021	61	61
		2022	188	188
	Ballpark Building Construction	2021	2,470	2,470
		2022	3,414	3,414
		2023	765	765
	Mixed Use Building Construction	2021	132	132
		2022	1,586	1,586
		2023	1,621	1,621
	Architectural Coating	2022	733	733
		2023	752	752
	Paving	2022	70	70
	Pedestrian Bike Overpass Grading and Site Preparation[3]	2022	--	67
	Pedestrian Bike Overpass Site Utilities[3]	2022	--	39
	Pedestrian Bike Overpass Tower Construction[3]	2022	--	82
		2023	--	56
	Pedestrian Bike Overpass Sitework[3]	2023	--	19
Phase 2	Demolition	2020	75	75
		2021	24	24
	Grading and Site Preparation	2023	460	460
		2024	1,387	1,387
	Grading and Site Preparation Remediation	2024	970	970
	Site Utilities	2024	264	264
		2025	68	68
	Mixed Use Building Construction	2024	1,469	1,469
		2025	3,414	3,414
		2026	4,350	4,350
		2027	2,779	2,779
	Paving	2025	135	135
		2026	1.0	1.0
	Architectural Coating	2025	251	251
		2026	463	463
		2027	303	303

Year	Summary of CO_2e Emissions by Year (Metric tons)[1,2,3]	
	Unmitigated	Mitigated
2020	349	349
2021	5,979	6,474
2022	5,991	6,180
2023	3,597	3,673
2024	4,090	4,090
2025	3,869	3,869
2026	4,814	4,814
2027	3,082	3,082
Total	**31,771**	**32,530**

Notes:

1. Global warming potentials used in the calculation of CO_2e are 1, 25 and 298 for CO_2, CH_4 and N_2O, respectively.
2. Emissions sources include gasoline and diesel on-road vehicles, diesel and electric off-road equipment, and water use.
3. GHG emissions are not affected by off-road equipment engine tier selection. Thus, emissions are identical for the Unmitigated and Mitigated Scenarios for all Construction Areas except for the Offsite Improvements phase and the Pedestrian Bike Overpass (part of Phase 1 area) which are mitigation measures and are only constructed during the Mitigated Scenario.

Abbreviations:

CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide Equivalent
DDC - Deep Dynamic Compaction
DPC - Direct Power Compaction
N_2O - Nitrogen Oxide

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Table 17
Unmitigated Architectural Coating Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions

Land Use	Floor Area (sq ft)	Building Surface Area[1] (sq ft)	Application Rate[2]	Indoor Paint VOC EF[3] (g/L)	Outdoor Paint VOC EF[3] (g/L)	Architectural Coating VOC emissions[4] (lb/yr)
Coliseum Ballpark[5]	--	1,085,000	10%	100	150	341
NFL and Other Stadium Uses[5]	--	1,085,000	10%	100	150	243
A's Headquarters	40,000	80,000	10%	100	150	42
Ballpark Parking	3,000,000	180,000	10%	0	150	31
					Existing Conditions Emissions[6]	**657**
					A's Related Existing Conditions Emissions[5]	**414**

Phase 1 Buildout

Land Use		Floor Area (sq ft)	Building Surface Area[1] (sq ft)	Application Rate[2]	Indoor Paint VOC EF[3] (g/L)	Outdoor Paint VOC EF[3] (g/L)	Architectural Coating VOC emissions[4] (lb/yr)
Howard Terminal Ballpark[7,8]		--	930,000	10%	100	150	501
Non-Ballpark Land Uses	Office	250,000	500,000	10%	100	150	261
	Retail	30,000	60,000	10%	100	150	31
	Residential	594,000	1,603,800	10%	100	150	836
	Performance Venue	0	0	10%	100	150	0
	Hotel	280,000	560,000	10%	100	150	292
	Parking Garages	372,000	744,000	10%	0	150	129
						Total Unmitigated Phase 1 Buildout Emissions	**2,051**

Full Project Buildout

Land Use		Floor Area (sq ft)	Building Surface Area[1] (sq ft)	Application Rate[2]	Indoor Paint VOC EF[3] (g/L)	Outdoor Paint VOC EF[3] (g/L)	Architectural Coating VOC emissions[4] (lb/yr)
Howard Terminal Ballpark[7]		--	930,000	10%	100	150	501
Non-Ballpark Land Uses	Office	1,500,000	3,000,000	10%	100	150	1,565
	Retail	270,000	540,000	10%	100	150	282
	Residential	3,300,000	8,910,000	10%	100	150	4,647
	Performance Venue	50,000	100,000	10%	100	150	52
	Hotel	280,000	560,000	10%	100	150	292
	Parking Garages	2,670,000	5,340,000	10%	0	150	928
						Total Unmitigated Full Project Buildout Emissions	**8,266**

Notes:

1. Consistent with CalEEMod®, residential building surface area is assumed to be 2.7 times the floor area, and non-residential 2 times the floor area. Also consistent with CalEEMod®, the parking painted area is assumed to be 6% of the total surface area for surface lots.
2. Consistent with CalEEMod®, 10% of all surfaces are assumed to be coated each year.
3. Based on BAAQMD paint VOC regulations, 100 g/L for flat paints, generally used indoors, and 150 g/L for all other architectural coatings. Building area is assumed to be 75% indoors and 25% outdoors (with the exception of the ballpark stadium, see below), consistent with CalEEMod®. Parking garages are assumed to have no indoor surfaces.
4. Uses CalEEMod® assumption that 1 gallon of paint covers 180 square feet.
5. A's Related Existing Conditions architectural coating emissions are estimated based on the Coliseum square footage, assuming the same ratio of interior and exterior painted areas as the new ballpark (see Footnote 7). Emissions for the Coliseum Ballpark were scaled for the portion of the year that the MLB season runs (March through September, or 7 out of 12 months), since only MLB activities are taken into account in the A's Related Existing Conditions. To estimate additional architectural coating emissions from NFL or other event uses, emissions were estimated assuming these occur during the other 5 months per year.
6. The Existing Conditions emissions incorporate all emissions at the Coliseum Stadium, including those from NFL or other event uses.

Table 17
Unmitigated Architectural Coating Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

[7.] There are no specific ballpark stadium default values in CalEEMod®, therefore, the Project sponsor estimated interior and exterior painted areas of the Project ballpark for the purposes of this analysis. The Project Sponsor estimated that approximately 630,000 square feet of interior area would be painted, and 300,000 square feet of exterior area would be painted.

[8.] During Phase 1 operation, there will be a temporary interim surface parking lot for the ballpark. The temporary lot will have 3,500 parking spaces that cover 1,050,000 square feet. Using CalEEMod® methodology, this results in approximately 0.005 tons per year of VOC from the use of outdoor paint, which were only included as a part of construction emissions and are therefore not included in this table.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod® - California Emissions Estimator Model
EF - emission factor
g - grams
L - liters
lb - pound
MBL - Major League Baseball
NFL - National Football League
sq ft - square feet
VOC - volatile organic compound
yr - year

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 18
Mitigated Architectural Coating Emissions from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Phase 1 Buildout

Land Use		Floor Area (sq ft)	Building Surface Area[1] (sq ft)	Application Rate[2]	Indoor Paint VOC EF[3] (g/L)	Outdoor Paint VOC EF[3] (g/L)	Architectural Coating VOC emissions[4] (lb/yr)
Howard Terminal Ballpark[5,6]		--	930,000	10%	10	150	238
Non-Ballpark Land Uses	Office	250,000	500,000	10%	10	150	104
	Retail	30,000	60,000	10%	10	150	13
	Residential	594,000	1,603,800	10%	100	150	836
	Performance Venue	0	0	10%	10	150	0
	Hotel	280,000	560,000	10%	10	150	117
	Parking Garages	372,000	744,000	10%	0	150	129
Total Mitigated Phase 1 Buildout Emissions							**1,437**

Full Project Buildout

Land Use		Floor Area (sq ft)	Building Surface Area[1] (sq ft)	Application Rate[2]	Indoor Paint VOC EF[3] (g/L)	Outdoor Paint VOC EF[3] (g/L)	Architectural Coating VOC emissions[4] (lb/yr)
Howard Terminal Ballpark[5]		--	930,000	10%	10	150	238
Non-Ballpark Land Uses	Office	1,500,000	3,000,000	10%	10	150	626
	Retail	270,000	540,000	10%	10	150	113
	Residential	3,300,000	8,910,000	10%	100	150	4,647
	Performance Venue	50,000	100,000	10%	10	150	21
	Hotel	280,000	560,000	10%	10	150	117
	Parking Garages	2,670,000	5,340,000	10%	0	150	928
Total Mitigated Full Project Buildout Emissions							**6,689**

Notes:

1. Consistent with CalEEMod®, residential building surface area is assumed to be 2.7 times the floor area, and non-residential 2 times the floor area. Also consistent with CalEEMod, the parking painted area is assumed to be 6% of the total surface area for surface lots.
2. Consistent with CalEEMod®, 10% of all surfaces are assumed to be coated each year.
3. This calculation assumes super-compliant coatings with a VOC content below 10 g/L are used for all indoor non-residential coating. Residential indoor coating and all outdoor coatings are assumed to comply with BAAQMD paint VOC regulations, which specifies 100 g/L for flat paints, generally used indoors, and 150 g/L for all other architectural coatings. Building area is assumed to be 75% indoors and 25% outdoors (with the exception of the ballpark stadium, see below), consistent with CalEEMod®. Parking garages are assumed to have no indoor surfaces.
4. Uses CalEEMod® assumption that 1 gallon of paint covers 180 square feet.
5. There are no specific ballpark stadium default values in CalEEMod®, therefore, the Project sponsor estimated interior and exterior painted areas of the Project ballpark for the purposes of this analysis. The Project Sponsor estimated that approximately 630,000 square feet of interior area would be painted, and 300,000 square feet of exterior area would be painted.
6. During Phase 1 operation, there will be a temporary interim surface parking lot for the ballpark. The temporary lot will have 3,500 parking spaces that cover 1,050,000 square feet. Using CalEEMod® methodology, this results in approximately 0.005 tons per year of VOC, which were only included as a part of construction emissions and are therefore not included in this table.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod® - California Emissions Estimator Model
EF - emission factor
g - grams
L - liters
lb - pound
sq ft - square feet
VOC - volatile organic compound
yr - year

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. Available online at http://www.caleemod.com/

South Coast Air Quality Management District. Super-Compliant Architectural Coatings. Available online at: http://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings/super-compliant-coatings

Table 19
Consumer Product Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions

Land Use	Floor Area (sq ft)	Consumer Products VOC EF[1] (lb/sq ft/day)	Days per Year	Consumer Products VOC emissions (lb/yr)
Coliseum Ballpark[2]	1,400,000	1.6E-05	213	4,829
NFL and Other Stadium Uses[2]	1,400,000	1.6E-05	152	3,449
A's Headquarters	40,000	1.6E-05	365	237
Ballpark Parking	3,000,000	3.5E-07	365	388
			Existing Conditions Emissions[3]	**8,903**
			A's Related Existing Conditions Emissions	**5,453**

Phase 1 Buildout

Land Use	Floor Area (sq ft)	Consumer Products VOC EF[1] (lb/sq ft/day)	Days per Year	Consumer Products VOC emissions (lb/yr)
Howard Terminal Ballpark	1,200,000	1.6E-05	365	7,096
Office	250,000	1.6E-05	365	1,478
Retail	30,000	1.6E-05	365	177
Residential	594,000	1.6E-05	365	3,512
Performance Venue	0	1.6E-05	365	0
Hotel	280,000	1.6E-05	365	1,656
Parking Garages	372,000	3.5E-07	365	48
Ballpark Parking	0	3.5E-07	365	0
			Total Phase 1 Emissions	**13,967**

Full Project Buildout

Land Use	Floor Area (sq ft)	Consumer Products VOC EF[1] (lb/sq ft/day)	Days per Year	Consumer Products VOC emissions (lb/yr)
Howard Terminal Ballpark	1,200,000	1.6E-05	365	7,096
Office	1,500,000	1.6E-05	365	8,870
Retail	270,000	1.6E-05	365	1,597
Residential	3,300,000	1.6E-05	365	19,513
Performance Venue	50,000	1.6E-05	365	296
Hotel	280,000	1.6E-05	365	1,656
Parking Garages	2,070,000	3.5E-07	365	268
Ballpark Parking	600,000	3.5E-07	365	78
			Total Full Buildout Emissions	**39,371**

Notes:

1. The consumer products VOC EF for office, retail, and residential land uses was derived using methodology consistent with CalEEMod® but with updated statewide parameters. The CalEEMod® default emissions factor assumes 2008 statewide VOC inventory and building square footage. An updated VOC inventory for 2017 was taken from the ARB and 2017 population estimates based on the State of California's Department of Finance demographic projections were used to estimate a statewide VOC EF for 2017. The EFs for the parking land uses were taken as default values from the CalEEMod® User's Guide. As a conservative measure, and since no CalEEMod® defaults are available specifically for a ballpark stadium, the office/retail/residential EF was used for the ballpark as well.

Table 19
Consumer Product Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

2. Coliseum Ballpark consumer product emissions are estimated based on the Coliseum square footage and then scaled for the portion of the year that the MLB season runs (March through September, or 7 out of 12 months). To estimate additional consumer product emissions from NFL or other event uses, emissions were estimated assuming these occur during the other 5 months per year.
3. The Existing Conditions emissions incorporate all emissions at the Coliseum Stadium, including those from NFL or other event uses.

Abbreviations:

ARB - Air Resources Board
CalEEMod® - California Emissions Estimator Model
EF - emission factor
lb - pound
MLB - Major League Baseball
NFL - National Football League
sq ft - square feet
VOC - volatile organic compound
yr - year

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 20
Energy Usage for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions

Location	Land Use	CalEEMod® Land Use Subtype	Size	Units	Electricity Use Rate (kWh/unit-yr)	Annual Electricity Use (MWh/yr)	Natural Gas Use Rate (kBTU/unit-yr)	Annual Natural Gas Use (MMBtu/yr)
Coliseum Ballpark[1]	A's Games		1,859,022	attendees	3.2	5,877	1.3	2,401
	Other Events		95,000	attendees	3.2	300	1.3	123
	NFL Games		491,976	attendees	3.2	1,555	1.3	635
A's Headquarters[2]		General Office Building	40,000	square feet	12	499	19	773

Phase 1 Buildout

Location	Land Use	CalEEMod® Land Use Subtype	Size	Units	Electricity Use Rate (kWh/unit-yr)	Annual Electricity Use (MWh/yr)	Natural Gas Use Rate (kBTU/unit-yr)	Annual Natural Gas Use (MMBtu/yr)
Howard Terminal Ballpark[3]	A's Games		2,870,000	attendees	-	9,855	1.3	3,707
	Events		841,500	attendees			1.3	1,087
Non-Ballpark Land Uses[4]	Office	General Office Building	250,000	square feet	12	2,915	19	4,787
	Retail	Regional Shopping Center	30,000	square feet	9.7	292	4.6	137
	Residential	High Rise Apartment	540	units	4,097	2,212	8,669	4,681
	Performance Venue	Arena	0	square feet	7.1	0	25	0
	Hotel	Hotel	280,000	square feet	7.6	2,128	36	10,141
	Parking Garages	Enclosed Parking Garage with Elevators	372,000	square feet	5.3	1,954	0	0
	Ballpark Parking	Enclosed Parking Garage with Elevators	0	square feet	5.3	0	0	0

Full Project Buildout

Land Use		CalEEMod® Land Use Subtype	Size	Units	Electricity Use Rate (kWh/unit-yr)	Annual Electricity Use (MWh/yr)	Natural Gas Use Rate (kBTU/unit-yr)	Annual Natural Gas Use (MMBtu/yr)
Howard Terminal Ballpark[3]	A's Games		2,870,000	attendees	-	9,855	1.3	3,707
	Events		841,500	attendees			1.3	1,087
Non-Ballpark Land Uses[4]	Office	General Office Building	1,500,000	square feet	12	17,487	19	28,720
	Retail	Regional Shopping Center	270,000	square feet	9.7	2,624	4.6	1,231
	Residential	High Rise Apartment	3,000	units	4,097	12,291	8,669	26,008
	Performance Venue	Arena	50,000	square feet	7.1	356	25	1,229
	Hotel	Hotel	280,000	square feet	7.6	2,128	36	10,141
	Parking Garages	Enclosed Parking Garage with Elevators	2,070,000	square feet	5.3	10,874	0	0
	Ballpark Parking	Enclosed Parking Garage with Elevators	600,000	square feet	5.3	3,152	0	0

Notes:

1. Annual electricity and natural gas use rates for the Coliseum Ballpark were calculated based on historical energy use and actual attendance data for 2017 for MLB games to get a per attendee use rate of 3.2 kWh/attendee/year and 1.3 kBtu/attendee/year. These rates were multiplied by 30-year average annual attendance for the Athletics, as shown in Table 2. PG&E invoices for the MLB season (March through September) are provided in Appendix C.
2. A's headquarters energy use rate is based on CalEEMod® version 2016.3.2 defaults for Climate Zone 5.
3. Electricity use for the Howard Terminal ballpark was provided by Meyers+ on 4/29/2019. Natural gas use for the ballpark Howard terminal assumes the same per attendee use rate from the Coliseum historical data.
4. Electricity and natural gas use for all ancillary land uses are based on CalEEMod® defaults for Climate Zone 5, which account for 2016 Title 24. For the Phase 1 and Full Project Buildout scenarios, Title 24 electricity and lighting electricity use rates were reduced by 10.7% and Title 24 natural gas use rates were reduced by 1.0%, per the California Energy Commission (CEC) 2019 Title 24 Impact Analysis.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CEC - California Energy Commission
kBTU - thousand British Thermal Units
kWh - kilowatt-hour
MLB - Major League Baseball
MMBtu - million British Thermal Units
MWh - megawatt-hour
NFL - National Football League
PG&E - Pacific Gas & Electric
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com
California Energy Commission. 2019. Building Energy Efficiency Standards for Residential and Nonresidential Buildings. Available online at: https://www.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf
California Energy Commission. 2019. Impact Analysis for 2019 Energy Efficiency Standards. Available online at: https://www.energy.ca.gov/title24/2019standards/post_adoption/documents/2019_Impact_Analysis_Final_Report_2018-06-29.pdf
U.S. Environmental Protection Agency. Energy Star website. Accessed April 17, 2019. https://www.energystar.gov/products/lighting_fans/light_fixtures/why_choose_energy_star_qualified_led_lighting

Table 21
Energy Usage Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Historical Electricity Intensity

Annual Electricity Data	2015	2016	2017	Average[1]	Units
CO_2 Intensity Factor per Total Energy Delivered[2]	405	294	210	303	lbs CO_2/MWh delivered
% of Total Energy From RPS-Eligible Renewables[3]	0.30	0.33	0.33	0.32	-
CO_2 Intensity Factor per Total Non-RPS-Eligible Energy[4]	574	437	314	444	lbs CO_2/MWh delivered

Estimated Intensity Factor for Total Energy Delivered[5,6]

Model Year	2015	2016	2017	Average[1]	Units
2020 RPS (33%)	384	293	210	297	lbs CO_2/MWh delivered
	386	295	212	299	lbs CO_2e/MWh delivered
2030 RPS (60%)[7]	230	175	126	178	lbs CO_2/MWh delivered
	232	177	128	180	lbs CO_2e/MWh delivered
2045 RPS (100%)[7]	0	0	0	0	lbs CO_2/MWh delivered
	2.0	2.0	2.0	2.0	lbs CO_2e/MWh delivered

Greenhouse Gas Energy Emission Factors

Greenhouse Gas	CO_2	CH_4	N_2O	CO_2e	Units
Global Warming Potential[6]	1.0	25	298	-	-
2018 (Existing) Electricity Use Emission Factor[7]	300	0.033	0.004	302	lb/MWh
	0.14	1.5E-05	1.8E-06	0.14	MT/MWh
2020 (Phase 1) Electricity Use Emission Factor[7]	297	0.033	0.004	299	lb/MWh
	0.13	1.5E-05	1.8E-06	0.14	MT/MWh
2027 (Full Buildout) Electricity Use Emission Factor[7]	213	0.033	0.004	215	lb/MWh
	0.10	1.5E-05	1.8E-06	0.10	MT/MWh
Natural Gas Use Emission Factor[8]	118	0.0023	0.0022	118	lb/MMBTU
	0.0053	1.0E-07	9.8E-08	0.0054	MT/therm

Criteria Air Pollutant Energy Emission Factors[9]

Land Use Type	ROG	NOx	PM_{10}	$PM_{2.5}$	Units
Residential	0.011	0.092	0.0075	0.0075	lb/MMBtu
Nonresidential	0.011	0.10	0.0075	0.0075	lb/MMBtu

Notes:

1. Total CO_2 emission factor from The Climate Registry.
2. Percent of total energy from eligible renewables is from the PG&E 2015, 2016, and 2017 Corporate Responsibility Reports.
3. This average uses the most recent three years of data.
4. The emissions metric presented here is calculated based on the total CO_2 intensity factor divided by the percent of energy delivered from non-RPS-eligible renewable sources. This CO_2 intensity factor includes both fossil fuel and carbon-free sources of energy, such as largescale hydro and nuclear. Diablo Canyon Nuclear Plant, which accounts for a portion of the carbon-free energy in this CO_2 intensity factor, is planned to be closed by 2024-2025. According to SB 1090 (approved 9/2018), "The [California Public Utilities] commission shall ensure that integrated resource plans are designed to avoid any increase in emissions of greenhouse gases as a result of the retirement of the Diablo Canyon Units 1 and 2 powerplant." This was incorporated into CPUC section 712.7(2)(b). Based on this information, the total Non-RPS-Eligible energy CO_2 intensity factor was assumed to remain constant.
5. The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-RPS-eligible renewable energy by the CO_2 emissions per total non-RPS-eligible renewable energy metric calculated above. The estimate provided here and the energy reports issued by PG&E assume that RPS-eligible renewable energy sources do not result in any CO_2 emissions.
6. Global Warming Potentials (GWP) are based on the IPCC Fourth Assessment Report.

Table 21
Energy Usage Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-RPS-eligible renewable energy by the CO_2 emissions per total non-RPS-eligible renewable energy metric from PG&E 2015 through 2017 data. The requirements at each Renewable Portfolio Standard (RPS) milestone year are used as a conservative representation of emissions in the relevant operational year; 2020 (33%), 2027 (52%) toward achieving 60% RPS in 2030 consistent with SB 100. The 2020 factor is conservatively applied for Phase 1 buildout in 2023, because SB 100's 3-year interim compliance period does not require 44% RPS until December 31, 2024. The estimate provided here and the energy reports issued by PG&E assume that RPS-eligible renewable energy sources do not result in any CO_2 emissions. CH_4 and N_2O emission factors are from eGRID2016 (Table 1 for the CAMX subregion), and are conservatively assumed not to change from these estimates. As more renewable energy is integrated into the electricity grid, these intensity factors will also decrease.

8. Natural Gas Use emission factors from Table 8.2 of CalEEMod® User's Guide Appendix D.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
CPUC - California Public Utilities Commission
eGRID - Emissions & Generation Resource Integrated Database
GWP - global warming potential
IPCC AR4 - Intergovernmental Panel on Climate Change Fourth Assessment Report
lb - pound(s)
MMBtu - million British Thermal Units
MT - metric ton(s)
MWh - megawatt-hour
N_2O - nitrous oxide
NOx - nitrogen oxides
PG&E - Pacific Gas & Electric
PM - particulate matter
ROG - reactive organic gases
RPS - Renewable Portolio Standard
SB - Senate Bill

References:

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Table 22
Energy Usage Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions

Location	Land Use Type	Natural Gas Emissions[1,2]					Electricity Emissions[1,2]
		ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e	
		(tons/yr)				(MT/yr)	
Coliseum Ballpark	A's Games	0.013	0.12	0.009	0.009	129	0,804
	Other Events	6.6E-04	0.0060	4.6E-04	4.6E-04	6.6	41
	NFL Games	0.0034	0.031	0.0024	0.0024	34	213
A's Headquarters		0.0042	0.038	0.0029	0.0029	42	68
Existing Conditions Total[3]		**0.021**	**0.19**	**0.015**	**0.015**	**211**	**1,126**
A's Related Existing Conditions Total[4]		**0.017**	**0.16**	**0.012**	**0.012**	**170**	**872**

Phase 1 Buildout

Location	Land Use Type	Natural Gas Emissions[1,2]					Electricity Emissions[1,2]
		ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e	
		(tons/yr)				(MT/yr)	
Howard Terminal Ballpark	A's Games	0.020	0.18	0.014	0.014	257	1,338
	Events	0.0059	0.053	0.0040	0.0040		
Non-Ballpark Land Uses	Office	0.026	0.23	0.018	0.018	257	396
	Retail	7.4E-04	0.0067	5.1E-04	5.1E-04	7.3	40
	Residential	0.025	0.22	0.017	0.017	251	300
	Performance Venue	0	0	0	0	0	0
	Hotel	0.055	0.50	0.038	0.038	544	289
	Parking Garages	0	0	0	0	0	265
	Ballpark Parking	0	0	0	0	0	0
Phase 1 Total		**0.13**	**1.2**	**0.091**	**0.091**	**1,317**	**2,629**

Full Project Buildout

Location	Land Use Type	Natural Gas Emissions[1,2]					Electricity Emissions[1,2]
		ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e	
		(tons/yr)				(MT/yr)	
Howard Terminal Ballpark	A's Games	0.020	0.18	0.014	0.014	257	961
	Events	0.0059	0.053	0.0040	0.0040		
Non-Ballpark Land Uses	Office	0.15	1.4	0.11	0.11	1,542	1,706
	Retail	0.0066	0.060	0.0046	0.0046	66	256
	Residential	0.14	1.2	0.097	0.097	1,396	1,199
	Performance Venue	0.0066	0.060	0.0046	0.0046	66	35
	Hotel	0.055	0.50	0.038	0.038	544	208
	Parking Garages	0	0	0	0	0	1,061
	Ballpark Parking	0	0	0	0	0	308
Full Buildout Total		**0.39**	**3.5**	**0.27**	**0.27**	**3,872**	**5,733**

Notes:

1. CAP emissions are calculated from natural gas use only and not from electricity use (since they are only directly emitted from natural gas combustion), while GHG emissions include emissions from both natural gas use and electricity use.
2. Emissions are calculated based on energy use, shown in Table 20, and energy emission factors, shown in Table 21.
3. The Existing Conditions emissions incorporate all emissions at the Coliseum Stadium, including those from NFL or other event uses.
4. Emissions for NFL and Other Events are not included in the A's Related Existing Conditions total in order to conservatively estimate net new emissions attributable to the Project.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutants
CO_2e - carbon dioxide equivalents
GHG - Greenhouse Gas
MT - metric ton(s)
NFL - National Football League
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

California Emissions Estimator Model (CalEEMod®). Available online at http://www.caleemod.com/

Table 23
Trip Rates for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions

Land Use and Scenario			Fleet Type	Trips per Activity[1] (trips/event or trips/day)		VMT per Activity[1] (mi/event or mi/day)		Average Trip Length[1] (mi/trip)	Annual Activity[2,3]		Annual Trips (trips/yr)	Annual VMT (mi/yr)
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend		
Coliseum Ballpark	A's Games[3]	Weekday Evening	Passenger	18,720	--	232,540	--	13	41	--	767,511	9,534,127
		Weekday Day	Passenger	18,979	--	244,199	--	14	14	--	265,704	3,418,787
		Weekend	Passenger	--	19,821	--	262,336	14	--	27	535,165	7,083,068
	Other Events[4]		Passenger	32,200		546,000		19	2		64,400	1,092,000
	NFL Games[4]		Passenger	33,000		495,000		17	9		297,000	4,455,000
	A's Games Deliveries		Bus	3		22		7.3	82		246	1,796
			Truck	11	--	80	--	7.3	261	--	2,870	20,951
	Event Deliveries		Truck	0.27	--	2.0	--	7.3	261	--	70	511
	NFL Deliveries		Truck	1.2	--	8.8	--	7.3	261	--	315	2,300
	Arena Management[5]		Passenger	72	--	685	--	10	261	--	18,829	178,875
A's Headquarters	Sports Team Management[5]		Passenger	172	--	1,630	--	10	261	--	44,775	425,358

Phase 1 Buildout, With TDM Plan

Land Use and Scenario			Fleet Type	Trips per Activity[1] (trips/event or trips/day)		VMT per Activity[1] (mi/event or mi/day)		Average Trip Length[1] (mi/trip)	Annual Activity[2,3]		Annual Trips (trips/yr)	Annual VMT (mi/yr)
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend		
Howard Terminal Ballpark	A's Games	Weekday Evening	Passenger	25,900	--	290,000	--	14	41	--	1,061,900	11,890,000
		Weekday Day	Passenger	26,400	--	291,000	--	14	14	--	369,600	4,074,000
		Weekend	Passenger	--	27,100	--	323,000	15	--	27	731,700	8,721,000
	Other Events	Concerts	Passenger	26,800		254,000		12	9		241,200	2,286,000
		Other	Passenger	6,000		58,000		12	35		210,000	2,030,000
		Corporate/Community	Passenger	1,500		14,000		12	100		150,000	1,400,000
		Plaza	Passenger	2,900		27,000		12	16		46,400	432,000
	A's Games Deliveries		Bus	3.0		22		7.3	82		246	1,796
			Truck	11	--	80	--	7.3	261	--	2,870	20,951
	Event Deliveries		Truck	21	--	157	--	7.3	261	--	5,600	40,880
	Arena Management[5]		Passenger	37	--	347	--	10	261	--	9,527	90,502
A's Headquarters	Sports Team Management[5]		Passenger	172	--	1,630	--	10	261	--	44,775	425,358
Residential			All	1,200	1,100	14,400	13,200	12	261	104	427,600	5,131,200
Office			All	1,700	300	20,400	3,600	12	261	104	474,900	5,698,800
Retail			All	1,100	1,300	13,200	15,600	12	261	104	422,300	5,067,600
Restaurant			All	600	700	7,200	8,400	12	261	104	229,400	2,752,800
Hotel[6]			All	2,100	1,700	25,200	20,400	12	261	104	724,900	8,698,800
Performance Venue[7]		Attendees	Passenger	--		--		--	--		--	--
		Deliveries	Truck	--		--		--	--		--	--
			Bus	--		--		--	--		--	--

Table 23
Trip Rates for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Full Project Buildout, With TDM Plan

Land Use and Scenario			Fleet Type	Trips per Activity[1] (trips/event or trips/day)		VMT per Activity[1] (mi/event or mi/day)		Average Trip Length[1] (mi/trip)	Annual Activity[2,3]		Annual Trips (trips/yr)	Annual VMT (mi/yr)
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend		
Howard Terminal Ballpark	A's Games	Weekday Evening	Passenger	25,900	--	290,000	--	14	41	--	1,061,900	11,890,000
		Weekday Day	Passenger	26,400	--	291,000	--	14	14	--	369,600	4,074,000
		Weekend	Passenger	--	27,100	--	323,000	15	--	27	731,700	8,721,000
	Other Events	Concerts	Passenger	26,800		254,000		12	9		241,200	2,286,000
		Other	Passenger	6,000		58,000		12	35		210,000	2,030,000
		Corporate/Community	Passenger	1,500		14,000		12	100		150,000	1,400,000
		Plaza	Passenger	2,900		27,000		12	16		46,400	432,000
	A's Games Deliveries		Bus	3.0		22		7.3	82		246	1,796
			Truck	11	--	80	--	7.3	261	--	2870	20,951
	Event Deliveries		Truck	21	--	157	--	7.3	261	--	5600	40,880
	Arena Management[5]		Passenger	37	--	347	--	10	261	0	9,527	90,502
A's Headquarters	Sports Team Management[5]		Passenger	172	--	1,630	--	10	261	0	44,775	425,358
Residential			All	6,100	5,700	73,300	68,500	12	261	104	2,184,900	26,255,300
Office			All	7,800	1,200	93,700	14,400	12	261	104	2,160,600	25,953,300
Retail			All	4,600	4,800	55,300	57,700	12	261	104	1,699,800	20,434,100
Restaurant			All	5,200	6,000	62,500	72,100	12	261	104	1,981,200	23,810,900
Hotel[6]			All	2,100	1,700	25,200	20,400	12	261	104	724,900	8,698,800
Performance Venue[7]		Attendees	Passenger	2,400		28,300		12	100		240,000	2,830,000
		Deliveries	Truck	6.0		44		7.3	100		600	4,380
			Bus	6.0		44		7.3	100		600	4,380

Notes:

1. Trip generation rate and total vehicle miles traveled (VMT) for each land use were provided by Fehr & Peers, and assume that all trips are primary trips. Ballpark trips account for attendees and event-day staff. For Existing Conditions, the trip generation rate and VMT for A's Games provided by Fehr & Peers assume 35,000 attendees per game. These values were scaled down to reflect the actual existing attendance of 22,671 attendees per game.
2. Activity assumptions provided by the Athletics management staff.
3. Per Athletics management staff, the Athletics play on average one preseason game, 81 regular season games, and typically no post-season games. These conditions are assumed as the average scenario for both the Existing Conditions and Project scenarios. Average breakdown of weekday evening, weekday day, and weekend MLB games were calculated based on game day schedule provided by the Athletics management staff.
4. Emissions for NFL and Other Events are not included in the A's Related Existing Conditions total in order to conservatively estimate net new emissions attributable to the Project.
5. Employee estimates provided by Athletics management staff. Arena management and sports team management trip generation were estimated by assuming each employee makes two daily commute trips. The vehicle trip length was assumed to be 9.5 miles one-way, consistent with the CalEEMod® default commercial-work trip length for Alameda County. A carpool rate and drive rate assumption was made based on US Census data for the Coliseum and Jack London Square census tracts. Ramboll assumes that Ballpark operations staff are based at the ballpark land use whereas all other employee types are based at the A's Headquarters.
6. For the Traffic Conditions with TDM measures, trips and VMT for the hotel were estimated by Fehr & Peers to represent operations on gamedays and non-gamedays. Gameday trip generation and VMT with TDM measures are 1,300 trips/day and 15,600 mi/day, respectively. For non-gamedays, hotel trips and VMT would be doubled. Trip generation and VMT for the hotel with TDM shown annualize these numbers.
7. The Performance venue daily trip rate is assigned to weekdays only.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
mi - mile(s)
MLB -Major League Baseball
NFL - National Football League
TDM - Transportation demand management
VMT - vehicle miles travelled
yr - year
US - United States

References:

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Table 24
On-road Fleet Mix for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions

Fleet Mix Assumption	Vehicle Type	Percentage of Fleet Mix[1]	% by Fuel Type[1]			
			Gas	Diesel	Natural Gas	Electric
Passenger-Only	HHDT	0%	0%	0%	0%	0%
	LDA	61%	97%	1.0%	0%	2.1%
	LDT1	6.0%	100%	0.045%	0%	0.21%
	LDT2	20%	99%	0.50%	0%	0.32%
	LHDT1	0%	0%	0%	0%	0%
	LHDT2	0%	0%	0%	0%	0%
	MCY	0.58%	100%	0%	0%	0%
	MDV	12%	98%	1.9%	0%	0.048%
	MH	0%	0%	0%	0%	0%
	MHDT	0%	0%	0%	0%	0%
	OBUS	0%	0%	0%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	0%	0%	0%	0%	0%
Trucks-Only	HHDT	46%	0%	99%	0.71%	0%
	LDA	0%	0%	0%	0%	0%
	LDT1	0%	0%	0%	0%	0%
	LDT2	0%	0%	0%	0%	0%
	LHDT1	24%	65%	35%	0%	0%
	LHDT2	5%	43%	57%	0%	0%
	MCY	0%	0%	0%	0%	0%
	MDV	0%	0%	0%	0%	0%
	MH	0%	0%	0%	0%	0%
	MHDT	24%	9.1%	91%	0%	0%
	OBUS	0%	0%	0%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	0%	0%	0%	0%	0%
Buses-Only	HHDT	0%	0%	0%	0%	0%
	LDA	0%	0%	0%	0%	0%
	LDT1	0%	0%	0%	0%	0%
	LDT2	0%	0%	0%	0%	0%
	LHDT1	0%	0%	0%	0%	0%
	LHDT2	0%	0%	0%	0%	0%
	MCY	0%	0%	0%	0%	0%
	MDV	0%	0%	0%	0%	0%
	MH	0%	0%	0%	0%	0%
	MHDT	0%	0%	0%	0%	0%
	OBUS	44%	57%	43%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	56%	0.64%	87%	11%	1.4%
All	HHDT	4.2%	0.065%	99%	0.71%	0%
	LDA	55%	97%	1.0%	0%	2.1%
	LDT1	5.4%	100%	0.045%	0%	0.21%
	LDT2	18%	99%	0.50%	0%	0.32%
	LHDT1	2.2%	65%	35%	0%	0%
	LHDT2	0.49%	43%	57%	0%	0%
	MCY	0.52%	100%	0%	0%	0%
	MDV	11%	98%	1.9%	0%	0.048%
	MH	0.066%	77%	23%	0%	0%
	MHDT	2.2%	9%	91%	0%	0%
	OBUS	0.15%	57%	43%	0%	0%
	SBUS	0.027%	20%	80%	0%	0%
	UBUS	0.19%	0.64%	87%	11%	1.4%

Table 24
On-road Fleet Mix for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Phase 1 Buildout

Fleet Mix Assumption	Vehicle Type	Percentage of Fleet Mix[1]	% by Fuel Type[1]			
			Gas	Diesel	Natural Gas	Electric
Passenger-Only	HHDT	0%	0%	0%	0%	0%
	LDA	62%	96%	1.1%	0%	3.3%
	LDT1	6.0%	99%	0.026%	0%	1.0%
	LDT2	20%	98%	0.76%	0%	0.99%
	LHDT1	0%	0%	0%	0%	0%
	LHDT2	0%	0%	0%	0%	0%
	MCY	0.57%	100%	0%	0%	0%
	MDV	12%	96%	2.7%	0%	0.89%
	MH	0%	0%	0%	0%	0%
	MHDT	0%	0%	0%	0%	0%
	OBUS	0%	0%	0%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	0%	0%	0%	0%	0%
Trucks-Only	HHDT	47%	0%	99%	0.86%	0%
	LDA	0%	0%	0%	0%	0%
	LDT1	0%	0%	0%	0%	0%
	LDT2	0%	0%	0%	0%	0%
	LHDT1	22%	58%	42%	0%	0%
	LHDT2	5%	36%	64%	0%	0%
	MCY	0%	0%	0%	0%	0%
	MDV	0%	0%	0%	0%	0%
	MH	0%	0%	0%	0%	0%
	MHDT	25%	8.5%	92%	0%	0%
	OBUS	0%	0%	0%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	0%	0%	0%	0%	0%
Buses-Only	HHDT	0%	0%	0%	0%	0%
	LDA	0%	0%	0%	0%	0%
	LDT1	0%	0%	0%	0%	0%
	LDT2	0%	0%	0%	0%	0%
	LHDT1	0%	0%	0%	0%	0%
	LHDT2	0%	0%	0%	0%	0%
	MCY	0%	0%	0%	0%	0%
	MDV	0%	0%	0%	0%	0%
	MH	0%	0%	0%	0%	0%
	MHDT	0%	0%	0%	0%	0%
	OBUS	42%	47%	53%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	58%	0.64%	82%	16%	1.3%
All	HHDT	4.5%	0.048%	99%	0.86%	0%
	LDA	56%	96%	1.1%	0%	3.3%
	LDT1	5.4%	99%	0.026%	0%	1.0%
	LDT2	18%	98%	0.76%	0%	0.99%
	LHDT1	2.1%	58%	42%	0%	0%
	LHDT2	0.52%	36%	64%	0%	0%
	MCY	0.51%	100%	0%	0%	0%
	MDV	11%	96%	2.7%	0%	0.89%
	MH	0.067%	74%	26%	0%	0%
	MHDT	2.4%	8%	92%	0%	0%
	OBUS	0.13%	47%	53%	0%	0%
	SBUS	0.033%	35%	65%	0%	0%
	UBUS	0.18%	0.64%	82%	16%	1.3%

Table 24
On-road Fleet Mix for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Full Project Buildout

Fleet Mix Assumption	Vehicle Type	Percentage of Fleet Mix[1]	% by Fuel Type[1]			
			Gas	Diesel	Natural Gas	Electric
Passenger-Only	HHDT	0%	0%	0%	0%	0%
	LDA	62%	94%	1.1%	0%	4.6%
	LDT1	6.1%	98%	0.016%	0%	2.1%
	LDT2	19%	97%	0.88%	0%	1.8%
	LHDT1	0%	0%	0%	0%	0%
	LHDT2	0%	0%	0%	0%	0%
	MCY	0.56%	100%	0%	0%	0%
	MDV	12%	95%	3.1%	0%	1.9%
	MH	0%	0%	0%	0%	0%
	MHDT	0%	0%	0%	0%	0%
	OBUS	0%	0%	0%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	0%	0%	0%	0%	0%
Trucks-Only	HHDT	48%	0%	99%	0.91%	0%
	LDA	0%	0%	0%	0%	0%
	LDT1	0%	0%	0%	0%	0%
	LDT2	0%	0%	0%	0%	0%
	LHDT1	21%	55%	45%	0%	0%
	LHDT2	5%	33%	67%	0%	0%
	MCY	0%	0%	0%	0%	0%
	MDV	0%	0%	0%	0%	0%
	MH	0%	0%	0%	0%	0%
	MHDT	25%	8.1%	92%	0%	0%
	OBUS	0%	0%	0%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	0%	0%	0%	0%	0%
Buses-Only	HHDT	0%	0%	0%	0%	0%
	LDA	0%	0%	0%	0%	0%
	LDT1	0%	0%	0%	0%	0%
	LDT2	0%	0%	0%	0%	0%
	LHDT1	0%	0%	0%	0%	0%
	LHDT2	0%	0%	0%	0%	0%
	MCY	0%	0%	0%	0%	0%
	MDV	0%	0%	0%	0%	0%
	MH	0%	0%	0%	0%	0%
	MHDT	0%	0%	0%	0%	0%
	OBUS	42%	41%	59%	0%	0%
	SBUS	0%	0%	0%	0%	0%
	UBUS	58%	0.64%	77%	22%	0.0%
All	HHDT	4.7%	0.041%	99%	0.91%	0%
	LDA	56%	94%	1.1%	0%	4.6%
	LDT1	5.4%	98%	0.016%	0%	2.1%
	LDT2	17%	97%	0.88%	0%	1.8%
	LHDT1	2.1%	55%	45%	0%	0%
	LHDT2	0.53%	33%	67%	0%	0%
	MCY	0.50%	100%	0%	0%	0%
	MDV	11%	95%	3.1%	0%	1.9%
	MH	0.067%	72%	28%	0%	0%
	MHDT	2.5%	8%	92%	0%	0%
	OBUS	0.13%	41%	59%	0%	0%
	SBUS	0.037%	43%	57%	0%	0%
	UBUS	0.18%	0.64%	77%	22%	0.0%

Notes:

1. Fleet mixes and percentages by fuel type are calculated based on EMFAC2017 vehicle miles traveled projections for Alameda County.

Abbreviations:

EMFAC2017 - California Air Resources Board EMission FACtor model

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Table 25
Operational On-road Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Scenario		Emission Factor Units[2]	Mobile Emission Factors[1]							
			CAPs				GHGs[3]			
Year	Fleet		ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O	CO_2e
Existing Conditions - 2018	Passenger	g/mi	0.039	0.11	0.046	0.019	326	0.0076	0.0091	329
		g/trip	1.2	0.35	0.0022	0.0020	70	0.091	0.035	82
	Truck	g/mi	0.23	3.8	0.19	0.12	1,281	0.025	0.17	1,333
		g/trip	0.49	4.1	0.011	0.011	530	0.020	0.091	558
	Bus	g/mi	0.13	2.7	0.16	0.086	1,662	0.46	0.20	1,733
		g/trip	0.18	0.85	0.0038	0.0036	71	0.013	0.016	76
	All	g/mi	0.057	0.46	0.060	0.029	418	0.011	0.024	426
		g/trip	1.1	0.70	0.0030	0.0028	111	0.084	0.040	126
Phase 1 - 2023	Passenger	g/mi	0.024	0.056	0.046	0.019	280	0.0046	0.0057	282
		g/trip	0.83	0.23	0.0018	0.0017	60	0.060	0.028	69
	Truck	g/mi	0.042	1.8	0.12	0.057	1,147	0.017	0.15	1,193
		g/trip	0.40	4.4	0.0016	0.0015	548	0.017	0.092	576
	Bus	g/mi	0.026	1.2	0.13	0.054	1,568	0.60	0.20	1,644
		g/trip	0.14	0.84	1.5E-04	1.4E-04	70	0.0092	0.015	75
	All	g/mi	0.026	0.22	0.054	0.023	367	0.0076	0.020	373
		g/trip	0.79	0.63	0.0018	0.0017	106	0.056	0.034	117
Full Buildout - 2027	Passenger	g/mi	0.019	0.038	0.046	0.019	245	0.0036	0.0045	247
		g/trip	0.66	0.17	0.0016	0.0014	52	0.044	0.023	60
	Truck	g/mi	0.037	1.7	0.12	0.057	1,070	0.016	0.14	1,114
		g/trip	0.36	4.4	0.0015	0.0014	514	0.016	0.086	540
	Bus	g/mi	0.022	0.93	0.13	0.054	1,506	0.80	0.21	1,587
		g/trip	0.13	0.92	1.5E-04	1.4E-04	72	0.0081	0.015	76
	All	g/mi	0.021	0.21	0.054	0.023	331	0.0072	0.019	337
		g/trip	0.63	0.59	0.0015	0.0014	98	0.041	0.029	107

Notes:

1. Emission factors were estimated using EMFAC2017 for Alameda County.
2. Emission factors from EMFAC with units of g/vehicle/day were converted to g/trip by scaling by the ratio of the total number of vehicles divided by the total number of trips for each vehicle class, fuel type, and year.
3. Emission factors for CO_2e were estimated by multiplying the CH_4 and N_2O emission factors by their global warming potentials from the IPCC 4th Assessment Report on Climate Change (AR4).

Table 25
Operational On-road Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

CAP - Criteria Air Pollutant
CH_4 - methane
CO - carbon monoxide
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
g - gallon(s)
GHG - greenhouse gas
IPCC - Intergovernmental Panel on Climate Change
mi - mile
N_2O - Nitrous oxide
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases

Table 26
Mobile Exhaust Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions

Trip Type	Emissions from Mobile Exhaust[1]				
	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e
	[tons/yr]				[MT/yr]
Coliseum Ballpark	3.0	3.2	1.0	0.44	6,811
Events	0.13	0.16	0.056	0.023	365
A's Headquarters	0.077	0.070	0.022	0.0092	144
NFL Games	0.58	0.68	0.23	0.096	1,493
Existing Conditions Total[2]	**3.7**	**4.1**	**1.3**	**0.57**	**8,812**
A's Related Existing Conditions Total[3]	**3.0**	**3.3**	**1.1**	**0.45**	**6,954**

Phase 1 Buildout, With TDM and TMP[4]

Trip Type	Emissions from Mobile Exhaust[1]				
	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e
	[tons/yr]				[MT/yr]
A's Games	2.7	2.2	1.3	0.53	7,278
Events	0.76	0.65	0.32	0.13	1,828
Non-Residential Non-Ballpark	2.2	6.8	1.3	0.56	8,505
Residential	0.52	1.6	0.31	0.13	1,964
Total	**6.2**	**11**	**3.2**	**1.4**	**19,575**

Project Full Buildout, With TDM and TMP[4]

Trip Type	Emissions from Mobile Exhaust[1]				
	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e
	[tons/yr]				[MT/yr]
A's Games	2.1	1.5	1.3	0.53	6,374
Events	0.61	0.48	0.32	0.13	1,603
Non-Residential Non-Ballpark	6.6	22	4.8	2.1	27,980
Residential	2.1	7.4	1.6	0.66	9,070
Total	**11**	**32**	**8.0**	**3.4**	**45,027**

Notes:

1. Trip generation rates and emission factors used in emissions calculations are shown in Table 24 and 25, respectively.
2. The Existing Conditions emissions incorporate all emissions at the Coliseum Stadium, including those from NFL or other event uses.
3. Emissions for NFL and Other Events are not included in the total A's Related Existing Conditions emissions in order to conservatively estimate net new emissions attributable to the Project.
4. Trip generation rates used for the Project are shown with reductions from TDM and TMP measures.

Abbreviations:

CO_2e - carbon dioxide equivalents
MT - metric ton(s)
NFL - National Football League
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
TDM - Transportation Demand Management Plan
TMP - Transportation Management Plan
yr - year

Table 27
Silt Loading Emission Factor
Oakland Waterfront Ballpark District Project
Oakland, California

Entrained Roadway Dust Constants for Alameda County		
Roadway Category	**Silt Loading[1] (g/m^2)**	**Travel Fraction[1]**
Freeway	0.015	57%
Major	0.032	32%
Collector	0.032	6%
Local	0.32	5%
Weighted Silt Loading Factor	0.038	100%

Notes:

1. Travel fraction by roadway category and silt loading are from the ARB's Entrained Road Travel Emission Inventory Source Methodology, Tables 6 and 7, respectively.

Abbreviations:

ARB - Air Resources Board
g - gram(s)
m - meter

References:

California Air Resources Board. 2018. Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust. March. Available online at: https://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2018.pdf

Table 28
On-Road Fugitive Dust Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Road Dust Equation[1]

E = k*(sL)^0.91 * (W)^1.02 * (1-P/4N)

Parameter[2]	**Value**
E = annual average emission factor in the same units as k	[calculated]
k = particle size multiplier for particle size range and units of interest	
PM_{10} (lb/VMT)	0.0022
$PM_{2.5}$ (lb/VMT)	3.3E-04
sL = road surface silt loading (grams per square meter) (g/m^2)	0.038
W = average weight (tons) of all the vehicles traveling the road	2.4
P = number of "wet" days with at least 0.01 in of precipitation during averaging period[3]	61
N number of days in the averaging period	365

Existing Conditions VMT[4]	26,212,773
A's Related Existing Conditions VMT[5]	20,662,962
Phase 1 Buildout Conditions VMT (With TDM)[6]	58,761,687
Full Project VMT (With TDM)[6] **(Project 2.0)**	139,403,647

Scenario	**Fugitive PM_{10}**	**Fugitive $PM_{2.5}$**	**Units**
Emission Factor	2.6E-04	3.9E-05	lb/VMT
Existing Conditions Emissions[4]	3.4	0.51	tons/year
A's Related Existing Conditions Emissions[5]	2.7	0.40	tons/year
Phase 1 Buildout Emissions (With TDM)	7.6	1.1	tons/year
Full Project Emissions (With TDM)	18	2.7	tons/year

Notes:

1. The road dust equation for paved roads is from the California Air Resources Board's (ARB) 2018 Miscellaneous Process Methodology 7.9 for Entrained Road Travel, Paved Road Dust.
2. Silt loading emission factor calculated in Table 27 using roadway travel fractions. Other parameters are from ARB 2016. $PM_{2.5}$ is assumed to be 15% of PM_{10} based on paved road dust sampling in California (ARB Speciation Profile #471), which is a more representative fraction than provided in the older AP-42 fugitive dust methodology as discussed in ARB 2018 (page 10).
3. The number of "wet" days for Alameda County is from ARB 2018. This is slightly lower than the default from CalEEMod® Appendix D Table 1.1 (63 days), which was based on older historic data and would result in slightly lower
4. The Existing Conditions VMT and emissions incorporate all emissions at the Coliseum Stadium, including those from NFL or other event uses.
5. A's Related Existing Conditions VMT and emissions excludes NFL and Other Events.
6. Project VMT shown here reflects trip reductions from Transportation Management Plan (TMP) and Transportation Demand Management (TDM) Plan measures.

Abbreviations:

ARB - Air Resources Board
CalEEMod® - California Emissions Estimator Model
lb - pounds
NFL - National Football League
PM - particulate matter
TDM - Transportation Demand Management
TMP - Transportation Management Plan
VMT - vehicle miles traveled

References:

California ARB. 2018. Miscellaneous Processes Methodologies - Paved Entrained Road Dust.
USEPA. 1996. AP 42. Compilation of Air Pollutant Emission Factors, Volume 1. Fifth Edition. Chapter 13.2.1, Paved

Table 29
Water Usage and Treatment Electricity Intensity for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Water Usage Rates

Venue	CalEEMod® Venue Subtype	Size Metric	Indoor Water, gal/size/year	Outdoor Water, gal/size/year
A's Related Existing Conditions[1]				
Coliseum Ballpark	-	attendees	17	0
A's Headquarters	General Office Building	square feet	178	109
Project Conditions[2]				
Howard Terminal Ballpark	-	attendees	28	0
Office	General Office Building	ksf	73,000	108,934
Retail	Regional Shopping Center	ksf	54,750	45,399
Residential	High Rise Apartment	units	91,250	41,075
Performance Venue	Arena	ksf	127,750	27,496
Hotel	Hotel	rooms	69,959	2,819

Water Usage

Venue	CalEEMod Venue Subtype	Size	Units	Indoor Water, million gal/year	Outdoor Water, million gal/year
Existing Conditions					
A's Games	-	1,859,022	attendees	32	0
Other Events[3]	-	95,000	attendees	1.6	0
NFL Games[3]	-	491,976	attendees	8.4	0
A's Headquarters	General Office Building	40,000	square feet	7.1	4.4
Phase 1 Buildout					
A's Games	--	2,870,000	attendees	80	0
Events	--	841,500	attendees	24	0
Office	General Office Building	250	ksf	18	27
Retail	Regional Shopping Center	30	ksf	1.6	1.4
Residential	High Rise Apartment	540	units	49	22
Performance Venue	Arena	0	ksf	0	0
Hotel	Hotel	400	rooms	28	1.1
Full Project Buildout					
A's Games	--	2,870,000	attendees	80	0
Events	--	841,500	attendees	24	0
Office	General Office Building	1,500	ksf	110	163
Retail	Regional Shopping Center	270	ksf	15	12
Residential	High Rise Apartment	3,000	units	274	123
Performance Venue	Arena	50	ksf	6.4	1.4
Hotel	Hotel	400	rooms	28	1.1

Table 29
Water Usage and Treatment Electricity Intensity for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Water Electricity Intensity[4]

County	Electricity to Supply Water (kWh/million gal)	Electricity to Treat Water (kWh/million gal)	Electricity to Distribute Water (kWh/million gal)
Alameda	2,117	111	1,272

Notes:

1. A's Related Existing Conditions water use rates were calculated based on actual 2017 MLB water consumption per attendee at the Coliseum and attendance data for 2017 for MLB games. For the purpose of this calculation, all water use is conservatively treated as indoor water use that will result in emissions from wastewater treatment. EBMUD invoices for the MLB season (March through September) are provided in the Appendix. For the A's headquarters at Jack London Square, water use is calculated using the CalEEMod® default water consumption profile for a General Office Building.
2. Project indoor water use rates were provided by Meyers+ on 2/14/2019. Outdoor water use was assumed from CalEEMod® default factors.
3. The water usage for NFL and Other Events are calculated using the water usage rate of the Coliseum Ballpark.
4. Water Electricity Intensity from Table 9.2 of Appendix D of the CalEEMod® User's Guide.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
EBMUD - East Bay Municipal Utility District
gal - gallon
kWh - kilowatt-hours
ksf - thousand square feet
MLB - Major League Baseball
NFL - National Football League

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 30
Wastewater Treatment Emission Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Wastewater Electricity Intensity[1]

County	Electricity to Treat Wastewater (kWh/million gal)
Alameda	1,911

Wastewater Treatment Types[2]

County	Septic Tank	Aerobic	Anaerobic, Facultative Lagoons	Anaerobic, Combustion of Gas	Anaerobic, Cogeneration of Gas
Alameda	10%	87%	2.2%	100%	0%

Wastewater Treatment Direct Emission Factors[3]

Wastewater Treatment Type	CO_2 Biogenic (ton/gal)	CO_2 Non-Biogenic (ton/gal)	CH_4 (ton/gal)	N_2O (ton/gal)
Septic	0	0	2.5E-07	8.5E-10
Aerobic	3.9E-07	0	1.3E-09	8.5E-10
Anaerobic Facultative	3.9E-07	0	4.0E-07	8.5E-10
Digester Burn	0	0	0	0
Digester Cogen	0	0	0	0

Notes:

1. Water Electricity Intensity from Table 9.2 of Appendix D of the CalEEMod® User's Guide.
2. Water Treatment Types from Table 9.3 of Appendix D of the CalEEMod® User's Guide.
3. Wastewater Treatment Direct Emission Factors from Table 9.4 of Appendix D of the CalEEMod® User's Guide.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CH_4 - methane
CO_2 - carbon dioxide
gal - gallon
kwh - kilowatt
N_2O - nitrous oxide

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 31
Water Usage and Wastewater Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Existing Conditions[1]

Land Use	CalEEMod® Land Use Type	Electricity Indirect Emissions (MT CO_2e/yr)	Septic Tank Direct Emissions (MT CO_2e/yr)	Aerobic Direct Emissions (MT CO_2e/yr)	Facultative Lagoon Direct Emissions (MT CO_2e/yr)
A's Games	-	23	19	17	7
Other Events3	-	1.2	0.98	0.87	0.35
NFL Games3	-	6.2	5.1	4.5	1.8
A's Headquarters	General Office Building	7.4	4.3	3.8	1.5
Existing Conditions Total[2]		**38**	**30**	**26**	**10**
A's Related Existing Conditions Total[3]		**31**	**24**	**21**	**8**

Phase 1 Buildout[1]

Land Use	CalEEMod® Land Use Type	Electricity Indirect Emissions (MT CO_2e/yr)	Septic Tank Direct Emissions (MT CO_2e/yr)	Aerobic Direct Emissions (MT CO_2e/yr)	Facultative Lagoon Direct Emissions (MT CO_2e/yr)
A's Games	--	59	49	43	17
Events	--	17	14	13	5.1
Office	General Office Building	26	11	9.8	3.9
Retail	Regional Shopping Center	1.9	1.0	0.88	0.35
Residential	High Rise Apartment	47	30	26	11
Performance Venue	Arena	0	0	0	0
Hotel	Hotel	21	17	15	6.0
Phase 1 Buildout Total		**172**	**123**	**108**	**43**

Full Project Buildout[1]

Land Use	CalEEMod® Land Use Type	Electricity Indirect Emissions (MT CO_2e/yr)	Septic Tank Direct Emissions (MT CO_2e/yr)	Aerobic Direct Emissions (MT CO_2e/yr)	Facultative Lagoon Direct Emissions (MT CO_2e/yr)
A's Games	--	42	49	43	17
Events	--	12	14	13	5.1
Office	General Office Building	114	67	59	23
Retail	Regional Shopping Center	12	9.0	7.9	3.2
Residential	High Rise Apartment	187	167	147	59
Performance Venue	Arena	3.8	3.9	3.4	1.4
Hotel	Hotel	15	17	15	6.0
Full Buildout Total		**386**	**327**	**288**	**115**

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Table 31
Water Usage and Wastewater Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emissions shown in this table were calculated using default values and methods from CalEEMod® Version 2016.3.2. These calculations were performed using water use rates, shown in Table 29, wastewater emission factors, shown in Table 30, and energy emission factors, shown in Table 21.
2. The Existing Conditions emissions incorporate all emissions at the Coliseum Stadium, including those from NFL or other event uses.
3. Emissions for NFL and Other Events are not included in the A's Related Existing Conditions total in order to conservatively estimate net new emissions attributable to the Project.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CO_2e - carbon dioxide equivalents
MT - metric ton
NFL - National Football League
yr - year

References:

California Emissions Estimator Model (CalEEMod®). Available online at http://www.caleemod.com/

Table 32
Solid Waste Generation for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Solid Waste Generation Rates[1]

Venue	CalEEMod® Venue Subtype	Size Metric	Solid Waste Generation Rate (ton/size/year)
Existing Conditions			
Coliseum Ballpark[2]	--	attendees	5.1E-04
A's Headquarters	General Office Building	ksf	0.93
Project Conditions			
Howard Terminal Ballpark[2]	--	attendees	5.1E-04
Office	General Office Building	ksf	0.93
Retail	Regional Shopping Center	ksf	1.1
Residential	High Rise Apartment	units	0.46
Performance Venue	Arena	ksf	0.030
Hotel	Hotel	rooms	0.55

Existing Conditions

Venue	Size	Units	Solid Waste Disposal Rate (ton/year)
A's Games	1,859,022	attendees	957
Other Events[3]	95,000	attendees	49
NFL Games[3]	491,976	attendees	253
A's Headquarters	40	ksf	37

Phase 1 Buildout[4]

Venue	Land Use Type	Size	Units	Solid Waste Generation Rate (ton/year)
A's Games	--	2,870,000	attendees	1,478
Events	--	841,500	attendees	433
Office	General Office Building	250	ksf	233
Retail	Regional Shopping Center	30	ksf	32
Residential	High Rise Apartment	540	units	248
Performance Venue	Arena	0	ksf	0
Hotel	Hotel	400	rooms	220

Project Full Buildout[4]

Venue	Land Use Type	Size	Units	Solid Waste Generation Rate (ton/year)
A's Games	--	2,870,000	attendees	1,478
Events	--	841,500	attendees	433
Office	General Office Building	1,500	ksf	1,395
Retail	Regional Shopping Center	270	ksf	284
Residential	High Rise Apartment	3,000	units	1,380
Performance Venue	Arena	50	ksf	1.5
Hotel	Hotel	400	rooms	220

Table 32
Solid Waste Generation for Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Solid Waste Generation Rates from Table 10.1 of Appendix D of the CalEEMod® User's Guide, with the exception of the Existing Conditions and Project Ballparks (see below).
2. Waste generation rates for the Existing Conditions ballpark were calculated based on actual 2017 MLB waste rates at the Coliseum and attendance data for 2017 for MLB games. Coliseum Stadium Waste Management and Recycling Report for the MLB season (March through September) are provided in the Appendix. The same waste generation rate was assumed to apply to the Howard Terminal Ballpark.
3. Emissions for NFL and Other Events are not included in the A's Related Existing Conditions total in order to conservatively estimate net new emissions attributable to the Project. The solid waste disposal rate for NFL and Other Events are calculated using the solid waste generation rate of the Coliseum Ballpark.
4. Solid waste generation estimates for Howard Terminal non-ballpark development land uses based on CalEEMod® 2016.3.2 defaults.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
ksf - thousand square feet
MLB - Major League Baseball
NFL -National Football League

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 33
Solid Waste Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Solid Waste Landfill Gas (LFG) Treatment Types[1]

County	Landfill, No Gas Capture	Landfill, Capture Gas Flare	Landfill Gas Capture Efficiency	Landfill Gas Control Efficiency
Alameda	6%	94%	75%	98%

Solid Waste Landfill Gas Emission Factors[2]

Description	CO_2 Emissions (ton/ton waste)	CH_4 Emissions (ton/ton waste)
No LFG Collection	0.14	0.043
LFG Collect and Combust	0.23	0.011

Existing Conditions[3]

Location	Land Use	CalEEMod Land Use Subtype	CO_2 (MT/year)	CH_4 (MT/year)	CO_2e (MT/year)
Coliseum Ballpark	A's Games		194	11	481
	Other Events		9.9	0.59	25
	NFL Games		51	3.0	127
A's Headquarters		General Office Building	7.6	0.45	19
		Existing Conditions Total[4]	**263**	**16**	**652**
		A's Related Existing Conditions Total[5]	**202**	**12**	**500**

Phase 1 Buildout[3]

Location	Land Use	CalEEMod® Land Use Subtype	CO_2 (MT/year)	CH_4 (MT/year)	CO_2e (MT/year)
Howard Terminal Ballpark	A's Games	--	300	18	743
	Events	--	88	5.2	218
Non-Ballpark Land Uses	Office	General Office Building	47	2.8	117
	Retail	Regional Shopping Center	6.4	0.38	16
	Residential	High Rise Apartment	50	3.0	125
	Performance Venue	Arena	0	0	0
	Hotel	Hotel	45	2.6	111
		Project Total	**537**	**32**	**1,329**

Project Full Buildout[3]

Location	Land Use	CalEEMod Land Use Subtype	CO_2 (MT/year)	CH_4 (MT/year)	CO_2e (MT/year)
Howard Terminal Ballpark	A's Games	--	300	18	743
	Events	--	88	5.2	218
Non-Ballpark Land Uses	Office	General Office Building	283	17	702
	Retail	Regional Shopping Center	58	3.4	143
	Residential	High Rise Apartment	280	17	694
	Performance Venue	Arena	0.30	0.018	0.75
	Hotel	Hotel	45	2.6	111
		Project Total	**1,054**	**62**	**2,611**

Table 33
Solid Waste Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Solid Waste Landfill Gas Treatment Types from Appendices A and D, Table 10.1, to CalEEMod® User's Guide.
2. Solid Waste Landfill Gas Emission Factors from Table 10.2 of CalEEMod® User's Guide Appendix D.
3. Emissions are calculated using data provided above and in Table 32.
4. The Existing Conditions emissions incorporate all emissions at the Coliseum Ballpark, including those from NFL or other event uses.
5. Emissions for NFL and Other Events are not included in the A's Related Existing Conditions total in order to conservatively estimate net new emissions attributable to the Project.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
LFG - Landfill Gas
MT - metric ton
NFL - National Football League

References:

California Emissions Estimator Model (CalEEMod®). Available online at http://www.caleemod.com/

Table 34
Landscaping Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Scenario	Emissions from Landscaping Equipment[1]				
	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e
	[tons/yr]				[MT/yr]
Existing Conditions[2]	0.010	9.8E-04	3.8E-04	3.8E-04	0.22
Phase 1 Buildout	0.12	0.046	0.022	0.022	6.8
Full Project Buildout	0.68	0.26	0.12	0.12	37

Notes:

1. Landscape emissions calculated using CalEEMod® 2016.3.2 based on information regarding building square footage and acreage, shown in Appendix D.
2. Emissions from landscaping equipment for Existing Conditions were not broken out by A's Related events and other events.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CO_2e - carbon dioxide equivalents
MT - metric ton(s)
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 35
Generator Emission Factors for Diesel Engines
Oakland Waterfront Ballpark District Project
Oakland, California

Fuel	Engine Tier	Generator Size Range (hp)		Engine Emission Factors[1,2] (g/bhp-hr)						
		Minimum	Maximum	TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Diesel	ATCM[3]	50	75	0.19	0.19	3.3	0.14	0.14	0.14	523
		75	100	0.19	0.19	3.3	0.14	0.14	0.14	523
		100	175	0.16	0.16	2.9	0.14	0.14	0.14	523
		175	300	0.16	0.16	2.9	0.14	0.14	0.14	523
		300	600	0.16	0.16	2.9	0.14	0.14	0.14	523
		600	750	0.16	0.16	2.9	0.14	0.14	0.14	523
		750	1,200	0.26	0.26	4.6	0.14	0.14	0.14	523
		1,200	--	0.26	0.26	4.6	0.14	0.14	0.14	523
Diesel	Tier 4	--	11	0.30	0.30	5.3	0.30	0.30	0.30	523
		11	25	0.30	0.30	5.3	0.30	0.30	0.30	523
		25	50	0.19	0.19	3.3	0.020	0.020	0.020	523
		50	75	0.19	0.19	3.3	0.020	0.020	0.020	523
		75	100	0.15	0.15	0.30	0.015	0.015	0.015	523
		100	175	0.15	0.15	0.30	0.015	0.015	0.015	523
		175	300	0.15	0.15	0.30	0.015	0.015	0.015	523
		300	600	0.15	0.15	0.30	0.015	0.015	0.015	523
		600	750	0.15	0.15	0.30	0.015	0.015	0.015	523
		750	1,200	0.15	0.15	0.50	0.020	0.020	0.020	523
		1,200	--	0.15	0.15	0.50	0.020	0.020	0.020	523

Notes:

1. Engine emission factors for PM_{10} and $PM_{2.5}$ (assumed all engines are diesel fueled and that all PM_{10} is diesel particulate matter) based on ARB standards for diesel generator engines. Emission factors for TOG and ROG were converted from NMHC values provided in the Tier standards using EPA hydrocarbon conversion factors. When an emission factor was specified as a combined NMHC+NOx factor, the NMHC/NOx ratio of 5%/95% are taken from BAAQMD guidance. The emission factors for CO_2e are based on diesel emergency generator CO_2 and CH_4 emission factors from CalEEMod® User's Guide Appendix D, Table 12.1, along with a GWP of 25 for CH_4.
2. Emission factors for engines exceeding the maximum horsepower provided in emission factor documentation are equal to the emission factors for the highest horsepower engines provided.
3. ATCM engine emission factors for PM_{10} and $PM_{2.5}$ assume that 96% of total PM emissions are PM_{10} and that 93.7% of total PM emissions are $PM_{2.5}$. This is consistent with Table A from the California Emission Inventory Development and Reporting System (CEIDARS) PM Appendix A.

Abbreviations:

ACTM - Airborne Toxic Control Measures
ARB - [California] Air Resources Board
BAAQMD - Bay Area Air Quality Management District
CalEEMod® - CALifornia Emissions Estimator MODel
CEIDERS - California Emission Inventory Data and Reporting System
CO_2e - carbon dioxide equivalents
DPM - diesel particulate matter
EPA - US Environmental Protection Agency
g/bhp-hr - Grams per Brake Horsepower Hour
GWP - global warming potential
hp - horsepower
NMHC - non-methane hydrocarbon
NOx - nitrogen oxides
PM_{10} - PM less than 10 microns in diameter
$PM_{2.5}$ - PM less than 2.5 microns in diameter
ROG - reactive organic gases
TOG - total organic gases
USEPA - United States Environmental Protection Agency

References:

CalEEMod® Version 2016.3.2 Available online at: http://www.caleemod.com
California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf
USEPA. 1996. AP 42, Volume I, Fifth Edition (1996). §3.3 Gasoline And Diesel Industrial Engines. Available online at: http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf
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California Emission Inventory Development and Reporting System. Appendix A, Table A. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-(pm)-2.5-significance-thresholds-and-calculation-methodology/appendix-a-updated-ceidars-table-with-pm2-5-fractions.doc

Table 36
Unmitigated Generator Emissions from Existing Conditions and Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Generator Information

Scenario	Location	Number of Generators	Engine Control	Size		Fuel Type	Annual Operation[1]
				kW	HP		hr/yr
Existing Conditions[2]	Ballpark	2	ATCM	1,500	2,012	Diesel	50
Project Phase 1 Buildout	Ballpark	1	ATCM	1,500	2,012	Diesel	50
	Non-Ballpark	1	ATCM	250	335	Diesel	50
	Non-Ballpark	2	ATCM	400	536	Diesel	50
	Non-Ballpark	1	ATCM	500	671	Diesel	50
	Non-Ballpark	2	ATCM	750	1,006	Diesel	50
Project Full Buildout	Ballpark	1	ATCM	1,500	2,012	Diesel	50
	Non-Ballpark	2	ATCM	250	335	Diesel	50
	Non-Ballpark	2	ATCM	300	402	Diesel	50
	Non-Ballpark	3	ATCM	400	536	Diesel	50
	Non-Ballpark	2	ATCM	500	671	Diesel	50
	Non-Ballpark	2	ATCM	750	1,006	Diesel	50
	Non-Ballpark	3	ATCM	1,000	1,341	Diesel	50
	Non-Ballpark	2	ATCM	1,250	1,676	Diesel	50

Existing Conditions Generator Emissions[2]

Location	Size (hp)	Annual Emissions (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Ballpark	2,012	0.058	0.057	1.0	0.032	0.032	0.031	105
Total Emissions		**0.058**	**0.057**	**1.0**	**0.032**	**0.032**	**0.031**	**105**

Project Phase 1[3]

Location	Size (hp)	Annual Emissions (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Ballpark	2,012	0.029	0.028	0.51	0.016	0.016	0.016	53
Non-Ballpark	335	0.0030	0.0030	0.053	0.0027	0.0027	0.0026	8.8
	536	0.0096	0.0095	0.17	0.0085	0.0085	0.0083	28
	671	0.0060	0.0059	0.11	0.0053	0.0053	0.0052	18
	1006	0.029	0.028	0.51	0.016	0.016	0.016	53
Total Emissions		**0.077**	**0.075**	**1.3**	**0.048**	**0.048**	**0.047**	**160**

Project Full Buildout[3]

Location	Size (hp)	Annual Emissions (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Ballpark	2,012	0.029	0.028	0.51	0.0160	0.016	0.016	53
Non-Ballpark	335	0.0060	0.0059	0.11	0.005	0.0053	0.0052	18
	402	0.0072	0.0071	0.13	0.0064	0.0064	0.0062	21
	536	0.014	0.014	0.25	0.013	0.013	0.012	42
	671	0.012	0.012	0.21	0.011	0.011	0.010	35
	1,006	0.029	0.028	0.51	0.016	0.016	0.016	53
	1,341	0.058	0.057	1.0	0.032	0.032	0.031	105
	1,676	0.048	0.047	0.84	0.027	0.027	0.026	88
Total Emissions		**0.20**	**0.20**	**3.6**	**0.13**	**0.13**	**0.12**	**414**

Notes:

1. Operation for routine maintenance and testing is conservatively assumed to be 50 hours per year, the maximum allowable by the Airborne Toxics Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115).
2. The existing generator at the Coliseum is conservatively not included in the Existing Conditions emissions total subtracted from the Project in order to conservatively estimate net new emissions attributable to the Project.
3. Number, size, and fuel of emergency generators were provided by the Project sponsor. Phase 1 and Project Full Buildout generators were estimated based on the number of buildings per phase anticipated to be greater than 75 feet in height. Per California Building Code, high-rise buildings having occupied floors more than 75 feet above the lowest level of fire department vehicle access must be equipped with emergency and standby power.

Abbreviations:

ATCM - Airborne Toxics Control Measure
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
DPM - diesel particulate matter
g - grams
hp - horsepower
hr - hour
kW - kilowatt
MT - metric tons
NOx - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
TOG - total organic gases
yr - year

References:

California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf

California Building Code, Part 2, Volume 2, Chapter 27 - Electrical. Available online at: https://up.codes/viewer/california/ca-building-code-2016-v2/chapter/27/electrical#27.

USEPA. 1995. AP 42, Volume I, Fifth Edition. §3.4. Large Stationary Diesel and All Stationary Dual-Fuel Engines. Available online at: http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf

RAMBOLL

Table 37
Mitigated Generator Emissions from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Generator Information

Scenario	Location	Number of Generators	Engine Control	Size		Fuel Type	Annual Operation[1]
				kW	hp		hr/yr
Project Phase 1 Buildout	Ballpark	1	Tier 4	1,500	2,012	Diesel	20
	Non-Ballpark	1	Tier 4	250	335	Diesel	20
	Non-Ballpark	2	Tier 4	400	536	Diesel	20
	Non-Ballpark	1	Tier 4	500	671	Diesel	20
	Non-Ballpark	2	Tier 4	750	1006	Diesel	20
Project Full Buildout	Ballpark	1	Tier 4	1,500	2,012	Diesel	20
	Non-Ballpark	2	Tier 4	250	335	Diesel	20
	Non-Ballpark	2	Tier 4	300	402	Diesel	20
	Non-Ballpark	3	Tier 4	400	536	Diesel	20
	Non-Ballpark	2	Tier 4	500	671	Diesel	20
	Non-Ballpark	2	Tier 4	750	1,006	Diesel	20
	Non-Ballpark	3	Tier 4	1,000	1,341	Diesel	20
	Non-Ballpark	2	Tier 4	1,250	1,676	Diesel	20

Project Phase 1 Buildout Generator Emissions[2]

Location	Size (hp)	Annual Emissions[3]						
		(ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Howard Terminal Ballpark	2,012	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
Non-Ballpark	335	0.0011	0.0011	0.0022	1.1E-04	1.1E-04	1.1E-04	3.5
	536	0.0036	0.0035	0.0071	3.5E-04	3.5E-04	3.5E-04	11
	671	0.0023	0.0022	0.0044	2.2E-04	2.2E-04	2.2E-04	7.0
	1006	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
Total Emissions		**0.020**	**0.020**	**0.058**	**0.0025**	**0.0025**	**0.0025**	**64**

Table 37
Mitigated Generator Emissions from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Project Full Buildout Generator Emissions[2]

Location	Size (hp)	Annual Emissions[3] (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Howard Terminal Ballpark	2,012	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
Non-Ballpark	335	0.0023	0.0022	0.0044	2.2E-04	2.2E-04	2.2E-04	7.0
	402	0.0027	0.0027	0.0053	2.7E-04	2.7E-04	2.7E-04	8.4
	536	0.0054	0.0053	0.011	5.3E-04	5.3E-04	5.3E-04	17
	671	0.0045	0.0044	0.0089	4.4E-04	4.4E-04	4.4E-04	14
	1,006	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
	1,341	0.014	0.013	0.044	0.0018	0.0018	0.0018	42
	1,676	0.011	0.011	0.037	0.0015	0.0015	0.0015	35
Total Emissions		**0.053**	**0.052**	**0.15**	**0.0065**	**0.0065**	**0.0065**	**166**

Notes:

1. Operation for routine maintenance and testing is assumed to be 20 hours per year.
2. Number, size, and fuel of emergency generators were provided by the Project Sponsor. Phase 1 and Project Full Buildout generators were estimated based on the number of buildings per phase anticipated to be greater than 75 feet in height. Per California Building Code, high-rise buildings having occupied floors more than 75 feet above the lowest level of fire department vehicle access must be equipped with emergency and standby power.
3. CO_2e emission factor based on AP-42 (USEPA 1995).

Abbreviations:

ATCM - Airborne Toxics Control Measure
CCR - California Code of Regulations
CO_2e - carbon dioxide equivalents
DPM - diesel particulate matter
g - grams
hp - horsepower
hr - hour
kW - kilowatt
MT - metric tons
NOx - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
TOG - total organic gases
USEPA - United States Environmental Protection Agency
yr - year

References:

California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf

California Building Code, Part 2, Volume 2, Chapter 27 - Electrical. Available online at: https://up.codes/viewer/california/ca-building-code-2016-v2/chapter/27/electrical#27.

USEPA. 1995. AP 42, Volume I, Fifth Edition. §3.4. Large Stationary Diesel and All Stationary Dual-Fuel Engines. Available online at: http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf

Table 38
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Year	Scenario[1]	Percent VMT from EVs[1,2]	
		Passenger Fleet	All Fleet
2023	Reference	3.4%	3.4%
	CTF	3.4%	3.4%
2027	Reference	6.2%	6.1%
	CTF	7.1%	7.1%

Phase 1 Buildout, With TDM Plan, Reference Fleet

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	884	--	9,902	--	0	--	--	3.0	405,993	--
		Weekday Day	Passenger	901	--	9,936	--	0	--	--	3.0	139,110	--
		Weekend	Passenger	--	925	--	11,029	0	--	--	3.0	297,785	--
	Other Events	Concerts	Passenger	915	--	8,673		0	--		3.0	78,057	--
		Other	Passenger	205	--	1,980		0	--		3.0	69,316	--
		Corporate/Community	Passenger	51	--	478		0	--		3.0	47,804	--
		Plaza	Passenger	99	--	922		0	--		3.0	14,751	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.2	--	12	--	0	--	--	3.0	3,090	--
	Sports Team Management		Passenger	5.9	--	56	--	0	--	--	3.0	14,524	--
Residential			All	41	38	489	448	54	54	54	0.35	174,223	174,223
Office			All	58	10	693	122	50	3.0	--	8.0	193,495	157,853
Retail			All	38	44	448	530	4.0	1.0	2.0	10	172,064	118,188
Restaurant			All	20	24	244	285	4.0	--	1.0	10	93,468	26,208
Hotel			All	72	58	856	693	20	16	13	2.0	295,356	278,611
Performance Venue	Attendees		Passenger	--	--	--		0	--		3.0	--	--
	Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**755,083**

Table 38
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Phase 1 Buildout, With TDM Plan, CTF Fleet

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	884	--	9,902	--	0	--	--	3.0	406,000	--
		Weekday Day	Passenger	901	--	9,937	--	0	--	--	3.0	139,112	--
		Weekend	Passenger	--	925	--	11,029	0	--	--	3.0	297,790	--
	Other Events	Concerts	Passenger	915	--	8,673		0	--		3.0	78,059	--
		Other	Passenger	205	--	1,980		0	--		3.0	69,317	--
		Corporate/Community	Passenger	51	--	478		0	--		3.0	47,805	--
		Plaza	Passenger	99	--	922		0	--		3.0	14,751	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.2	--	12	--	0	--	--	3.0	3,090	--
	Sports Team Management		Passenger	5.9	--	56	--	0	--	--	3.0	14,524	--
Residential			All	41	38	491	450	54	54	54	0.35	174,878	174,878
Office			All	58	10	695	123	50	3.0	--	8.0	194,222	157,853
Retail			All	38	44	450	532	4.0	1.0	2.0	10	172,710	118,188
Restaurant			All	20	24	245	286	4.0	--	1.0	10	93,819	26,208
Hotel			All	72	58	859	695	20	17	13	2.0	296,466	291,766
Performance Venue	Attendees		Passenger	--	--	--		0	--		3.0	--	--
	Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**768,892**

Full Project Buildout, With TDM Plan, Reference Fleet

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,594	--	17,850	--	200	200	--	3.0	731,836	619,920
		Weekday Day	Passenger	1,625	--	17,911	--	200	200	--	3.0	250,757	211,680
		Weekend	Passenger	--	1,668	--	19,881	200	--	200	3.0	536,783	408,240
	Other Events	Concerts	Passenger	1,650		15,634		200	200		3.0	140,705	136,080
		Other	Passenger	369		3,570		200	47		3.0	124,948	124,362
		Corporate/Community	Passenger	92		862		200	11		3.0	86,171	83,160
		Plaza	Passenger	178		1,662		200	21		3.0	26,590	25,402
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	2.2	--	21	--	200	0	--	3.0	5,570	--
	Sports Team Management		Passenger	11	--	100	--	200	1	--	3.0	26,181	19,732
Residential			All	375	351	4487	4193	300	300	300	0.58	1,607,317	1,607,317
Office[9]			All	480	74	5,736	882	300	28.0	4.0	8.0	1,588,829	1,557,158
Retail			All	283	295	3385	3532	35.5	13.0	14.0	10	1,250,950	1,221,948
Restaurant			All	320	369	3826	4414	35.5	15.0	17.0	10	1,457,674	1,432,116
Hotel			All	129	105	1,543	1,249	20	20	20	2.0	532,530	367,920
Performance Venue	Attendees		Passenger	148		1,742		200	23		3.0	174,188	173,880
	Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**7,988,915**

Table 38
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Full Project Buildout, With TDM Plan, CTF Fleet

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,837	--	20,569	--	200	200	--	3.0	843,319	619,920
		Weekday Day	Passenger	1,872	--	20,640	--	200	200	--	3.0	288,956	211,680
		Weekend	Passenger	--	1,922	--	22,909	200	--	200	3.0	618,552	408,240
	Other Events	Concerts	Passenger	1,901		18,015		200	200		3.0	162,139	136,080
		Other	Passenger	426		4,114		200	54		3.0	143,981	142,884
		Corporate/Community	Passenger	106		993		200	13		3.0	99,297	98,280
		Plaza	Passenger	206		1,915		200	25		3.0	30,640	30,240
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	2.6	--	25	--	200	0	--	3.0	6,419	--
	Sports Team Management		Passenger	12	--	116	--	200	1	--	3.0	30,169	19,732
Residential			All	433	404	5,189	4850	300	300	300	0.67	1,858,801	1,858,801
Office[9]			All	553	85	6,634	1019	300	32	5	8.0	1,837,421	1,788,595
Retail			All	326	340	3915	4,085	35.5	15	16	10	1,446,677	1,405,908
Restaurant			All	369	426	4425	5104	35.5	17	20	10	1,685,745	1,642,284
Hotel			All	149	121	1,784	1,444	20	20	20	2.0	615,851	367,920
Performance Venue		Attendees	Passenger	170		2,007		200	26		3.0	200,723	196,560
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**8,927,124**

Notes:

1. As detailed in Table 57, the California Air Resources Board VISION Model includes a Reference scenario based on currently adopted regulations, and a CTF scenario with increased EV penetration assumptions consistent with the trajectory needed to meet the State's long-term climate goals.
2. As described in Table 57, the California Air Resources Board VISION Model Passenger Module (version 2.1) was used to calculate the electric VMT (eVMT) for the MTC (San Francisco Bay Area) region for the Phase 1 and Full Buildout calendar years.
3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 23.
4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.
5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.
6. The EV trips per activity and EV miles per activity are calculated by multiplying the trips and miles shown in Table 23 by the fleet eVMT percentages for the given year.
7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

Table 38
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers. These values change by year, as shown in Table 58.

   The chargers are assumed to charge at a rate of 25 range-mile per hour of charging. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

   EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that depending on the year and scenario, there can be a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, retail), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (ballpark games, hotel), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 15,000 miles and over 1,800 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 32 of the 300 chargers would be used in this scenario (for a total of 256 hours/day charging). This is equivalent to using all 300 chargers at 0.85 hours/day. As EV penetration increases beyond the assumed percentages, these chargers would be used more.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

CTF - Cleaner Technologies and Fuels
EV - electric vehicle (includes battery electric or plug-in hybrid technology)
eVMT - electric vehicle miles traveled
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

References:

U.S. Census. 2019. Factfinder. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk
California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 39
Electric Vehicle Charging Emissions Reduction from Project Operations in Prjoect Buildout Years
Oakland Waterfront Ballpark District Project
Oakland, California

Vehicle Miles Traveled Conversion from Replacement of Gasoline Vehicle with EVs

Buildout Conditions	Total Miles Charged Per Year[1]		
	Reference eVMT	CTF eVMT	Additional eVMT
Phase 1 Buildout Conditions	755,083	768,892	13,809
Full Project Buildout Conditions	7,988,915	8,927,124	938,210

Phase 1 Buildout Conditions (2023)

	Emissions[2]				
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Vehicle Emission Factor (gram/mile)[3]	0.024	0.057	0.0015	0.0014	288
EV Charging Indirect Electricity Emissions (grams/mile)[4]	-	-	-	-	34
Emissions Reduction for Gasoline/Diesel Vehicles (ton/year or MT CO_2e/year)	-3.7E-04	-8.7E-04	-2.3E-05	-2.1E-05	-4.0
Emissions Increase from Electricity (ton/year or MT CO_2e/year)	-	-	-	-	0.47
Net Emissions Reduction (ton/year or MT CO_2e/year)	-3.7E-04	-8.7E-04	-2.3E-05	-2.1E-05	-3.5

Full Project Buildout Conditions (2027)

	Emissions Reductions[2]				
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Vehicle Emission Factor (gram/mile)[3]	0.020	0.039	0.0013	0.0012	256
EV Charging Indirect Electricity Emissions (grams/mile)[4]	-	-	-	-	24
Emissions Reduction for Gasoline/Diesel Vehicles (ton/year or MT CO_2e/year)	-0.020	-0.040	-0.0013	-0.0012	-240
Emissions Increase from Electricity (ton/year or MT CO_2e/year)	-	-	-	-	23
Net Emissions Reduction (ton/year or MT CO_2e/year)	-0.020	-0.040	-0.0013	-0.0012	-217

Notes:

1. Miles charged by year for each scenario is calculated in Table 38. The additional eVMT is calculated as the difference between the eVMT charged by Project chargers from the Reference scenario and the CTF scenario.
2. Negative values denote emissions avoided or reduced.
3. Emission factors based on EMFAC 2017 for Alameda County, aggregated for all model years and speeds, averaged over all seasons for calendar years 2023 and 2027, respectively. EF were weighted according to LDA, LDT1, LDT2, MCY, and MDV fleet-mix VMT and trips. Only running emissions are included. Tire wear and brakewear emissions are not considered, as these emissions are also expected to occur for electric vehicles. All other vehicle emission sources are conservatively not included since their emission factors are in units of g/trip and are not expected to contribute as greatly to the overall emissions reduction. However, emissions from these sources for the conventional fleet are considerably higher than for the electric vehicles, and thus these assumptions are conservative. Only emissions from internal combustion engines were included, as these are the vehicles that would be replaced with EVs.
4. The EV charging indirect electricity emission factor assumes an EV fuel economy of 0.25 kWh/mi. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

Abbreviations:

CO_2e - carbon dioxide equivalents
CTF - Cleaner Technologies and Fuels
EF - Emission Factors
EMFAC - EMission FACtors model
eVMT - electric vehicle miles traveled
EV - electric vehicle
kWh - kilowatt-hour
LDA - Light Duty Auto (passenger cars)
LDT - Light Duty trucks
MCY - motorcycle
MDV -medium duty vehicle
MT - metric tonnes
NOx - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
VMT - vehicle miles traveled

References

US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel. Available at: http://www.afdc.energy.gov/fuels/electricity_benefits.html. Accessed: February, 2019.

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Table 40
Transportation Refrigeration Unit (TRU) Emissions from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

TRU Usage Inputs			**Value**	**Units**
TRU Usage for Ballpark Events[1]			10	TRU/event
				TRU trips/event
TRU Usage for Performance Venue Events[1]			1	TRU/event
				TRU trips/event
TRU Horsepower[2]			34	hp
TRU Load Factor[2]			0.45	--
Number of Ballpark Events[3]	A's Related Existing Conditions		82	events/yr
	Existing Conditions		93	events/yr
	Phase 1 Buildout and Full Buildout Conditions		91	events/yr
Number of Performance Venue Events[3]	Full Buildout Conditions		100	events/yr
Operation During Travel	Average Speed Traveled by Truck[4]		25	mi/hr
	Average Miles Traveled by Truck[5]		7.3	mi/TRU trip
	Annual Hours of Operation During Travel	A's Related Existing Conditions	239	hr/yr
		Existing Conditions	272	hr/yr
		Phase 1 Buildout Condition	266	hr/yr
		Full Buildout Condition	295	hr/yr
Operation During Unloading	Unloading Time per TRU[6]		0.50	hr/TRU
	Annual Hours of Operation During Unloading	A's Related Existing Conditions	410	hr/yr
		Existing Conditions	465	hr/yr
		Phase 1 Buildout Condition	455	hr/yr
		Full Buildout Condition	505	hr/yr

Table 40
Transportation Refrigeration Unit (TRU) Emissions from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

TRU Emission Factors and Fuel Consumption

Source	Year	Emission Factor (g/hp-hr)					Diesel Fuel Consumption (gal/hp-hr)
		ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e	
TRU Equipment Exhaust	2018	0.16	1.8	0.049	0.045	37	0.026
	2023	0.19	1.5	0.016	0.015	37	0.026
	2027	0.20	1.5	0.011	0.0097	37	0.026

A's Related Existing Operating Conditions (2018)

TRU Emission Source	Annual Average Emissions (tons/yr)				(MT/yr)	Diesel Fuel Consumption (gal/yr)
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e	
Operation During Travel	6.6E-04	0.0071	2.0E-04	1.8E-04	0.14	96
Operation During Unloading	0.0011	0.012	3.4E-04	3.2E-04	0.23	164
Total Emissions	**0.0018**	**0.019**	**5.4E-04**	**5.0E-04**	**0.37**	**260**

Existing Conditions (2018)

TRU Emission Source	Annual Average Emissions (tons/yr)				(MT/yr)	Diesel Fuel Consumption (gal/yr)
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e	
Operation During Travel	7.5E-04	0.0081	2.3E-04	2.1E-04	0.16	109
Operation During Unloading	0.0013	0.014	3.9E-04	3.6E-04	0.27	186
Total Emissions	**0.0020**	**0.022**	**6.2E-04**	**5.7E-04**	**0.42**	**294**

Phase 1 Buildout Conditions (2023)

TRU Emission Source	Annual Average Emissions (tons/yr)				(MT/yr)	Diesel Fuel Consumption (gal/yr)
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e	
Operation During Travel	8.4E-04	0.0068	7.4E-05	6.8E-05	0.15	106
Operation During Unloading	0.0014	0.012	1.3E-04	1.2E-04	0.26	182
Total Emissions	**0.0023**	**0.019**	**2.0E-04**	**1.9E-04**	**0.41**	**288**

Table 40
Transportation Refrigeration Unit (TRU) Emissions from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Full Buildout Conditions (2027)

TRU Emission Source	Annual Average Emissions (tons/yr)				Annual Average Emissions (MT/yr)	Diesel Fuel Consumption (gal/yr)
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e	
Operation During Travel	9.9E-04	0.0075	5.3E-05	4.8E-05	0.17	118
Operation During Unloading	0.0017	0.013	9.0E-05	8.3E-05	0.29	201
Total Emissions	**0.0027**	**0.020**	**1.4E-04**	**1.3E-04**	**0.46**	**319**

Notes:

1. Approximate TRU usage provided by Project sponsor.
2. The engine size and load factor for TRU are based on the CARB 2011 off-road inventory, available for download at https://ww3.arb.ca.gov/msei/ordiesel.htm.
3. NFL and Other Events are not included in the A's Related Existing Conditions ballpark events in order to conservatively estimate net new emissions attributable to the Project. These events are included in the Existing Conditions. Phase 1 and Full Buildout Conditions include all baseball games and concerts but do not include the other events, corporate/community events, or plaza events because these events are much smaller.
4. Per Oakland Code of Ordinances 10.20.040 "Prima facie speed limits", the standard speed limit for business or residential districts in CA is 25 MPH. Some streets near the Project have limits of 30 MPH and a portion of each delivery trip will be on highways, but 25 MPH was conservatively assumed for the entire trip.
5. Truck trip length is consistent with the trip length assumed for truck deliveries. All other emissions from the trucks' engines during travel are included in the mobile emissions and are therefore not estimated separately here.
6. Based on City of Oakland commercial unloading and loading time restriction.

Abbreviations:

ARB - [California] Air Resources Board
CO_2e - carbon dioxide equivalents
g - gram
gal - gallon
hp - horsepower
hr - hour
mi - mile
MT - metric tonnes
NO_X - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
TRU - transportation refrigeration unit
VMT - vehicles miles traveled
yr - year

References:

California Air Resources Board. 2011 OFFROAD database. Available at: https://ww3.arb.ca.gov/msei/ordiesel.htm.
City of Oakland Code of Ordinances. 10.20.040. Available at: https://library.municode.com/ca/oakland/codes/code_of_ordinances

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Table 41
Idling Emissions from Delays to Port Trucks
Oakland Waterfront Ballpark District Project
Oakland, California

Port Truck Delay Inputs

Intersection[1]	Daily Delay[2] (idle-hr/day)			
	Existing Howard Terminal Condition	Weekday Day Ballpark[3]	Weekday Evening Ballpark[3]	Full Buildout Ancillary[3]
Adeline Street and 3rd Street	15	5.0	8.3	-1.5
Adeline Street and 5th Street	14	-3.2	-6.5	8.1
Market Street and 3rd Street	2.2	9.0	3.3	9.6
Market Street and 5th Street	2.9	1.7	2.1	2.0
Martin Luther King Jr. Way and 3rd Street	5.0	1.2	0.29	-0.84
Martin Luther King Jr. Way and 5th Street	1.8	1.5	1.1	0.93
Broadway and 5th Street	18	-3.6	-2.8	-1.3
Activity (days/yr)[4]	261	14	41	261

Emission Factors[5]

Year	Idling Emission Factors (g/idle-hr)				
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
2018	5.1	45	0.21	0.20	6,183
2023	4.6	31	0.12	0.12	5,671
2027	4.4	28	0.12	0.11	5,363

Emissions from Port Truck Idling Delays due to Project

Scenario	Weekday Idling Emissions				
	(ton/yr)				(MT/yr)
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Existing Howard Terminal Conditions	0.085	0.76	0.0035	0.0034	94
Phase 1 Buildout Conditions	0.079	0.52	0.0021	0.0020	88
Full Buildout Conditions	0.096	0.62	0.0026	0.0025	107

Notes:

1. Length of delay per truck at each intersection was estimated by Fehr & Peers for the four traffic scenarios shown. Delays and truck volumes were provided hourly from 3 PM to 8 PM. Truck volumes were also provided hourly from 7 AM to 9 AM for all intersections, and from 9 AM to 12 PM for the Adeline Street intersections. Morning traffic volumes for the intersections only studied from 7 AM to 9 AM were estimated based on the Adeline Street intersections and the data provided for 7 AM to 9 AM. According to Fehr & Peers, existing truck volumes are expected to remain constant in the future Project scenarios.

2. Total daily truck delays at each intersection were estimated by multiplying PM delays per truck by existing truck volumes for each hour between 7 AM and 12 PM and between 3 PM to 8 PM. It is assumed that the delays durations are relatively consistent between AM traffic and PM traffic. Negative truck delays indicate a decrease in truck delays due to Project TDM measures, including improved signalization.

3. Fehr & Peers evaluated truck delays for Existing Conditions, ballgame conditions, and Full Buildout ancillary conditions. Delays from operation of ancillary land uses during Phase 1 buildout were not evaluated, therefore, Phase 1 Buildout only includes delays from ballpark conditions. Ballpark and Full Buildout Ancillary delays reflect net new delays relative to Existing Conditions.

Table 41
Idling Emissions from Delays to Port Trucks
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

4. Port activity is assumed to be operational only on weekdays. Ballpark delays are assumed to occur only during weekday ballgames.
5. Emission factors were estimated using EMFAC2017 to generate emission rates for Alameda County from HHDT, LHDT1, LHDT2, and MHDT vehicle classes.

Abbreviations

CO_2e - carbon dioxide equivalents
EF - emission factor
EMFAC - EMission FACtors model
g - grams
HHDT - heavy heavy duty truck
idle-hr - hour spent idling
LHDT - light heavy duty truck
MHDT - medium heavy duty truck
MT - metric ton
NO_X - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
yr - year

Table 42
Summary of Unmitigated Operational CAP and GHG Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1]								GHG Emissions[1]
	[ton/year]				[lb/day]				[MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
A's Related Existing Conditions[2] (2018)									
Area Sources[4]	2.9	9.8E-04	3.8E-04	3.8E-04	16	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	872
Natural Gas Use	0.017	0.16	0.012	0.012	0.09	0.9	0.065	0.065	170
Water and Wastewater	--	--	--	--	--	--	--	--	83
Solid Waste	--	--	--	--	--	--	--	--	500
Mobile Sources	3.0	3.3	3.8	0.8	17	18	21	4.7	6,954
Stationary Sources[4]	--	--	--	--	--	--	--	--	--
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0018	0.019	5.4E-04	5.0E-04	0.0099	0.11	0.0030	0.0027	0.37
Truck Idling	--	--	--	--	--	--	--	--	--
Total Emissions	**6.0**	**3.5**	**3.8**	**0.9**	**33**	**19**	**21**	**4.7**	**8,581**
Existing Conditions[2] (2018)									
Area Sources[4]	4.8	9.8E-04	3.8E-04	3.8E-04	26	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	1,126
Natural Gas Use	0.021	0.19	0.015	0.015	0.12	1.1	0.08	0.08	211
Water and Wastewater	--	--	--	--	--	--	--	--	104
Solid Waste	--	--	--	--	--	--	--	--	652
Mobile Sources	3.7	4.1	4.8	1.1	21	23	26	5.9	8,812
Stationary Sources[4]	0.057	1.0	0.032	0.031	0.31	5.5	0.17	0.17	105
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0020	0.022	6.2E-04	5.7E-04	0.011	0.12	0.0034	0.0031	0.42
Truck Idling	0.085	0.76	3.5E-03	3.4E-03	0.46	4.1	0.019	0.019	94
Total Emissions	**9**	**6.1**	**4.8**	**1.1**	**48**	**33**	**26**	**6.2**	**11,106**

Table 42
Summary of Unmitigated Operational CAP and GHG Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1]								GHG Emissions[1]
	[ton/year]				[lb/day]				[MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Phase 1 Buildout Conditions[3] (2023)									
Area Sources[4]	8.1	0.046	0.022	0.022	45	0.25	0.12	0.12	6.8
Electricity Use	--	--	--	--	--	--	--	--	2,629
Natural Gas Use	0.13	1.2	0.091	0.091	0.73	6.5	0.50	0.50	1,317
Water and Wastewater	--	--	--	--	--	--	--	--	446
Solid Waste	--	--	--	--	--	--	--	--	1,329
Mobile Sources	6.2	11	11	2.5	34	61	60	14	19,575
Stationary Sources[4]	0.075	1.3	0.048	0.047	0.41	7.3	0.27	0.26	160
EV Charging	-3.7E-04	-8.7E-04	-2.3E-05	-2.1E-05	-0.0020	-0.0047	-1.3E-04	-1.2E-04	-3.5
TRU Operation	0.0023	0.019	2.0E-04	1.9E-04	0.012	0.10	0.0011	0.0010	0.41
Truck Idling	0.079	0.52	2.1E-03	2.0E-03	0.43	2.87	0.011	0.011	88
Total Emissions	**15**	**14**	**11**	**2.7**	**80**	**78**	**61**	**15**	**25,548**
Total Unmitigated Net New Emissions	**8.6**	**10.8**	**7.3**	**1.8**	**47**	**59**	**40**	**9.9**	**16,967**
Full Project Buildout Conditions[3] (2027)									
Area Sources[4]	24	0.26	0.12	0.12	134	1.4	0.68	0.68	37
Electricity Use	--	--	--	--	--	--	--	--	5,733
Natural Gas Use	0.39	3.5	0.27	0.27	2.1	19	1.5	1.5	3,872
Water and Wastewater	--	--	--	--	--	--	--	--	1,116
Solid Waste	--	--	--	--	--	--	--	--	2,611
Mobile Sources	11	32	26	6.1	63	174	143	33	45,027
Stationary Sources[4]	0.20	3.6	0.13	0.12	1.1	20	0.69	0.67	414
EV Charging	-0.020	-0.040	-0.0013	-0.0012	-0.11	-0.22	-0.0072	-0.0066	-0,217
TRU Operation	0.0027	0.020	1.4E-04	1.3E-04	0.015	0.11	7.8E-04	7.2E-04	0.46
Truck Idling	0.096	0.62	0.0026	0.0025	0.53	3.4	0.014	0.013	107
Total Emissions	**37**	**40**	**27**	**6.6**	**201**	**217**	**146**	**36**	**58,701**
Total Unmitigated Net New Emissions	**31**	**36**	**23**	**5.8**	**168**	**198**	**126**	**32**	**50,120**

Table 42
Summary of Unmitigated Operational CAP and GHG Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emissions estimated using methods consistent with CalEEMod® version 2016.3.2, as detailed in Tables 17 through 41. Area sources include Architectural Coating, Consumer Products, and Landscaping. Stationary sources include Emergency Generators.
2. A's Related Existing Conditions emissions do not include emissions from non-A's events at the Coliseum. The Existing Conditions include all emissions from the A's Related Existing Conditions, plus NFL games and other events.
3. Annual average emissions were calculated assuming 365 days per year, even though operations will not occur for the entire 365 days per year in 2023 or 2027.
4. Unmitigated assumes Architectural Coatings are compliant with standard BAAQMD paint VOC regulations. Generators are assumed to operate 50 hours per year for maintenance and testing (maximum allowed) in the unmitigated scenario.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
CO_2e - carbon dioxide equivalent
EV - Electric vehicle
GHG - greenhouse gas
lb - pounds
MT - metric ton
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
TRU - transportation refrigeration unit
VOC - Volatile organic compound
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 43
Summary of Mitigated Operational CAP and GHG Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1]								GHG Emissions[1]
	[ton/year]				[lb/day]				[MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
A's Related Existing Conditions[2] (2018)									
Area Sources	2.9	9.8E-04	3.8E-04	3.8E-04	16	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	872
Natural Gas Use	0.017	0.16	0.012	0.012	0.09	0.9	0.065	0.065	170
Water and Wastewater	--	--	--	--	--	--	--	--	83
Solid Waste	--	--	--	--	--	--	--	--	500
Mobile Sources	3.0	3.3	3.8	0.8	17	18	21	4.7	6,954
Stationary Sources	--	--	--	--	--	--	--	--	--
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0018	0.019	5.4E-04	5.0E-04	0.0099	0.11	0.0030	0.0027	0.37
Truck Idling	--	--	--	--	--	--	--	--	--
Total Emissions	**6.0**	**3.5**	**3.8**	**0.9**	**33**	**19**	**21**	**4.7**	**8,581**
Existing Conditions[2] (2018)									
Area Sources	4.8	9.8E-04	3.8E-04	3.8E-04	26	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	1,126
Natural Gas Use	0.021	0.19	0.015	0.015	0.12	1.1	0.08	0.08	211
Water and Wastewater	--	--	--	--	--	--	--	--	104
Solid Waste	--	--	--	--	--	--	--	--	652
Mobile Sources	3.7	4.1	4.8	1.1	21	23	26	5.9	8,812
Stationary Sources	0.057	1.0	0.032	0.031	0.31	5.5	0.17	0.17	105
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0020	0.022	6.2E-04	5.7E-04	0.011	0.12	0.0034	0.0031	0.42
Truck Idling	0.085	0.76	3.5E-03	3.4E-03	0.46	4.1	0.019	0.019	94
Total Emissions	**9**	**6.1**	**4.8**	**1.1**	**48**	**33**	**26**	**6.2**	**11,106**

Table 43
Summary of Mitigated Operational CAP and GHG Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1]								GHG Emissions[1]
	[ton/year]				[lb/day]				[MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Phase 1 Buildout Conditions[3] (2023)									
Area Sources[4]	7.8	0.046	0.022	0.022	43	0.25	0.12	0.12	6.8
Electricity Use	--	--	0.00	--	--	--	--	--	2,629
Natural Gas Use	0.13	1.2	0.091	0.091	0.73	6.5	0.50	0.50	1,317
Water and Wastewater	--	--	0.00	--	--	--	--	--	446
Solid Waste	--	--	0.00	--	--	--	--	--	1,329
Mobile Sources	6.2	11	11	2.5	34	61	60	14	19,575
Stationary Sources[4]	0.020	0.058	0.0025	0.0025	0.11	0.32	0.013	0.013	64
EV Charging	0.000	0.00	-2.3E-05	0.0000	0.00	0.0	0.000	0.000	-4
TRU Operation	0.0023	0.019	2.0E-04	1.9E-04	0.012	0.10	0.0011	0.0010	0.41
Truck Idling	0.079	0.52	2.1E-03	2.0E-03	0.43	2.9	0.011	0.011	88
Total Emissions	**14**	**13**	**11**	**2.6**	**78**	**71**	**60**	**14**	**25,452**
Total Mitigated Net New Emissions	**8.3**	**9.5**	**7.2**	**1.8**	**45**	**52**	**40**	**9.7**	**16,871**
Full Project Buildout Conditions[3] (2027)									
Area Sources[4]	24	0.26	0.12	0.12	130	1.4	0.68	0.68	37
Electricity Use	--	--	--	--	--	--	--	--	5,733
Natural Gas Use	0.39	3.5	0.27	0.27	2.1	19	1.5	1.5	3,872
Water and Wastewater	--	--	--	--	--	--	--	--	1,116
Solid Waste	--	--	--	--	--	--	--	--	2,611
Mobile Sources	11	32	26	6.1	63	174	143	33	45,027
Stationary Sources[4]	0.052	0.15	0.0065	0.0065	0.29	0.85	0.036	0.036	166
EV Charging	-0.02	-0.04	-0.001	-0.001	-0.1	-0.2	-0.01	-0.01	-0,217
TRU Operation	0.0027	0.020	1.4E-04	1.3E-04	0.015	0.11	7.8E-04	7.2E-04	0.46
Truck Idling	0.096	0.62	0.0026	0.0025	0.53	3.4	0.014	0.013	107
Total Emissions	**36**	**36**	**27**	**6.5**	**196**	**199**	**145**	**36**	**58,453**
Total Mitigated Net New Emissions	**30**	**33**	**23**	**5.6**	**163**	**180**	**125**	**31**	**49,872**

Table 43
Summary of Mitigated Operational CAP and GHG Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emissions estimated using methods consistent with CalEEMod® version 2016.3.2, as detailed in Tables 17-41. Area sources include Architectural Coating, Consumer Products, and Landscaping. Stationary sources include Emergency Generators.
2. A's Related Existing Conditions emissions do not include emissions from non-A's events at the Coliseum. The Existing Conditions include all emissions from the A's Related Existing Conditions, plus NFL games and other events.
3. Annual average emissions were calculated assuming 365 days per year, even though operations will not occur for the entire 365 days per year in 2023 or 2027.
4. Area source mitigations includes use of low VOC coatings on all indoor non-residential surfaces. Project emergency generators are controlled with Tier 4 engines and assumed to operate 20 hours per year for maintenance and cleaning in the mitigated scenario.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
CO_2e - carbon dioxide equivalent
EV - Electric vehicle
GHG - greenhouse gas
lb - pounds
MT - metric ton
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
TRU - transportation refrigeration unit
VOC - Volatile organic compound
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 44
Unmitigated Net New Overlapping Construction and Operational CAP Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Calendar Year	CAP Emissions[1]							
	[tons/yr]				[lb/day][2]			
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$
Construction Only								
2020	0.22	2.1	0.10	0.094	5.1	48	2.3	2.1
2021	2.3	23	0.81	0.76	16	166	5.9	5.4
2022	7.5	16	0.66	0.61	56	113	4.5	4.2
2023	6.7	10	0.39	0.36	51	72	2.9	2.7
2024	1.1	13	0.41	0.38	8.7	99	3.1	2.9
2025	7.8	10	0.33	0.31	60	75	2.5	2.4
2026	14	13	0.47	0.44	108	99	3.6	3.4
2027	9.3	8.1	0.30	0.28	107	93	3.4	3.2
2028	--	--	--	--	--	--	--	--
Net New Operational Emissions[3]								
2020	--	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	--	--
2022	--	--	--	--	--	--	--	--
2023	2.0	1.4	2.4	0.56	11	7.9	13	3.1
2024	8.6	11	7.3	1.8	47	59	40	10
2025	8.6	11	7.3	1.8	47	59	40	10
2026	8.6	11	7.3	1.8	47	59	40	10
2027	16	19	12	3.1	87	105	68	17
2028	31	36	23	5.8	168	198	126	32
Construction + Net New Operational Emissions[3]								
2020	0.22	2.1	0.10	0.094	5.1	48	2.3	2.1
2021	2.3	23	0.81	0.76	16	166	5.9	5.4
2022	7.5	16	0.66	0.61	56	113	4.5	4.2
2023	8.7	11	2.8	0.93	62	80	16	5.8
2024	10	24	7.7	2.2	56	158	43	13
2025	16	21	7.6	2.1	108	134	42	12
2026	23	24	7.8	2.3	156	158	44	13
2027	25	27	13	3.4	195	198	72	20
2028	31	36	23	5.8	168	198	126	32
Maximum Annual Emissions	**31**	**36**	**23**	**5.8**	**195**	**198**	**126**	**32**

Notes:

1. Emissions estimated using methods consistent with CalEEMod® version 2016.3.2, as discussed in detail in previous tables.
2. Total construction emissions are divided by 260 work days to get pounds per day. Total operational emissions are divided by 365 days per year to get pounds per day.
3. Net new operational emissions are scaled for partial years of phased operations in 2023 and 2027 by multiplying by the ratio of number of days of operations of that year to 365 total days (30 days for 2023 and 120 days for 2027). For 2023, ballpark emissions are not scaled as the ballpark is operational at the start of Phase 1. Only Phase 1 ancillary land use emissions are scaled by the ratio of 30 days to 365 days.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
lb - pounds
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 45
Mitigated Net New Overlapping Construction and Operational CAP Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Calendar Year	CAP Emissions[1]							
	[tons/yr]				[lb/day][2]			
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$
Construction Only								
2020	0.075	0.63	0.023	0.021	1.7	14	0.51	0.48
2021	1.2	11	0.21	0.20	8.6	81	1.5	1.4
2022	3.7	5.4	0.10	0.092	27	37	0.68	0.64
2023	3.1	2.7	0.051	0.047	24	20	0.38	0.35
2024	0.46	5.5	0.075	0.070	3.5	42	0.58	0.54
2025	3.4	4.1	0.059	0.054	26	32	0.46	0.42
2026	5.9	4.7	0.073	0.069	45	36	0.56	0.53
2027	3.9	3.4	0.047	0.045	45	39	0.54	0.52
2028	--	--	--	--	--	--	--	--
Net New Operational Emissions[3]								
2020	--	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	--	--
2022	--	--	--	--	--	--	--	--
2023	1.8	0.90	2.4	0.55	10	4.9	13	3.0
2024	8.3	10	7.2	1.8	45	52	40	10
2025	8.3	10	7.2	1.8	45	52	40	10
2026	8.3	10	7.2	1.8	45	52	40	10
2027	15	17	12	3.0	84	94	68	17
2028	30	33	23	5.6	163	180	125	31
Construction + Net New Operational Emissions[3]								
2020	0.075	0.63	0.023	0.021	1.7	14	0.51	0.48
2021	1.2	11	0.21	0.20	8.6	81	1.5	1.4
2022	3.7	5.4	0.10	0.092	27	37	0.68	0.64
2023	4.9	3.6	2.4	0.59	34	25	13	3.3
2024	8.7	15	7.3	1.8	49	94	40	10
2025	12	14	7.3	1.8	71	84	40	10
2026	14	14	7.3	1.8	91	88	40	10
2027	19	21	12	3.1	129	133	68	17
2028	30	33	23	5.6	163	180	125	31
Maximum Annual Emissions	**30**	**33**	**23**	**5.6**	**163**	**180**	**125**	**31**

Notes:

1. Emissions estimated using methods consistent with CalEEMod® version 2016.3.2, as discussed in detail in previous tables.
2. Total construction emissions are divided by 260 work days to get pounds per day. Total operational emissions are divided by 365 days per year to get pounds per day.
3. Net new operational emissions are scaled for partial years of phased operations in 2023 and 2027 by multiplying by the ratio of number of days of operations of that phase to 365 total days (30 days for Phase 1 and 120 days for 2027). For 2023, ballpark emissions are not scaled as the ballpark is operational at the start of Phase 1. Only Phase 1 ancillary land use emissions are scaled by the ratio of 30 days to 365 days.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
lb - pounds
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 46
Potential GHG Reductions from Zero-Carbon Electricity
Oakland Waterfront Ballpark District Project
Oakland, California

Phase 1 Buildout

Location	Land Use Type	Electricity Use[1] (MWh/yr)	CO_2e Emissions Reduction[2] (MT CO_2e/yr)
Howard Terminal Ballpark	A's Games	9,855	1,338
	Events		
Non-Ballpark Land Uses	Office	2,915	396
	Retail	292	40
	Residential	2,212	300
	Performance Venue	0	0
	Hotel	2,128	289
	Parking Garages	1,954	265
	Ballpark Parking	0	0
	Phase 1 Total	**19,356**	**2,629**

Full Project Buildout

Location	Land Use Type	Electricity Use[1] (MWh/yr)	CO_2e Emissions Reduction[2] (MT CO_2e/yr)
Howard Terminal Ballpark	A's Games	9,855	961
	Events		
Non-Ballpark Land Uses	Office	17,487	1,706
	Retail	2,624	256
	Residential	12,291	1,199
	Performance Venue	356	35
	Hotel	2,128	208
	Parking Garages	10,874	1,061
	Ballpark Parking	3,152	308
	Full Buildout Total	**58,767**	**5,733**

Notes:

1. Electricity use is from Table 20.
2. CO_2e emissions reductions assume that all electricity for which emissions in Table 22 are quantified using PG&E projected factors is instead replaced by zero-carbon electricity.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CO_2e - carbon dioxide equivalents
GHG - greenhouse gas
MT - metric ton(s)
MWh - megawatt-hour
PG&E - Pacific Gas and Electric
yr - year

References:

California Emissions Estimator Model (CalEEMod®). Available online at: http://www.caleemod.com/.

Table 47
Potential GHG Reductions from Rooftop Solar Photovoltaics
Oakland Waterfront Ballpark District Project
Oakland, California

Phase 1 Buildout

Rooftop Area for Solar PV[1]	Solar System Size[2]	Electricity Generation[2]	CO_2e Emissions Reduction[3]
(m^2)	(kW)	(MWh/yr)	(MT CO_2e/yr)
8,156	1,223	1,867	254

Full Project Buildout

Rooftop Area for Solar PV[1]	Solar System Size[2]	Electricity Generation[2]	CO_2e Emissions Reduction[3]
(m^2)	(kW)	(MWh/yr)	(MT CO_2e/yr)
36,846	5,527	8,435	823

Notes:

1. For the purpose of this calculation, it was assumed that 50% of the available rooftop space could be utilized for rooftop solar PV panels. Rooftop area was estimated from Project site plans.
2. Annual electricity generated was calculated using the National Renewable Energy Laboratory's PVWatts®, version 6. Input parameters are all defaults for Oakland, California, including a standard module type, fixed (roof mount) array type, system losses of 14.08%, tilt of 20 degrees, and azimuth of 180 degrees. Solar system size was calculated using the DC System Size for PVWatts®: Size (kW) = Array Area (m^2) x 1 kW/m^2 x Module Efficiency (%), with a default module efficiency of 15%.
3. CO_2e emissions reductions assume that zero-carbon electricity replaces electricity otherwise supplied by PG&E with the intensity factors shown in Table 21.

Abbreviations:

CO_2e - carbon dioxide equivalents
GHG - greenhouse gas
kW - kilowatt
m - meter
MT - metric ton(s)
MWh - megawatt-hour
PG&E - Pacific Gas and Electric
PV - photovoltaic
yr - year

References:

PVWatts®. Available online at: https://pvwatts.nrel.gov/pvwatts.php.

Table 48
Potential CAP and GHG Emissions Reductions from Replacing Residential Natural Gas with Zero-Carbon Electricity
Oakland Waterfront Ballpark District Project
Oakland, California

Phase 1 Buildout

Land Use Type	Criteria Air Pollutant Natural Gas Emissions Reductions[1] (tons/yr)				CO_2e Emissions Reductions[1] (MT CO_2e/yr)
	ROG	NOx	PM_{10}	$PM_{2.5}$	
Residential	0.025	0.22	0.017	0.017	251
Phase 1 Total	**0.025**	**0.22**	**0.017**	**0.017**	**251**

Full Project Buildout

Land Use Type	Criteria Air Pollutant Natural Gas Emissions Reductions[1] (tons/yr)				CO_2e Emissions Reductions[1] (MT CO_2e/yr)
	ROG	NOx	PM_{10}	$PM_{2.5}$	
Residential	0.14	1.2	0.097	0.097	1,396
Full Buildout Total	**0.14**	**1.2**	**0.097**	**0.097**	**1,396**

Additional Electricity Use from Replacing Natural Gas and GHG Emissions if Using Grid Electricity Rather Than Zero-Carbon Electricity

Scenario	Electricity Use That Replaces Natural Gas Use[2] (kWh/yr)	Additional CO_2e Emissions[1] (MT CO_2e/yr)
Phase 1 Buildout	885	120
Full Project Buildout	4,916	480

Notes:

1. This calculation shows the reduction in emissions from natural gas consumption for residential land uses. If replaced by zero-carbon electricity, this is the total reduction. If replaced by grid electricity, additional emissions will be added as shown in the bottom table. Natural gas emissions are from Table 22.
2. Assumes a 40% increase in residential electricity use, based on engineering estimates from Meyers+ Engineers.

Abbreviations:

CAP - criteria air pollutant
CO_2e - carbon dioxide equivalents
GHG - greenhouse gas
kWh - kilowatt hour
MT - metric ton(s)
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

Table 49
Potential CAP and GHG Emissions Reductions from Replacing Non-Residential Natural Gas Space Heating with Zero-Carbon Electricity
Oakland Waterfront Ballpark District Project
Oakland, California

Proportion of Natural Gas Use by Commercial End Use in PG&E

End Use	Annual Natural Gas Use[1]	Units
Heating	24,852	10,000 therms
Cooling	401	
Water Heating	16,668	
Cooking	11,176	
Miscellaneous	474	
Process	2,907	
Segment Total	**56,478**	
Percent of Annual Natural Gas Use from Heating Loads	44%	%

Emissions Reductions for Phase 1 Buildout and Full Project Buildout

Scenario	Non-Residential Natural Gas Use from Retail and Office[2]	Non-Residential Natural Gas Use from Space Heating[3]	Criteria Air Pollutant Natural Gas Emissions Reductions[2] (tons/yr)				CO_2e Emissions Reductions[2] (MT CO_2e/yr)
	(MMBTU/yr)		ROG	NOx	PM_{10}	$PM_{2.5}$	
Phase 1 Buildout	4,924	2,166	0.012	0.11	0.0081	0.0081	116
Full Project Buildout	29,952	13,180	0.071	0.65	0.049	0.049	707

Additional Electricity Use from Replacing Natural Gas and GHG Emissions if Using Grid Electricity Rather Than Zero-Carbon Electricity

Scenario	Non-Residential Electricity Use from Space Heating[4]	Additional CO_2e Emissions[5] (MT CO_2e/yr)
	(MWh/yr)	
Phase 1 Buildout	991	135
Full Project Buildout	6,296	614

Notes:

1. Commercial End Use Survey data from http://capabilities.itron.com/CeusWeb/Chart.aspx for PG&E, all commercial buildings, natural gas use. Accessed: April 2019.
2. This calculation shows the reduction in emissions from natural gas consumption from space heating for retail and office land uses. If replaced by zero-carbon electricity, this is the total reduction. If replaced by grid electricity, additional emissions will be added as shown in the bottom table. Natural gas use is from Table 20. Emission factors are from Table 21.
3. Assumes the proportion of natural gas use from space heating for the Project is consistent with the overall PG&E inventory.
4. According to communication with Meyers+ Engineers, it is assumed that about 15-30% of non-residential electricity usage should be added to account for heating, depending on specific land use. For this analysis, the retail assumed 40% and the office assumed 30% of electricity would be added for heating electrically.
5. The additional CO_2e emissions from using electricity to heat retail and office spaces assumes grid-averaged electricity intensities for 2020 and 2027 for Phase 1 Buildout and Full Project Buildout conditions, respectively. Because the grid-averaged electricity intensity reduces over time, it is expected that this reduction will increase in future years, despite showing an increase in emissions for Phase 1 buildout conditions and a modest decrease in emissions for Full Project buildout conditions.

Abbreviations:

CAP - criteria air pollutant
CO_2e - carbon dioxide equivalents
GHG - greenhouse gas
MMBTU - million British Thermal Units
MT - metric ton(s)
MWh - megawatt-hour
NOx - nitrogen oxides
PG&E - Pacific Gas & Electric
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

Commercial End Use Survey data from http://capabilities.itron.com/CeusWeb/Chart.aspx for PGE, all commercial buildings, natural gas use. Accessed: April 2019.

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Table 50
Potential Charging Mileage from Additional Electric Vehicle Chargers
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Year	Scenario[1]	Percent VMT from EVs[1,2]	
		Passenger Fleet	All Fleet
2023	Reference	3.4%	3.4%
	CTF	3.4%	3.4%
2027	Reference	6.2%	6.1%
	CTF	7.1%	7.1%

Phase 1 Buildout, With TDM Plan, CTF Fleet

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	884	--	9,902	--	0	--	--	3.0	406,000	--
		Weekday Day	Passenger	901	--	9,937	--	0	--	--	3.0	139,112	--
		Weekend	Passenger	--	925	--	11,029	0	--	--	3.0	297,790	--
	Other Events	Concerts	Passenger	915	--	8,673		0	--		3.0	78,059	--
		Other	Passenger	205	--	1,980		0	--		3.0	69,317	--
		Corporate/Community	Passenger	51	--	478		0	--		3.0	47,805	--
		Plaza	Passenger	99	--	922		0	--		3.0	14,751	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.2	--	12	--	0	--	--	3.0	3,090	--
	Sports Team Management		Passenger	5.9	--	56	--	0	--	--	3.0	14,524	--
Residential			All	41	38	491	450	81	81	81	0.23	174,878	174,878
Office			All	58	10	695	123	50	3.0	--	8.0	194,222	157,853
Retail			All	38	44	450	532	8.0	1.0	2.0	10	172,710	118,188
Restaurant			All	20	24	245	286	8.0	--	1.0	10	93,819	26,208
Hotel			All	72	58	859	695	30	17	13	2.0	296,466	291,766
Performance Venue		Attendees	Passenger	--	--	--		0	--		3.0	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**768,892**

Table 50
Potential Charging Mileage from Additional Electric Vehicle Chargers
Oakland Waterfront Ballpark District Project
Oakland, California

Full Project Buildout, With TDM Plan, CTF Fleet

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,837	--	20,569	--	700	272	--	3.0	843,319	843,091
		Weekday Day	Passenger	1,872	--	20,640	--	700	273	--	3.0	288,956	288,943
		Weekend	Passenger	--	1,922	--	22,909	700	--	303	3.0	618,552	618,484
	Other Events	Concerts	Passenger	1,901		18,015		700	238		3.0	162,139	161,935
		Other	Passenger	426		4,114		700	54		3.0	143,981	142,884
		Corporate/Community	Passenger	106		993		700	13		3.0	99,297	98,280
		Plaza	Passenger	206		1,915		700	25		3.0	30,640	30,240
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	2.6	--	25	--	700	0	--	3.0	6,419	--
	Sports Team Management		Passenger	12	--	116	--	700	1	--	3.0	30,169	19,732
Residential			All	433	404	5,189	4850	450	300	300	0.67	1,858,801	1,858,801
Office[9]			All	553	85	6,634	1019	300	32	5	8.0	1,837,421	1,788,595
Retail			All	326	340	3915	4,085	71	15	16	10	1,446,677	1,405,908
Restaurant			All	369	426	4425	5104	71	17	20	10	1,685,745	1,642,284
Hotel			All	149	121	1,784	1,444	30	30	28	2.0	615,851	541,397
Performance Venue		Attendees	Passenger	170		2,007		700	26		3.0	200,723	196,560
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**9,637,134**

Notes:

1. As detailed in Table 57, the California Air Resources Board VISION Model includes a Reference scenario based on currently adopted regulations, and a CTF scenario with increased EV penetration assumptions consistent with the trajectory needed to meet the State's long-term climate goals.
2. As described in Table 57, the California Air Resources Board VISION Model Passenger Module (version 2.1) was used to calculate the electric VMT (eVMT) for the MTC (San Francisco Bay Area) region for the Phase 1 and Full Buildout calendar years.
3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 23.
4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.
5. Per Project sponsor, this assumes that higher than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The number of EV chargers available is listed for each land use. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.
6. The EV trips per activity and EV miles per activity are calculated by multiplying the trips and miles shown in Table 23 by the fleet eVMT percentages for the given year.
7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

Table 50
Potential Charging Mileage from Additional Electric Vehicle Chargers
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

[8] The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers. These values change by year, as shown in Table 58.

The chargers are assumed to charge at a rate of 25 range-mile per hour of charging. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

EV charging at non-residential is different in that depending on the year and scenario, there can be a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, retail), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (ballpark games, hotel), the site is charger limited and all chargers will be used.

For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 15,000 miles and over 1,800 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 32 of the 300 chargers would be used in this scenario (for a total of 256 hours/day charging). This is equivalent to using all 300 chargers at 0.85 hours/day. As EV penetration increases beyond the assumed percentages, these chargers would be used more.

[9] Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
kWh - kilowatt-hour
mi - mile(s)
VMT - vehicle miles travelled
yr - year
ZEV - zero emission vehicle

References:

Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/
National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf
U.S. Census. 2019. Factfinder. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk
California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 51
Potential CAP and GHG Emissions Reductions from Additional Electric Vehicle Charging
Oakland Waterfront Ballpark District Project
Oakland, California

Miles Charged by Additional Chargers Only[1]

Buildout Conditions	Total Miles Charged Per Year			
	Reference eVMT	CTF eVMT		Additional eVMT from Addiitonal Chargers
		eVMT from 10%	eVMT from > 10%	
Phase 1 Buildout Conditions	755,083	768,892	768,892	0
Full Project Buildout Conditions	7,988,915	8,927,124	9,637,134	710,010

Emissions from Additional Chargers in Phase 1 Buildout Conditions (2023)[2]

	Emissions[2]				
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Vehicle Emission Factor (gram/mile)[3]	0.024	0.057	0.0015	0.0014	288
EV Charging Indirect Electricity Emissions (grams/mile)[4]	-	-	-	-	34
Emissions Reduction for Gasoline/Diesel Vehicles (ton/year or MT CO_2e/year)	0	0	0	0	0
Emissions Increase from Electricity (ton/year or MT CO_2e/year)	-	-	-	-	0
Net Emissions Reduction (ton/year or MT CO_2e/year)	0	0	0	0	0

Emissions from Additional Chargers in Full Buildout Conditions (2027)[2]

	Emissions[2]				
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Vehicle Emission Factor (gram/mile)[3]	0.020	0.039	0.0013	0.0012	256
EV Charging Indirect Electricity Emissions (grams/mile)[4]	-	-	-	-	24
Emissions Reduction for Gasoline/Diesel Vehicles (ton/year or MT CO_2e/year)	-0.015	-0.031	-0.0010	-9.1E-04	-182
Emissions Increase from Electricity (ton/year or MT CO_2e/year)	-	-	-	-	17
Net Emissions Reduction (ton/year or MT CO_2e/year)	-0.015	-0.031	-0.0010	-9.1E-04	-164

Notes:

1. The miles charged by additional chargers represent the additional miles charged as a result of the additional EV charging-capable parking spaces. The miles charged assuming greater than 10% of parking spaces have EV charging is shown in Table 50. The miles charged assuming 10% of parking spaces have EV charging is shown in Table 39. These values represent the difference between these two estimates.
2. Negative values denote emissions avoided or reduced.
3. Emission factors based on EMFAC 2017 for Alameda County, aggregated for all model years and speeds, averaged over all seasons for calendar years 2023 and 2027, respectively. EFs were weighted according to LDA, LDT1, LDT2, MCY, and MDV fleet-mix VMT and trips. Only running emissions are included. Tire wear, brakewear, and evaporative emissions are not considered, as these emissions are also expected to occur for electric vehicles. All other vehicle emission sources are conservatively not included since their emission factors are in units of g/trip and are not expected to contribute as greatly to the overall emissions reduction. However, emissions from these sources for the conventional fleet are considerably higher than for the electric vehicles, and thus these assumptions are conservative. Only emissions from gasoline/diesel/natural gas vehicles were included, as these are the vehicles that would be replaced with EVs.
4. The EV charging indirect electricity emission factor assumes an EV fuel economy of 0.25 kWh/mi. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

Abbreviations:

CAP - criteria air pollutant
CO_2e - carbon dioxide equivalents
EF - Emission Factors
EMFAC - EMission FACtors model
EV - electric vehicle
GHG - greenhouse gas
kWh - kilowatt-hour
LDA - Light Duty Auto (passenger cars)
LDT - Light Duty trucks
MCY - motorcycle
MDV - Medium Duty Vehicle
mi - mile
MT - metric tonnes
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases

Table 52
Potential GHG Emissions Reductions from Additional Solid Waste Diversion at the Ballpark
Oakland Waterfront Ballpark District Project
Oakland, California

Solid Waste Generation Rates[1]

Venue	Size Metric	Solid Waste Generation Rate (tons/size/yr)
Howard Terminal Ballpark	attendees	2.3E-04

Phase 1 Buildout and Project Full Buildout Annual Waste Generation

Venue	Area	Units	Solid Waste Generation Rate (tons/yr)
A's Games	2,870,000	attendees	662
Events	841,500	attendees	194

Phase 1 and Project Full Buildouts Howard Terminal Waste Emissions[2]

Location	Land Use	CO_2 (MT/year)	CH_4 (MT/year)	CO_2e (MT/year)
Howard Terminal Ballpark	A's Games	134	7.9	333
	Other Events	39	2.3	98

Howard Terminal Ballpark GHG Emission Reductions

Scenario	CO_2e (MT/year)
Unmitigated Emissions	961
Mitigated Emissions	431
CO_2e Emissions Reduced	**530**

Notes:

1. Waste generation rates for the ballpark were calculated based on actual 2017 MLB waste rates at the Coliseum and attendance data for 2017 for MLB games to get tons/attendee/yr, adjusted for a higher diversion rate of 75%.
2. Emissions calculated using solid waste landfill gas treatment types from Appendices A and D, Table 10.1, to CalEEMod® User's Guide and emission factors from Table 10.2 of CalEEMod® User's Guide Appendix D.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
GHG - greenhouse gas
MLB - Major League Baseball
MT - metric ton
yr - year

References:

California Emissions Estimator Model (CalEEMod®). Available online at: http://www.caleemod.com/

Table 53
Summary of CAP and GHG Emissions Reductions from Potential Operational Mitigation Measures
Oakland Waterfront Ballpark District Project
Oakland, California

Mitigation Measure[1]	Emissions Source	CAP Emissions[2,3] [ton/year] ROG	NO_x	PM_{10}	$PM_{2.5}$	CAP Emissions[2,3] [lb/day] ROG	NO_x	PM_{10}	$PM_{2.5}$	GHG Emissions[2,3] [MT CO_2e/yr] CO_2e
Phase 1 Buildout Conditions (2023)										
	Total Unmitigated Net New Emissions	**8.6**	**10.8**	**7.3**	**1.8**	**47**	**59**	**40**	**9.9**	**16,967**
1	100 percent zero carbon electricity through East Bay Community Energy (ECBE)[2]	--	--	--	--	--	--	--	--	-2,629
2	On-site solar for 50% of roof areas	--	--	--	--	--	--	--	--	-254
3	75% solid waste diversion at Project ballpark	--	--	--	--	--	--	--	--	-530
4	No natural gas for 100% of residential development (replaced by zero-carbon electricity)	-0.025	-0.22	-0.017	-0.017	-0.14	-1.2	-0.096	-0.096	-251
5	Limited natural gas for retail/commercial development (no space heating), replaced by zero-carbon electricity	-0.012	-0.11	-0.0081	-0.0081	-0.064	-0.58	-0.044	-0.044	-116
6	Additional EV charging stations (>10% of parking spaces)[4]	0	0	0	0	0	0	0	0	0
Full Project Buildout Conditions (2027)										
	Total Unmitigated Net New Emissions	**31**	**36**	**23**	**5.8**	**168**	**198**	**126**	**32**	**50,120**
1	100 percent zero carbon electricity through East Bay Community Energy[2]	--	--	--	--	--	--	--	--	-5,733
2	On-site solar for 50% of roof areas	--	--	--	--	--	--	--	--	-823
3	75% solid waste diversion at Project ballpark	--	--	--	--	--	--	--	--	-530
4	No natural gas for 50% of residential development (replaced by zero-carbon electricity)	-0.14	-1.2	-0.097	-0.097	-0.77	-6.6	-0.53	-0.53	-1,396
5	Limited natural gas for retail/commercial development (no space heating), replaced by zero-carbon electricity	-0.071	-0.65	-0.049	-0.049	-0.39	-3.5	-0.27	-0.27	-707
6	Additional EV charging stations (>10% of parking spaces)	-0.015	-0.031	-0.0010	-9.1E-04	-0.084	-0.17	-0.0054	-0.0050	-164

Notes:

1. Mitigation measures shown are intended to be potential mitigation measures that may be included in the Project. Because it has not yet been determined which (if any) of the measures shown above will be implemented, these potential additional mitigation measures are not added together or to the proposed Project results but are presented for informational purposes only.
2. Emissions estimated using methods consistent with CalEEMod® version 2016.3.2.
3. These reductions are not all additive; for example, if the Project purchases 100 percent zero carbon electricity through EBCE, it cannot also claim credit for on-site solar electricity.
4. As shown in Table 51, there is no additional reduction from installing > 10% chargers beyond the reduction for installing 10% chargers in 2023.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
CO_2e - carbon dioxide equivalent
EBCE - East Bay Community Energy
EV - Electric vehicle
GHG - greenhouse gas
lb - pounds
MT - metric ton
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

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Table 54
Greenhouse Gas Emission Factors by Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Electricity Emission Factors[1]	Mobile Emission Factors[2]					
		EMFAC2017 Fleet Mixes				EMFAC2017 Fleets Without EVs[3]	
		Passenger Vehicles Only	All Vehicles	Trucks	Buses	Passenger Vehicles Only	All Vehicles
	lb CO2e/MWh	g CO_2e/mi	g CO_2e/mi	g CO_2e/mi	g CO_2e/mi	g CO_2e/mi	g CO_2e/mi
2020	299	310	406	1,290	1,712	315	412
2021	287	301	396	1,269	1,687	306	403
2022	275	291	385	1,240	1,671	297	393
2023	263	282	373	1,193	1,644	288	381
2024	251	272	364	1,176	1,620	280	373
2025	239	262	354	1,157	1,618	271	364
2026	228	254	345	1,136	1,604	263	355
2027	216	247	337	1,114	1,587	256	348
2028	204	240	329	1,092	1,572	249	340
2029	192	234	321	1,066	1,559	243	333
2030	180	228	315	1,046	1,549	238	327
2031	168	224	309	1,028	1,539	234	321
2032	156	220	304	1,012	1,531	230	317
2033	144	216	300	998	1,523	226	312
2034	132	213	296	985	1,516	223	309
2035	120	210	292	974	1,509	221	306
2036	109	208	290	964	1,503	218	303
2037	97	206	287	955	1,497	217	300
2038	85	204	285	947	1,491	215	299
2039	73	203	283	940	1,487	214	297
2040	61	201	282	934	1,483	212	296
2041	49	201	281	929	1,479	212	294
2042	38	200	280	925	1,476	211	294
2043	26	199	279	921	1,473	210	293
2044	14	199	279	918	1,471	210	292
2045	2.0	198	278	916	1,468	209	292
2046	2.0	198	278	914	1,466	209	292
2047	2.0	197	278	912	1,463	209	291
2048	2.0	197	277	910	1,461	208	291
2049	2.0	197	277	908	1,458	208	291
2050	2.0	197	277	910	1,455	208	291

Notes:

1. Electricity emissions factors are derived in Table 21. Emission factors are scaled linearly between 2020 and 2030 to match the requirement of 60% renewable energy in 2030 and scaled linearly between 2030 and 2045 to match the requirement of 100% renewable energy in 2045 as outlined in
2. Emission factors were estimated using EMFAC2017 for Alameda County.
3. Vehicle emission factors used to estimate reductions from installation of EV chargers do not include EVs in their fleet mixes.

Abbreviations:

CO_2e - carbon dioxide equivalents
lb - pound
MWh - megawatt hour
g - gram
mi - mile
SB - state bill

Table 55
Modeled Electric Vehicle Penetration from ARB's VISION Model for the MTC Region
Oakland Waterfront Ballpark District Project
Oakland, California

Electric Vehicle Fleet Penetration

Year[1]	Scenario[2,3]	Fleet Type	Percent of eVMT
2023	Reference	Passenger	3.4%
		All Fleet	3.4%
2024		Passenger	4.1%
		All Fleet	4.1%
2025		Passenger	4.9%
		All Fleet	4.9%
2026		Passenger	5.6%
		All Fleet	5.5%
2027		Passenger	6.2%
		All Fleet	6.1%
2028		Passenger	6.7%
		All Fleet	6.6%
2029		Passenger	7.1%
		All Fleet	7.1%
2030		Passenger	7.6%
		All Fleet	7.5%
2031		Passenger	7.9%
		All Fleet	7.9%
2032		Passenger	8.2%
		All Fleet	8.2%
2033		Passenger	8.5%
		All Fleet	8.5%
2034		Passenger	8.8%
		All Fleet	8.7%
2035		Passenger	9.0%
		All Fleet	8.9%
2036		Passenger	9.1%
		All Fleet	9.1%
2037		Passenger	9.3%
		All Fleet	9.2%
2038		Passenger	9.4%
		All Fleet	9.4%
2039		Passenger	9.5%
		All Fleet	9.5%
2040		Passenger	9.6%
		All Fleet	9.5%
2041		Passenger	9.6%
		All Fleet	9.6%
2042		Passenger	9.7%
		All Fleet	9.6%
2043		Passenger	9.7%
		All Fleet	9.7%
2044		Passenger	9.8%
		All Fleet	9.7%
2045		Passenger	9.8%
		All Fleet	9.7%
2046		Passenger	9.8%
		All Fleet	9.8%
2047		Passenger	9.8%
		All Fleet	9.8%

Table 55
Modeled Electric Vehicle Penetration from ARB's VISION Model for the MTC Region
Oakland Waterfront Ballpark District Project
Oakland, California

Electric Vehicle Fleet Penetration

Year[1]	Scenario[2,3]	Fleet Type	Percent of eVMT
2048	Reference	Passenger	9.8%
		All Fleet	9.8%
2049		Passenger	9.8%
		All Fleet	9.8%
2050		Passenger	9.8%
		All Fleet	9.8%
2023	CTF	Passenger	3.4%
		All Fleet	3.4%
2024		Passenger	4.1%
		All Fleet	4.1%
2025		Passenger	4.9%
		All Fleet	4.9%
2026		Passenger	5.9%
		All Fleet	5.9%
2027		Passenger	7.1%
		All Fleet	7.1%
2028		Passenger	8.5%
		All Fleet	8.5%
2029		Passenger	10.0%
		All Fleet	10.0%
2030		Passenger	11.8%
		All Fleet	11.7%
2031		Passenger	13.7%
		All Fleet	13.7%
2032		Passenger	15.7%
		All Fleet	15.7%
2033		Passenger	17.8%
		All Fleet	17.8%
2034		Passenger	20.0%
		All Fleet	20.0%
2035		Passenger	22.3%
		All Fleet	22.3%
2036		Passenger	24.7%
		All Fleet	24.7%
2037		Passenger	27.1%
		All Fleet	27.1%
2038		Passenger	29.6%
		All Fleet	29.5%
2039		Passenger	32.1%
		All Fleet	32.0%
2040		Passenger	34.7%
		All Fleet	34.6%
2041		Passenger	37.2%
		All Fleet	37.2%
2042		Passenger	39.8%
		All Fleet	39.8%
2043		Passenger	42.5%
		All Fleet	42.4%
2044		Passenger	45.1%
		All Fleet	45.0%

Table 55
Modeled Electric Vehicle Penetration from ARB's VISION Model for the MTC Region
Oakland Waterfront Ballpark District Project
Oakland, California

Electric Vehicle Fleet Penetration

Year[1]	Scenario[2,3]	Fleet Type	Percent of eVMT
2045	CTF	Passenger	47.8%
		All Fleet	47.7%
2046		Passenger	50.5%
		All Fleet	50.3%
2047		Passenger	53.2%
		All Fleet	53.0%
2048		Passenger	55.9%
		All Fleet	55.7%
2049		Passenger	58.6%
		All Fleet	58.4%
2050		Passenger	61.3%
		All Fleet	61.1%

Notes:

1. This calculation is performed for every calendar year for the year-by-year calculations.
2. The ARB VISION Model (version 2.1) was used to develop the ARB 2016 Mobile Source Strategy and to inform the ARB 2017 Scoping Plan. This model includes vehicle (VMT and fuel type) assumptions consistent with the Sustainable Communities Strategies (SCS) adopted around that time. To calculate these percentages, VISION Passenger Vehicle Module scenarios were downloaded and run on November 11, 2019 from the 2016 Vision 2.1 Passenger Vehicle Module and extracted the eVMT for the MTC (San Francisco Bay Area) region. Note that the 'All Fleet' percent calculated here is very slightly high for both scenarios as calculated, as it does not include trucks with gross vehicle weight over 8,500 pounds, which would achieve lower EV penetration than the total fleet. However, the categories included make up over 92% of annual VMT per EMFAC2017 in 2030 in Alameda County so this is not expected to make a substantial difference except at very high EV penetration.
3. The VISION Reference scenario modeling is based on EMFAC2014 and incorporates regulations such as Advanced Clean Cars, but with some modifications to reflect VMT consistent with adopted SCSs and to split out electric vehicle types. Compared to the Reference scenario, the Cleaner Technologies & Fuels (CTF) scenario assumes the following:
-Assumed combined LDA/LDT2 ZEV/PHEV sales increase from 18 percent to 40 percent between 2025 and 2030, and reach 100 percent by 2050.
-Assumed MDV ZEV/PHEV sales beginning in 2025, ramping up to 10 percent by 2030, and reach 50 percent by 2050.
-Assumed increased fuel efficiency (~2.9 percent per year) for gasoline vehicles starting 2025.
-Assumed new SULEV NOx standard phased in between 2025 and 2030 for gasoline LDAs. 100 percent SULEV20 sales by 2030.
-Assumed VMT reductions ramping up to 15 percent below 2050 baseline VMT in 2050.
-Assumed extended electric range for PHEVs after 2025 from 40 percent to 60 percent eVMT by 2050.
Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the

Abbreviations:

ARB - California Air Resources Board
CTF - Cleaner Technologies and Fuels
eVMT - electric vehicle miles traveled
LDA - light duty automobile
MTC - Metropolitan Transportation Commission
MDV - medium duty vehicle
PHEV - plug-in hybrid electric vehicle
ZEV - zero emission vehicle

Table 56
Summary of eVMT and Emissions Reductions from Project Chargers By Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Scenario[1]	Project Commitment (% Chargers)[2]	Miles Charged by Project Chargers[3]	Increased eVMT from Project Chargers, 10% Commitment[4]	Additional Increased eVMT from Project Chargers, >10% Commitment[4]	Electricity Emissions (g/mi)[5]	Reduced Vehicle Emissions (g/mi)[5]	Emissions Reduction (MT CO_2e)[5]	Additional Emissions Reduction (MT CO_2e)[5]
2023	Reference	10	755,083	13,809	--	30	288	3.6	--
	CTF	10	768,892						
	Reference	>10	755,083	--	0			--	0
	CTF	>10	768,892						
2024	Reference	10	1,044,755	745	--	29	280	0.19	--
	CTF	10	1,045,499						
	Reference	>10	1,044,755	--	0			--	0
	CTF	>10	1,045,499						
2025	Reference	10	1,125,371	881	--	27	271	0.21	--
	CTF	10	1,126,252						
	Reference	>10	1,177,988	--	52,618			--	13
	CTF	>10	1,178,869						
2026	Reference	10	1,217,149	104,364	--	26	263	25	--
	CTF	10	1,321,513						
	Reference	>10	1,319,713	--	134,114			--	32
	CTF	>10	1,455,627						
2027	Reference	10	7,988,915	938,210	--	25	256	217	--
	CTF	10	8,927,124						
	Reference	>10	8,421,750	--	710,010			--	164
	CTF	>10	9,637,134						
2028	Reference	10	8,476,953	1,869,613	--	23	249	423	--
	CTF	10	10,346,566						
	Reference	>10	9,063,684	--	1,092,596			--	247
	CTF	>10	11,439,162						
2029	Reference	10	8,987,008	2,926,667	--	22	243	649	--
	CTF	10	11,913,674						
	Reference	>10	9,710,777	--	1,512,857			--	335
	CTF	>10	13,426,531						
2030	Reference	10	9,355,795	4,395,601	--	20	238	958	--
	CTF	10	13,751,396						
	Reference	>10	10,195,963	--	1,977,797			--	431
	CTF	>10	15,729,193						
2031	Reference	10	9,765,822	5,836,132	--	19	234	1,253	--
	CTF	10	15,601,954						
	Reference	>10	10,705,706	--	2,585,041			--	555
	CTF	>10	18,186,995						

Table 56
Summary of eVMT and Emissions Reductions from Project Chargers By Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Scenario[1]	Project Commitment (% Chargers)[2]	Miles Charged by Project Chargers[3]	Increased eVMT from Project Chargers, 10% Commitment[4]	Additional Increased eVMT from Project Chargers, >10% Commitment[4]	Electricity Emissions (g/mi)[5]	Reduced Vehicle Emissions (g/mi)[5]	Emissions Reduction (MT CO_2e)[5]	Additional Emissions Reduction (MT CO_2e)[5]
2032	Reference	10	10,071,160	7,345,258	--	18	230	1,558	--
	CTF	10	17,416,418						
	Reference	>10	11,100,479	--	3,415,583			--	724
	CTF	>10	20,832,001						
2033	Reference	10	10,415,887	8,345,253	--	16	226	1,752	--
	CTF	10	18,761,140						
	Reference	>10	11,519,143	--	4,777,844			--	1,003
	CTF	>10	23,538,984						
2034	Reference	10	10,619,198	9,515,515	--	15	223	1,982	--
	CTF	10	20,134,713						
	Reference	>10	11,788,830	--	5,799,049			--	1,208
	CTF	>10	25,933,762						
2035	Reference	10	10,855,558	10,594,679	--	14	221	2,193	--
	CTF	10	21,450,237						
	Reference	>10	12,081,588	--	6,855,408			--	1,419
	CTF	>10	28,305,645						
2036	Reference	10	10,992,952	11,872,598	--	12	218	2,447	--
	CTF	10	22,865,550						
	Reference	>10	12,263,360	--	7,972,272			--	1,643
	CTF	>10	30,837,822						
2037	Reference	10	11,154,086	13,109,769	--	11	217	2,694	--
	CTF	10	24,263,855						
	Reference	>10	12,466,074	--	8,847,972			--	1,818
	CTF	>10	33,111,827						
2038	Reference	10	11,313,925	14,398,555	--	10	215	2,955	--
	CTF	10	25,712,480						
	Reference	>10	12,659,630	--	9,611,910			--	1,973
	CTF	>10	35,324,390						
2039	Reference	10	11,365,450	15,728,935	--	8.3	214	3,228	--
	CTF	10	27,094,385						
	Reference	>10	12,734,894	--	10,151,190			--	2,084
	CTF	>10	37,245,575						
2040	Reference	10	11,442,170	17,129,905	--	7.0	212	3,520	--
	CTF	10	28,572,075						
	Reference	>10	12,832,253	--	10,234,350			--	2,103
	CTF	>10	38,806,425						

Table 56
Summary of eVMT and Emissions Reductions from Project Chargers By Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Scenario[1]	Project Commitment (% Chargers)[2]	Miles Charged by Project Chargers[3]	Increased eVMT from Project Chargers, 10% Commitment[4]	Additional Increased eVMT from Project Chargers, >10% Commitment[4]	Electricity Emissions (g/mi)[5]	Reduced Vehicle Emissions (g/mi)[5]	Emissions Reduction (MT CO_2e)[5]	Additional Emissions Reduction (MT CO_2e)[5]
2041	Reference	10	11,534,026	18,522,985	--	5.7	212	3,814	--
	CTF	10	30,057,012						
	Reference	>10	12,943,009	--	10,287,270			--	2,118
	CTF	>10	40,344,282						
2042	Reference	10	11,572,738	19,965,281	--	4.3	211	4,122	--
	CTF	10	31,538,019						
	Reference	>10	12,991,700	--	10,340,190			--	2,135
	CTF	>10	41,878,209						
2043	Reference	10	11,708,394	21,327,174	--	3.0	210	4,419	--
	CTF	10	33,035,568						
	Reference	>10	13,138,015	--	10,393,110			--	2,153
	CTF	>10	43,428,678						
2044	Reference	10	11,715,935	22,883,553	--	1.6	210	4,760	--
	CTF	10	34,599,489						
	Reference	>10	13,154,477	--	10,448,676			--	2,174
	CTF	>10	45,048,165						
2045	Reference	10	11,724,489	24,389,372	--	0.29	209	5,096	--
	CTF	10	36,113,861						
	Reference	>10	13,169,230	--	10,501,596			--	2,194
	CTF	>10	46,615,457						
2046	Reference	10	11,730,320	25,861,365	--	0.29	209	5,394	--
	CTF	10	37,591,684						
	Reference	>10	13,179,899	--	10,557,162			--	2,202
	CTF	>10	48,148,846						
2047	Reference	10	11,733,950	27,430,127	--	0.29	209	5,714	--
	CTF	10	39,164,077						
	Reference	>10	13,185,570	--	10,610,082			--	2,210
	CTF	>10	49,774,159						
2048	Reference	10	11,736,758	28,889,588	--	0.29	208	6,011	--
	CTF	10	40,626,346						
	Reference	>10	13,190,118	--	10,733,688			--	2,233
	CTF	>10	51,360,034						
2049	Reference	10	11,738,977	30,358,403	--	0.29	208	6,310	--
	CTF	10	42,097,380						
	Reference	>10	13,197,477	--	10,875,740			--	2,261
	CTF	>10	52,973,121						

Table 56
Summary of eVMT and Emissions Reductions from Project Chargers By Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year	Scenario[1]	Project Commitment (% Chargers)[2]	Miles Charged by Project Chargers[3]	Increased eVMT from Project Chargers, 10% Commitment[4]	Additional Increased eVMT from Project Chargers, >10% Commitment[4]	Electricity Emissions (g/mi)[5]	Reduced Vehicle Emissions (g/mi)[5]	Emissions Reduction (MT CO_2e)[5]	Additional Emissions Reduction (MT CO_2e)[5]
2050	Reference	10	11,766,957	31,769,010	--	0.29	208	6,598	--
	CTF	10	43,535,967						
	Reference	>10	13,225,458	--	11,017,793			--	2,288
	CTF	>10	54,553,760						
Total				**375,523,348**	**181,495,919**	**-**	**-**	**78,095**	**37,721**

Notes:

1. ARB VISION scenarios are described in Table 55.
2. The 10 percent scenario assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, whereas the >10 percent scenario assumes the following: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percentages are applied to the parking spaces associated with each individual land use. The >10 percent scenario accounts for the number of chargers in addition to the 10 percent scenario (i.e., does not include the number of chargers in the 10 percent scenario). Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.
3. Calculated as shown in Appendix A. For years 2023-2027, this is based on Phase 1 VMT; for years 2028-2050, it is based on Full Buildout.
4. Increased eVMT for the 10 percent commitment is calculated by subtracting the miles charged by Project chargers from the Reference scenario from the miles charged by Project chargers from the CTF scenario. The additional increased eVMT beyond 10 percent is estimated using the Reference scenario at 10 percent as a baseline, and then subtracting out the eVMT charged from the 10% commitment.
5. Year-by-year electricity emission factors are derived in Report Table 21. Emission factors are scaled between 2020 and 2030 to match the requirement of 60% renewable energy in 2030 and scaled between 2030 and 2045 to match the requirement of 100% renewable energy in 2045 as outlined in SB 100. Vehicle emission factors are estimated using EMFAC2017 for Alameda County, removing electric vehicles from the fleet mixes.

Abbreviations:

CO_2e - carbon dioxide equivalent
lb - pounds
MT - metric tons
N/A - not applicable
CTF - Cleaner Technologies and Fuels
mi - mile
g - gram
eVMT - electric vehicle miles traveled

Table 57
Summary of Non-Mobile Non-Ballpark Net GHG Emissions by Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year[1]	Net Service Population[2]	A's Related Existing Conditions Emissions[3]	Unmitigated Project Operational Emissions[4]	Reductions from Project Features and Mitigation Measures		Non-Mobile Net Project Operational Emissions	Non-Mobile Non-Ballpark Net Project Operational Emissions Per Service Population	Additional Reductions[7]		Non-Mobile Net Project Operational Emissions with Additional Reductions	Non-Mobile Non-Ballpark Net Project Operational Emissions with Additional Reductions Per Service Population
				EV Charging Stations (10%)[5]	Reduced Generator Hours[6]			100 Percent Zero Carbon Electricity through EBCE[8]	No Natural Gas for 100% of Residential Units[9]		
	SP	MT CO_2e/year					MT CO_2e /year/SP	MT CO_2e/year			MT CO_2e /year/SP
2023	213	120	233	0	-5.2	108	0.51	-100	-12	-3.6	-0.017
2024	2,646	117	2,839	0	-64	2,657	1.00	-1,185	-150	1,322	0.50
2025	2,646	114	2,783	0	-64	2,605	0.98	-1,128	-155	1,321	0.50
2026	2,646	112	2,728	0	-64	2,552	0.96	-1072	-160	1,320	0.50
2027	6,364	109	5,542	0	-115	5,318	0.84	-2,416	-127	2,776	0.44
2028	**13,894**	**106**	**11,071**	**0**	**-217**	**10,747**	**0.77**	**-4,960**	**-77**	**5,710**	**0.41**
2029	13,894	104	10,787	0	-217	10,466	0.75	-4,668	-103	5,695	0.41
2030	13,894	101	10,503	0	-217	10,185	0.73	-4,376	-130	5,679	0.41
2031	13,894	98	10,223	0	-217	9,908	0.71	-4,088	-156	5,664	0.41
2032	13,894	96	9,942	0	-217	9,630	0.69	-3,799	-183	5,648	0.41
2033	13,894	93	9,662	0	-217	9,352	0.67	-3,511	-209	5,633	0.41
2034	13,894	90	9,382	0	-217	9,075	0.65	-3,222	-236	5,617	0.40
2035	13,894	87	9,102	0	-217	8,797	0.63	-2,934	-262	5,602	0.40
2036	13,894	85	8,821	0	-217	8,520	0.61	-2,645	-288	5,586	0.40
2037	13,894	82	8,541	0	-217	8,242	0.59	-2,357	-315	5,570	0.40
2038	13,894	79	8,261	0	-217	7,965	0.57	-2,068	-341	5,555	0.40
2039	13,894	77	7,981	0	-217	7,687	0.55	-1,780	-368	5,539	0.40
2040	13,894	74	7,700	0	-217	7,409	0.53	-1,492	-394	5,524	0.40
2041	13,894	71	7,420	0	-217	7,132	0.51	-1,203	-420	5,508	0.40
2042	13,894	69	7,140	0	-217	6,854	0.49	-915	-447	5,493	0.40
2043	13,894	66	6,860	0	-217	6,577	0.47	-626	-473	5,477	0.39
2044	13,894	63	6,579	0	-217	6,299	0.45	-338	-500	5,462	0.39
2045	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2046	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2047	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2048	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2049	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39

Table 57
Summary of Non-Mobile Non-Ballpark Net GHG Emissions by Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year[1]	Net Service Population[2]	A's Related Existing Conditions Emissions[3]	Unmitigated Project Operational Emissions[4]	Reductions from Project Features and Mitigation Measures		Non-Mobile Net Project Operational Emissions	Non-Mobile Net Project Operational Emissions Per Service Population	Additional Reductions[7]		Non-Mobile Net Project Operational Emissions with Additional Reductions	Non-Mobile Net Project Operational Emissions with Additional Reductions Per Service Population
				EV Charging Stations (10%)[5]	Reduced Generator Hours[6]			100 Percent Zero Carbon Electricity through EBCE[8]	No Natural Gas for 100% of Residential Units[9]		
	SP	MT CO_2e/year					MT CO_2e /year/SP	MT CO_2e/year			MT CO_2e /year/SP
2050	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2051	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2052	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2053	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2054	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2055	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2056	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39
2057	13,894	61	6,299	0	-217	6,022	0.43	-49	-526	5,446	0.39

Key:

- Phased Net Service Population
- Existing Conditions Emissions
- Project Operatoinal Emissions
- Reductions
- Non-Mobile Non-Ballpark Net Project Emissions Per Service Population

Table 57
Summary of Non-Mobile Non-Ballpark Net GHG Emissions by Year
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emissions shown in 2023 and 2027 in this analysis may be slightly different from emissions reported elsewhere in the AQTR for these years. While the majority of analyses assume full operation of Phase 1 conditions in 2023 and of Full Buildout conditions in 2027, this analysis uses the project schedule to phase in each land use.
2. The service population is provided in the Project Description for Phase 1 and Full Buildout operating conditions. These were phased in based on the Project schedule. The service population of the Arena and Sports Team Management was assumed to be constant between the Existing and the Project conditions.
3. The A's Related Existing Conditions emissions are from the Arena and Sports Team Management land uses; these do not include any emissions from mobile or ballpark-related sources.
4. Emissions decrease over time due to transportation and electricity (for both building energy use and water treatment and distribution) becoming cleaner. A linear interpolation is used to take into account decrease in electricity intensity factor due to Renewable Portfolio Standards. The decrease in vehicle emission factors over time is based on the g/mi emission factor from Alameda County fleet-average emission factors from 2020-2050. The estimate assumes no change after 2050, since EMFAC2017 does not project past 2050. Emissions assume all buildings become operational as soon as each Phase is constructed, based on percent of operational land uses by Phase and percent of operation per year.
5. As part of the Project design, the Project will provide EV chargers for at least 10% of its parking spaces. While the Project has committed to installing EV chargers onsite, which is beyond the City of Oakland's requirement that 10% of spaces be EV-ready, the reductions have conservatively not been included in the calculation above.
6. As a mitigation measure for on-site health impacts, all Project generators will be restricted to 20 hours of operation per year.
7. The Project has quantified a number of potential additional reductions, however only those required to meet the 0.6 MT CO_2e/yr/SP threshold are shown, as an example of how the threshold could
8. East Bay Community Energy (EBCE) provides 100% renewable energy. The reduction from using EBCE assumes 100% of emissions from on-site electricity is replaced by zero-carbon electricity, as shown in Table 46.
9. The Project could choose to make 100% of units all-electric. It is assumed that there are no natural gas emissions but that electricity usage increases to compensate for energy required for heating. However, with the addition of EBCE as a reduction strategy, there are no emissions associated with this increased electricity. The reduction in emissions from EBCE is captured in the EBCE column. Details and assumptions for this calculation are presented in Table 48.

Abbreviations:

CO_2e - carbon dioxide equivalents
EV - electric vehicle
GHG - greenhouse gas
MT - metric ton
SP - service population
yr - year

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Table 58
Summary of Net GHG Emissions by Year
Oakland Waterfront Ballpark District Project
Oakland, California

Year[1]	A's Related Existing Conditions Emissions[2]	30-Year Amortized Construction Emissions[3]	Unmitigated Project Operational Emissions[2]	Reductions from Project Features and Mitigation Measures[2]		Net Project Construction and Operational Emissions	Additional Reductions[2,6]			Sum of Additional Reductions	Net Project Construction and Operational Emissions with Additional Reductions
				EV Charging Stations (10%)[4]	Reduced Generator Hours[5]		100 Percent Zero Carbon Electricity through EBCE[7]	No Natural Gas for 100% of Residential Units[8]	Additional EV Charging Stations (> 10%)[9]		
	MT CO_2e/year										
2023	7,388	1,084	12,889	-3.6	-37	6,545	-1,345	-12	0	-1,357	5,188
2024	7,152	1,084	24,530	-0.19	-96	18,366	-2,373	-150	0	-2,523	15,843
2025	6,917	1,084	23,835	-0.21	-96	17,907	-2,261	-155	-13	-2,429	15,477
2026	6,705	1,084	23,206	-25	-96	17,465	-2,153	-160	-32	-2,345	15,120
2027	6,511	1,084	34,599	-217	-146	28,809	-3,475	-127	-164	-3,766	25,043
2028	**6,333**	**1,084**	**57,493**	**-423**	**-248**	**51,573**	**-5,991**	**-77**	**-247**	**-6,314**	**45,259**
2029	6,171	1,084	56,124	-649	-248	50,140	-5,670	-103	-335	-6,109	44,031
2030	6,024	1,084	54,900	-958	-248	48,755	-5,355	-130	-431	-5,916	42,839
2031	5,890	1,084	53,777	-1,253	-248	47,470	-5,041	-156	-555	-5,752	41,717
2032	5,768	1,084	52,755	-1,558	-248	46,265	-4,727	-183	-724	-5,634	40,630
2033	5,657	1,084	51,819	-1,752	-248	45,246	-4,407	-209	-1,003	-5,619	39,627
2034	5,556	1,084	50,959	-1,982	-248	44,256	-4,078	-236	-1,208	-5,521	38,735
2035	5,465	1,084	50,169	-2,193	-248	43,347	-3,742	-262	-1,419	-5,423	37,924
2036	5,381	1,084	49,443	-2,447	-248	42,451	-3,404	-288	-1,643	-5,335	37,116
2037	5,305	1,084	48,772	-2,694	-248	41,609	-3,056	-315	-1,818	-5,189	36,420
2038	5,235	1,084	48,155	-2,955	-248	40,801	-2,702	-341	-1,973	-5,016	35,784
2039	5,171	1,084	47,586	-3,228	-248	40,022	-2,341	-368	-2,084	-4,792	35,230
2040	5,112	1,084	47,057	-3,520	-248	39,261	-1,972	-394	-2,103	-4,469	34,792
2041	5,058	1,084	46,562	-3,814	-248	38,526	-1,599	-420	-2,118	-4,138	34,388
2042	5,007	1,084	46,103	-4,122	-248	37,810	-1,223	-447	-2,135	-3,805	34,006
2043	4,959	1,084	45,671	-4,419	-248	37,129	-842	-473	-2,153	-3,468	33,661
2044	4,913	1,084	45,258	-4,760	-248	36,421	-458	-500	-2,174	-3,131	33,290
2045	4,870	1,084	44,863	-5,096	-248	35,734	-69	-526	-2,194	-2,789	32,945
2046	4,862	1,084	44,808	-5,394	-248	35,388	-69	-526	-2,202	-2,797	32,590
2047	4,856	1,084	44,764	-5,714	-248	35,031	-70	-526	-2,210	-2,806	32,225
2048	4,850	1,084	44,730	-6,011	-248	34,705	-70	-526	-2,233	-2,829	31,875
2049	4,846	1,084	44,707	-6,310	-248	34,386	-71	-526	-2,261	-2,857	31,529
2050	4,842	1,084	44,721	-6,598	-248	34,116	-71	-526	-2,288	-2,885	31,230
2051	4,842	1,084	36,907	-6,598	-248	26,303	-71	-526	-2,288	-2,885	23,417
2052	4,842	1,084	44,721	-6,598	-248	34,116	-71	-526	-2,288	-2,885	31,230
2053	4,842	1,084	44,721	-6,598	-248	34,116	-71	-526	-2,288	-2,885	31,230
2054	4,842	1,084	44,721	-6,598	-248	34,116	-71	-526	-2,288	-2,885	31,230
2055	4,842	1,084	44,721	-6,598	-248	34,116	-71	-526	-2,288	-2,885	31,230
2056	4,842	1,084	44,721	-6,598	-248	34,116	-71	-526	-2,288	-2,885	31,230
2057	4,842	1,084	44,721	-6,598	-248	34,116	-71	-526	-2,288	-2885	31,230
Total Remaining Emissions to Offset for Zero Net GHGs											**1,125,315**

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Table 58
Summary of Net GHG Emissions by Year
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emissions shown in 2023 and 2027 in this analysis may be slightly different from emissions reported elsewhere in the AQTR for these years. While the majority of analyses assume a full year of operation of Phase 1 conditions in 2023 and of Full Buildout conditions in 2027, this analysis uses the Project schedule to phase in each land use. If full years of operations were assumed for these two years, the emissions in 2023 and 2027 would be 25,215 and 58,920 MT CO2e/yr, respectively.
2. Emissions decrease over time due to transportation and electricity (for both building energy use and water treatment and distribution) becoming cleaner. A linear interpolation is used to take into account decrease in electricity intensity factor due to Renewable Portfolio Standards. The decrease in vehicle emission factors over time is based on the g/mi emission factor from Alameda County fleet-average emission factors from 2020-2050. The estimate assumes no change after 2050, since EMFAC2017 does not project past 2050. Emissions assume all buildings become operational as soon as each Phase is constructed, based on percent of operational land uses by Phase and percent of operation per year.
3. Construction is anticipated to occur between 2020-2027. However, construction emissions were amortized over 30 years and conservatively added to operational sources starting when Project Phase 1 operation begins.
4. As part of the Project design, the Project will provide EV chargers for at least 10% of its parking spaces. Assumptions related to EV charging are presented in Table 38 and 39. Reductions from chargers were scaled each year based on project phasing, electricity intensity factors, EV fleet penetration, and mobile emission factors.
5. As a mitigation measure for on-site health impacts, all Project generators will be restricted to 20 hours of operation per year.
6. The Project has quantified a number of potential additional reductions, however only EV charging and those required to meet the 0.6 MT CO_2e/yr/SP threshold are shown, as an example of how the threshold could be met.
7. East Bay Community Energy (EBCE) provides 100% renewable energy. The reduction from using EBCE assumes 100% of emissions from on-site electricity is replaced by zero-carbon electricity, as shown in Table 46. Emissions associated with electricity used for EV charging are added into the EBCE reductions.
8. The Project could choose to make 100% of units all-electric. It is assumed that there are no natural gas emissions but that electricity usage increases to compensate for energy required for heating. However, with the addition of EBCE as a reduction strategy, there are no emissions associated with this increased electricity. Details and assumptions for this calculation are presented in Table 48.
9. The Project may install EV chargers for more than 10% of their parking spaces. In the Additional EV Charging Stations reduction, it is assumed that EV chargers will be installed in 15% of residential parking spaces, 10% of office parking spaces, 15% of retail parking spaces, 15% of restaurant parking spaces, 15% of hotel parking spaces, and 30% of ballpark parking spaces. The reduction quantified here represents only the increase in miles charged by project chargers as a result of this increase. Exact assumptions and details are presented in Tables 50 and 51. Additionally, reductions from chargers were scaled each year based on project phasing, electricity intensity factors, mobile emission factors, and EV fleet penetration.

Abbreviations:

CO_2e - carbon dioxide equivalents
EV - electric vehicle
GHG - greenhouse gas

Table 59
Summary of GHG Emissions by Land Use
Oakland Waterfront Ballpark District Project
Oakland, California

Source	GHG Emissions (MT CO_2e)			
	Ballpark Land Uses		Ancillary Land Uses	
	A's Games	Other Events	Non-Residential	Residential
Existing Conditions (2018)[1]				
Area Sources (Landscaping)[2]	0.22		--	--
Electricity[2]	872	254	--	--
Natural Gas	170	41	--	--
Water and Wastewater	83	21	--	--
Solid Waste	500	152	--	--
Mobile	6,954	1,858	--	--
Emergency Generators[2]	105		--	--
EV Charging	--	--	--	--
TRU Operation	0.37	0.050	--	--
Truck Idling[2]	94		--	--
Phase 1 Buildout Conditions (2023)[3]				
Area Sources (Landscaping)[2]	0.023		0.037	6.7
Electricity[2]	1,338		990	300
Natural Gas	199	58	809	251
Water and Wastewater	169	49	114	114
Solid Waste	743	218	243	125
Mobile	7,278	1,828	8,505	1,964
Emergency Generators[2,4]	21		27	16
EV Charging	0	0	-3.3	-0.17
TRU Operation	0.37	0.041	0	--
Truck Idling[2,4]	45		36	8
Full Project Buildout Conditions (2027)				
Area Sources (Landscaping)[2]	0.061		0.17	37
Electricity[2]	961		3,573	1,199
Natural Gas	199	58	2,218	1,396
Water and Wastewater	152	45	361	559
Solid Waste	743	218	956	694
Mobile	6,374	1,603	27,980	9,070
Emergency Generators[2,4]	21		62	83
EV Charging	0	-8.9	-150	-58
TRU Operation	0.20	0.021	0.24	--
Truck Idling[2,4]	19		68	20

Notes:

1. The values presented under the A's Games column represent the subset of Existing Conditions that is A's Related Existing Conditions (including non-ballpark employees), while the combined values under the A's Games and Other Events columns represent Existing Conditions.
2. Landscaping, electricity, emergency generator, and truck idling sources could not be divided between A's Games and Other Events straightforwardly, so they are shown as grouped ballpark emissions.
3. Phase 1 and Full Buildout conditions were provided by the Project sponsor and represent a reasonable and accelerated phasing schedule for the purposes of conservatively assessing impacts.
4. For emergency generators and truck idling delays, emissions were split between ancillary land uses using relative square footage.

Abbreviations:

CO_2e - carbon dioxide equivalent

EV - Electric vehicle

GHG - geenhouse gas

MT - metric ton

TRU - Transportation refrigeration unit

Table 60
Project Operational Traffic Volumes for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

Roadway Type	Link Location	Segment Limits		Segment Length (meters)	Volume[1,2] (vehicles/day)			Vehicle Miles Traveled (miles/day)		
					Ballpark Only	Phase 1 Operation	Full Buildout Operation	Ballpark Only	Phase 1 Operation	Full Buildout Operation
Freeway Cars[3]	I-580 Eastbound	I-980/SR 24	Oakland Avenue	1,425	169	398	1,073	150	353	950
	I-580 Eastbound	Oakland Avenue	Grand Avenue	1,086	119	279	751	80	188	507
	I-580 Eastbound	Grand Avenue	Lakeshore Avenue	194	155	361	969	19	44	117
	I-580 Westbound	MacArthur Blvd	High Street	696	205	388	928	89	168	401
	I-580 Westbound	High Street	35th Avenue	898	218	447	1,122	122	250	626
	I-580 Westbound	35th Avenue	Fruitvale Avenue	1,419	232	484	1,226	205	427	1,081
	I-580 Westbound	Fruitvale Avenue	Park Blvd	1,621	246	520	1,330	247	524	1,340
	I-580 Westbound	Park Blvd	Lakeshore Avenue	1,313	246	520	1,330	200	425	1,086
	I-580 Westbound	Lakeshore Avenue	Grand Avenue	197	246	520	1,330	30	64	163
	I-580 Westbound	Grand Avenue	Oakland Avenue	2,515	259	545	1,389	405	852	2,171
	I-580 Westbound	Oakland Avenue	I-980/SR 24	1,453	295	592	1,470	266	535	1,327
	I-980 Eastbound	I-880	12th Street	1,329	92	92	92	76	76	76
	I-980 Eastbound	12th Street	27th Street	968	652	1,568	4,269	393	944	2,568
	I-980 Eastbound	27th Street	I-580	981	652	1,568	4,269	398	956	2,601
	I-980 Westbound	I-580	27th Street	893	688	1,398	3,491	382	776	1,938
	I-980 Westbound	27th Street	12th Street	1,657	417	1,127	3,220	430	1,160	3,314
	I-980 Westbound	12th Street	I-880	1,242	252	252	252	195	195	195
	I-880 Northbound	42nd Avenue	29th Avenue	1,269	838	1,262	2,511	661	995	1,980
	I-880 Northbound	29th Avenue	23rd Avenue	858	838	1,262	2,511	447	673	1,338
	I-880 Northbound	23rd Avenue	Embarcadero	2,471	838	1,262	2,511	1,287	1,938	3,855
	I-880 Northbound	Embarcadero	Oak Street	547	838	1,262	2,511	285	429	853
	I-880 Northbound	Oak Street	Broadway	1,031	704	1,128	2,377	451	722	1,522
	I-880 Northbound	Broadway	I-980	311	415	713	1,590	80	138	307
	I-880 Northbound	I-980	Market Street	1,502	324	621	1,499	302	580	1,399
	I-880 Northbound	Market Street	Union Street	524	21	21	21	7	7	7
	I-880 Northbound	Union Street	7th Street	1,397	335	827	2,279	291	718	1,977
	I-880 Northbound	7th Street	I-80	2,029	335	839	2,324	422	1,057	2,930
	I-880 Southbound	I-80	7th Street	2,035	246	624	1,738	311	789	2,198
	I-880 Southbound	7th Street	Union Street	1,302	246	624	1,738	199	505	1,406
	I-880 Southbound	Union Street	Market Street	675	0	0	0	0	0	0
	I-880 Southbound	Market Street	I-980	1,385	0	218	859	0	187	739
	I-880 Southbound	I-980	Broadway	862	252	641	1,789	135	344	959
	I-880 Southbound	Broadway	Oak Street	404	687	1,237	2,857	173	311	717
	I-880 Southbound	Oak Street	Embarcadero	707	821	1,371	2,991	361	602	1,314
	I-880 Southbound	Embarcadero	23rd Avenue	2,450	821	1,371	2,991	1,250	2,086	4,552
	I-880 Southbound	23rd Avenue	42nd Avenue	872	821	1,371	2,991	445	742	1,620
	SR 24 Eastbound	I-580	MLK Jr. Way	871	311	815	2,300	168	441	1,244
	SR 24 Eastbound	MLK Jr. Way	Claremont Avenue	1,322	311	815	2,300	255	669	1,889
	SR 24 Eastbound	Claremont Avenue	Broadway	1,397	240	629	1,777	209	546	1,543
	SR 24 Eastbound	Broadway	SR 13	1,497	198	518	1,463	184	482	1,362
	SR 24 Eastbound	SR 13	Tunnel Lane	1,144	169	444	1,254	120	316	892
	SR 24 Eastbound	Tunnel Lane	Caldecott Tunnel	178	169	444	1,254	19	49	139
	SR 24 Westbound	Broadway	Telegraph Avenue	1,781	218	447	1,123	242	495	1,242
	SR 24 Westbound	Telegraph Avenue	I-580	1,897	328	648	1,593	386	764	1,878

Table 60
Project Operational Traffic Volumes for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

Roadway Type	Link Location	Segment Limits		Segment Length (meters)	Volume[1,2] (vehicles/day)			Vehicle Miles Traveled (miles/day)		
					Ballpark Only	Phase 1 Operation	Full Buildout Operation	Ballpark Only	Phase 1 Operation	Full Buildout Operation
Freeway Trucks[3]	I-580 Eastbound	I-980/SR 24	Oakland Avenue	1,425	18	42	114	16	37	101
	I-580 Eastbound	Oakland Avenue	Grand Avenue	1,086	13	30	80	8	20	54
	I-580 Eastbound	Grand Avenue	Lakeshore Avenue	194	16	38	103	2	5	12
	I-580 Westbound	MacArthur Blvd	High Street	696	22	41	99	9	18	43
	I-580 Westbound	High Street	35th Avenue	898	23	47	119	13	26	66
	I-580 Westbound	35th Avenue	Fruitvale Avenue	1,419	25	51	130	22	45	115
	I-580 Westbound	Fruitvale Avenue	Park Blvd	1,621	26	55	141	26	55	142
	I-580 Westbound	Park Blvd	Lakeshore Avenue	1,313	26	55	141	21	45	115
	I-580 Westbound	Lakeshore Avenue	Grand Avenue	197	26	55	141	3	7	17
	I-580 Westbound	Grand Avenue	Oakland Avenue	2,515	28	58	147	43	90	230
	I-580 Westbound	Oakland Avenue	I-980/SR 24	1,453	31	63	156	28	57	141
	I-980 Eastbound	I-880	12th Street	1,329	10	10	10	8	8	8
	I-980 Eastbound	12th Street	27th Street	968	69	166	453	42	100	273
	I-980 Eastbound	27th Street	I-580	981	69	166	453	42	101	276
	I-980 Westbound	I-580	27th Street	893	73	148	371	41	82	206
	I-980 Westbound	27th Street	12th Street	1,657	44	119	342	46	123	352
	I-980 Westbound	12th Street	I-880	1,242	27	27	27	21	21	21
	I-880 Northbound	42nd Avenue	29th Avenue	1,269	89	134	267	70	105	210
	I-880 Northbound	29th Avenue	23rd Avenue	858	89	134	267	47	71	142
	I-880 Northbound	23rd Avenue	Embarcadero	2,471	89	134	267	137	205	409
	I-880 Northbound	Embarcadero	Oak Street	547	89	134	267	30	45	91
	I-880 Northbound	Oak Street	Broadway	1,031	75	119	252	48	77	162
	I-880 Northbound	Broadway	I-980	311	44	75	169	9	15	33
	I-880 Northbound	I-980	Market Street	1,502	34	66	159	32	61	149
	I-880 Northbound	Market Street	Union Street	524	2	2	2	1	1	1
	I-880 Northbound	Union Street	7th Street	1,397	36	88	242	31	76	210
	I-880 Northbound	7th Street	I-80	2,029	36	89	247	45	112	311
	I-880 Southbound	I-80	7th Street	2,035	26	66	184	33	84	233
	I-880 Southbound	7th Street	Union Street	1,302	26	66	184	21	53	149
	I-880 Southbound	Union Street	Market Street	675	0	0	0	0	0	0
	I-880 Southbound	Market Street	I-980	1,385	0	23	91	0	20	78
	I-880 Southbound	I-980	Broadway	862	27	68	190	14	36	102
	I-880 Southbound	Broadway	Oak Street	404	73	131	303	18	33	76
	I-880 Southbound	Oak Street	Embarcadero	707	87	145	317	38	64	139
	I-880 Southbound	Embarcadero	23rd Avenue	2,450	87	145	317	133	221	483
	I-880 Southbound	23rd Avenue	42nd Avenue	872	87	145	317	47	79	172
	SR 24 Eastbound	I-580	MLK Jr. Way	871	33	86	244	18	47	132
	SR 24 Eastbound	MLK Jr. Way	Claremont Avenue	1,322	33	86	244	27	71	201
	SR 24 Eastbound	Claremont Avenue	Broadway	1,397	26	67	189	22	58	164
	SR 24 Eastbound	Broadway	SR 13	1,497	21	55	155	20	51	145
	SR 24 Eastbound	SR 13	Tunnel Lane	1,144	18	47	133	13	33	95
	SR 24 Eastbound	Tunnel Lane	Caldecott Tunnel	178	18	47	133	2	5	15
	SR 24 Westbound	Broadway	Telegraph Avenue	1,781	23	47	119	26	52	132
	SR 24 Westbound	Telegraph Avenue	I-580	1,897	35	69	169	41	81	199

Table 60
Project Operational Traffic Volumes for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

Roadway Type	Link Location	Segment Limits		Segment Length (meters)	Volume[1,2] (vehicles/day)			Vehicle Miles Traveled (miles/day)		
					Ballpark Only	Phase 1 Operation	Full Buildout Operation	Ballpark Only	Phase 1 Operation	Full Buildout Operation
Surface Streets	Brush Street	3rd Street	5th Street	167	0	248	980	0	26	101
	Brush Street	5th Street	6th Street	86	276	572	1,446	15	30	77
	Brush Street	6th Street	7th Street	93	230	554	1,510	13	32	87
	Brush Street	7th Street	11th Street	341	289	1,180	3,809	61	250	806
	Brush Street	11th Street	12th Street	95	543	1,462	4,173	32	86	246
	Brush Street	12th Street	14th Street	161	198	530	1,508	20	53	151
	Brush Street	14th Street	17th Street	254	247	561	1,487	39	89	235
	Brush Street	17th Street	19th Street	161	241	556	1,481	24	55	148
	Castro Street	3rd Street	5th Street	167	0	200	790	0	21	82
	Castro Street	5th Street	6th Street	86	192	414	1,072	10	22	57
	Castro Street	6th Street	7th Street	100	304	527	1,184	19	33	74
	Castro Street	7th Street	8th Street	77	423	742	1,683	20	35	80
	Castro Street	8th Street	11th Street	257	505	796	1,655	81	127	265
	Castro Street	11th Street	12th Street	84	586	1,014	2,276	31	53	119
	Castro Street	12th Street	14th Street	173	250	324	540	27	35	58
	Castro Street	14th Street	17th Street	253	168	378	998	26	59	157
	MLK	Embarcadero	3rd Street	188	768	1,989	5,588	90	232	652
	MLK	3rd Street	5th Street	170	772	2,071	5,902	81	218	623
	MLK	5th Street	6th Street	83	823	1,765	4,543	42	91	233
	MLK	6th Street	7th Street	87	892	1,720	4,162	48	93	224
	MLK	7th Street	8th Street	86	832	1,635	4,002	44	87	213
	MLK	8th Street	11th Street	255	852	1,571	3,692	135	249	585
	MLK	11th Street	12th Street	85	829	1,378	2,999	44	73	159
	MLK	12th Street	14th Street	183	536	953	2,186	61	108	248
	MLK	14th Street	17th Street	234	155	474	1,415	23	69	206
	MLK	17th Street	19th Street	172	150	393	1,110	16	42	119
	3rd Street	Brush Street	Castro Street	115	0	205	810	0	15	58
	3rd Street	Castro Street	MLK	116	0	170	670	0	12	48
	5th Street	Brush Street	Castro Street	116	660	1,139	2,550	48	82	183
	5th Street	Castro Street	MLK	109	469	897	2,159	32	61	147
	5th Street	MLK	Jefferson Street	116	591	1,014	2,261	43	73	163
	5th Street	Jefferson Street	Clay Street	114	635	1,066	2,335	45	75	165
	5th Street	Clay Street	Washington Street	118	635	1,066	2,335	46	78	171
	5th Street	Washington Street	Broadway	118	660	1,088	2,350	49	80	173
	5th Street	Broadway	Franklin Street	123	562	1,068	2,562	43	81	195
	7th Street	Brush Street	Castro Street	141	892	1,251	2,312	78	109	202
	8th Street	MLK	Jefferson Street	123	522	719	1,302	40	55	100
	8th Street	Jefferson Street	Clay Street	118	513	768	1,523	38	56	112
	8th Street	Clay Street	Washington Street	117	513	768	1,523	37	56	111
	8th Street	Washington Street	Broadway	115	518	705	1,258	37	51	90
	8th Street	Broadway	Franklin Street	118	346	551	1,156	25	40	85
	8th Street	Franklin Street	Webster Street	116	383	581	1,163	28	42	84
	8th Street	Webster Street	Harrison	115	335	563	1,235	24	40	88
	11th Street	Brush Street	Castro Street	147	316	549	1,236	29	50	113
	12th Street	Castro Street	MLK	116	215	474	1,235	16	34	89

Table 60
Project Operational Traffic Volumes for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

Roadway Type	Link Location	Segment Limits		Segment Length (meters)	Volume[1,2] (vehicles/day)			Vehicle Miles Traveled (miles/day)		
					Ballpark Only	Phase 1 Operation	Full Buildout Operation	Ballpark Only	Phase 1 Operation	Full Buildout Operation
Surface Streets	14th Street	MLK	Jefferson Street	111	588	783	1,358	40	54	93
	14th Street	Jefferson Street	Clay Street	117	588	793	1,398	43	57	101
	14th Street	Clay Street	Broadway	235	588	588	588	86	86	86
	14th Street	Broadway	Franklin Street	122	588	790	1,388	45	60	105
	14th Street	Franklin Street	Webster Street	116	588	790	1,388	42	57	100
	14th Street	Webster Street	Harrison	116	588	775	1,328	42	56	96
	14th Street	Harrison	Alice Street	116	588	780	1,348	42	56	97
	14th Street	Alice Street	Jackson Street	115	588	588	588	42	42	42
	14th Street	Jackson Street	Madison Street	118	588	785	1,368	43	58	101
	14th Street	Madison Street	Oak Street	117	588	783	1,358	43	57	99
	7th Street	Market Street	Brush Street	148	852	1,961	5,232	79	181	482
	Market Street	Embarcadero	3rd Street	191	1,681	6,100	19,131	200	725	2,275
	Market Street	3rd Street	7th Street	332	1,679	5,838	18,099	347	1,206	3,739
	Adeline Street	3rd Street	7th Street	326	0	347	1,370	0	70	277
	5th Street	Union Street	Adeline Street	222	395	1,436	4,505	54	198	621
	5th Street	Adeline Street	Market Street	488	320	1,348	4,380	97	409	1,328
	5th Street	Market Street	Brush Street	119	385	800	2,025	28	59	149
	Market Street	7th Street	12th Street	450	709	1,902	5,419	198	532	1,515
	Market Street	12th Street	18th Street	519	262	1,085	3,512	85	350	1,133
	Market Street	18th Street	Grand Avenue	390	122	707	2,432	30	171	589
	Market Street	Grand Avenue	San Pablo Avenue	688	109	574	1,949	46	245	833
	3rd Street	MLK	Jefferson Street	120	3	264	1,033	0	20	77
	6th Street	MLK	Jefferson Street	120	488	648	1,118	36	48	83
	6th Street	Jefferson Street	Washington Street	231	476	633	1,096	68	91	157
	6th Street	Washington Street	Broadway	122	377	536	1,007	29	41	76
	7th Street	Castro Street	MLK	92	292	447	902	17	26	52
	7th Street	MLK	Jefferson Street	120	396	568	1,076	29	42	80
	11th Street	Castro Street	MLK	116	265	343	575	19	25	41
	11th Street	MLK	Jefferson Street	118	284	489	1,094	21	36	80
	11th Street	Jefferson Street	Clay Street	115	284	284	284	20	20	20
	11th Street	Clay Street	Broadway	237	284	484	1,074	42	71	158
	11th Street	Broadway	Franklin Street	122	284	487	1,084	21	37	82
	11th Street	Franklin Street	Webster Street	116	284	482	1,064	20	35	77
	11th Street	Webster Street	Harrison	116	284	479	1,054	20	34	76
	11th Street	Harrison	Alice Street	117	284	487	1,084	21	35	79
	11th Street	Alice Street	Jackson Street	117	284	284	284	21	21	21
	11th Street	Jackson Street	Madison Street	115	284	479	1,054	20	34	75
	11th Street	Madison Street	Oak Street	116	284	482	1,064	20	35	77
	12th Street	Brush Street	Castro Street	116	77	120	247	6	9	18
	14th Street	Brush Street	Castro Street	147	116	344	1,016	11	31	93
	14th Street	Castro Street	MLK	114	198	267	468	14	19	33
	Posey Tube NB	Willie Stargell Avenue	6th Street	1,081	167	384	1,027	112	258	689
	3rd Street	Market Street	Brush Street	82	0	281	1,110	0	14	56
	7th Street	Union Street	Adeline Street	199	272	460	1,012	34	57	125
	7th Street	Adeline Street	Market Street	482	386	543	1,006	115	162	301
	Gerry Adams Way	7th Street	8th Street	110	185	391	1,000	13	27	68

Table 60
Project Operational Traffic Volumes for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Annual average daily traffic volumes for ancillary development and for a single weekday evening ball game were provided by the Transportation Engineer (Fehr and Peers). To estimate annual traffic volumes from A's games, the game day traffic volume was annualized (by multiplying by 82 games per year and dividing by 365 days per year). For ballpark non-A's events -- including concerts, corporate/community events, plaza events and other events -- the ballpark traffic volumes for a single weekday evening ball game were scaled by the ratio between event trip generation and ball game trip generation. The number of other events assumed for a calendar year is shown in Table 2.

2. Traffic volumes were phased for the Project HRA assuming only Ballpark operation in 2023, Phase 1 operation from 2024 through 2026, and Full Buildout operation beginning in 2027. Ballpark only volumes were provided per game or event by Fehr and Peers and annualized by 365 days per year. Phase 1 operation of ancillary land uses was estimated using the ratio of ancillary trip generation in Phase 1 to Full Buildout. Ballpark trip volumes were then added to the Phase 1 ancillary trip volumes to estimate the Phase 1 operation trip volumes.

3. Freeway trucks and cars were modeled separately. Trips shown here were apportioned by the West Oakland-specific freeway fleet mix, estimated by Ramboll using traffic data from Fehr and Peers. Approximately 90% of freeway traffic are estimated to be cars and approximately 10% are estimated to be trucks.

Abbreviations:

HRA - health risk assessment

References:

Fehr & Peers. 2020. Memorandum, Subject: Howard Terminal – Air, Noise, and Greenhouse Gas Forecast Inputs. January 27. See Appendix B.

Table 61
Project Operational On-Road Emission Factors for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

Calendar Year[2]	Mobile Emissions Factors[1] (g/mi)											
	All[3]				Light and Medium Duty Vehicles[3]				Heavy-Duty Vehicles[3]			
	TOG Evaporative	TOG Exhaust[4]	$PM_{2.5}$[4]	DPM[4]	TOG Evaporative	TOG Exhaust[4]	$PM_{2.5}$[4]	DPM[4]	TOG Evaporative	TOG Exhaust[4]	$PM_{2.5}$[4]	DPM[4]
2020	0.065	0.056	0.042	0.0040	0.050	0.039	0.037	1.04E-04	0.067	0.006	0.12	0.063
2021	0.063	0.051	0.042	0.0033	0.048	0.035	0.037	9.34E-05	0.063	0.0052	0.11	0.054
2022	0.060	0.046	0.040	0.0020	0.046	0.032	0.037	8.37E-05	0.059	0.0044	0.089	0.030
2023	0.058	0.042	0.039	0.0010	0.045	0.030	0.037	7.40E-05	0.056	0.0036	0.075	0.015
2024	0.056	0.039	0.039	0.0010	0.043	0.028	0.037	6.33E-05	0.053	0.0031	0.075	0.015
2025	0.055	0.037	0.039	0.0010	0.042	0.026	0.037	5.57E-05	0.051	0.0026	0.075	0.015
2026	0.053	0.035	0.039	0.0009	0.041	0.025	0.036	4.87E-05	0.049	0.0022	0.075	0.015
2027	0.051	0.033	0.039	0.0009	0.040	0.024	0.036	4.00E-05	0.047	0.0019	0.075	0.015
2028	0.050	0.031	0.039	0.0009	0.039	0.023	0.036	3.33E-05	0.046	0.0016	0.075	0.015
2029	0.048	0.030	0.039	0.0008	0.038	0.022	0.036	2.9E-05	0.045	0.0014	0.075	0.015
2030	0.047	0.029	0.039	0.0008	0.036	0.021	0.036	2.6E-05	0.045	0.0012	0.075	0.015
2031	0.045	0.028	0.039	0.0008	0.035	0.021	0.036	2.4E-05	0.041	0.0010	0.075	0.014
2032	0.043	0.027	0.039	0.0008	0.034	0.020	0.036	2.2E-05	0.038	0.0009	0.075	0.014
2033	0.042	0.026	0.039	0.0008	0.033	0.020	0.036	2.0E-05	0.034	0.0008	0.075	0.014
2034	0.040	0.026	0.038	0.0008	0.032	0.020	0.036	1.9E-05	0.029	0.0008	0.075	0.014
2035	0.039	0.025	0.038	0.0007	0.031	0.019	0.036	1.8E-05	0.024	0.0007	0.074	0.014
2036	0.038	0.025	0.038	0.0007	0.030	0.019	0.036	1.7E-05	0.023	0.0007	0.074	0.014
2037	0.037	0.025	0.038	0.0007	0.030	0.019	0.036	1.6E-05	0.022	0.0007	0.074	0.014
2038	0.036	0.024	0.038	0.0007	0.029	0.019	0.036	1.6E-05	0.021	0.0006	0.074	0.014
2039	0.036	0.024	0.038	0.0007	0.028	0.018	0.036	1.5E-05	0.020	0.0006	0.074	0.014
2040	0.035	0.024	0.038	0.0007	0.028	0.018	0.036	1.5E-05	0.019	0.0006	0.074	0.014
2041	0.035	0.023	0.038	0.0007	0.027	0.018	0.036	1.5E-05	0.018	0.0006	0.074	0.014
2042	0.034	0.023	0.038	0.0007	0.027	0.018	0.036	1.4E-05	0.018	0.0006	0.074	0.014
2043	0.034	0.023	0.038	0.0007	0.027	0.018	0.036	1.4E-05	0.018	0.0006	0.074	0.014
2044	0.034	0.023	0.038	0.0007	0.027	0.018	0.036	1.4E-05	0.018	0.0005	0.074	0.014
2045	0.034	0.023	0.038	0.0007	0.026	0.018	0.036	1.4E-05	0.017	0.0005	0.074	0.014
2046	0.033	0.023	0.038	0.0007	0.026	0.018	0.036	1.4E-05	0.017	0.0005	0.074	0.014
2047	0.033	0.023	0.038	0.0007	0.026	0.018	0.036	1.4E-05	0.017	0.0005	0.074	0.014
2048	0.033	0.023	0.038	0.0007	0.026	0.018	0.036	1.3E-05	0.017	0.0005	0.074	0.014
2049	0.033	0.023	0.038	0.0007	0.026	0.018	0.036	1.3E-05	0.017	0.0004	0.074	0.014
2050	0.033	0.023	0.038	0.0007	0.026	0.018	0.036	1.3E-05	0.017	0.0004	0.074	0.014

Table 61
Project Operational On-Road Emission Factors for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emission factors were calculated using EMFAC2017, consistent with CalEEMod® methods for the fleet over time. Emission factors used in the HRA include running exhaust (TOG Exhaust, PM_{10}, $PM_{2.5}$), running losses (TOG Evaporative), brakewear/tirewear ($PM_{2.5}$), and entrained dust ($PM_{2.5}$). DPM emissions are assumed to be equivalent to PM_{10} from diesel vehicles.

2. As EMFAC2017 does not extend past 2050, emissions estimates use 2050 factors for subsequent years.

3. For the purposes of the fleet determination, it was assumed that the Light and Medium-Duty Vehicles include the following vehicle types: LDA, LDT1, LDT2, MCY, and MDV. The Heavy-Duty Vehicles include: LHDT1, LHDT2, MHDT, HHDT, MH, OBUS, SBUS, and UBUS.

4. As running exhaust emissions are speed-dependent, running emission factors were calculated for three average speeds: 25 miles per hour was used for all surface street traffic volumes, 55 miles per hour were used for all highway heavy-duty vehicles, and 65 miles per hour were used for all highway light-duty vehicles. The speeds were assumed based on typical speed limits for West Oakland. All other emission factors are not speed-dependent and are included in the summed emission factors shown above.

Abbreviations:

ARB - Air Resources Board
DPM - diesel particulate matter
g - grams
HHDT - heavy-heavy duty trucks
HRA - health risk assessment
LDA - light duty auto
LDT - light-duty trucks
LHDT - light-heavy duty trucks
MCY - motorcycle
MDV - medium duty trucks
MH - motor homes
MHDT - medium-heavy duty trucks
OBUS - other buses
$PM_{2.5}$ - particulate matter < 2.5 µm
SBUS - school buses
TOG - total organic gases
UBUS - urban buses

References:

ARB. 2017. Emission FACtors Model, 2017 (EMFAC2017). Available online at: https://www.arb.ca.gov/emfac/
CalEEMod Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 62
Modeling Parameters for Construction and Operational Sources
Oakland Waterfront Ballpark District Project
Oakland, California

Period	Source	Source Type	Number of Sources[1]	Release Height[2]	Exit Temperature[3]	Exit Velocity[3]	Exit Diameter[3]	Initial Vertical Dimension[4]	Initial Lateral Dimension[5]
				[m]	K	[m/s]	[m]	[m]	[m]
Construction	Construction Equipment	Area[6]	Multiple	5.0	--	--	--	1.2	--
	On-Road Trucks	Volume	Variable	2.6	--	--	--	2.4	4.2
Operational	On-Road Light Duty Vehicles	Volume	Variable	1.7	--	--	--	1.6	Variable
	On-Road Heavy-Duty Vehicles	Volume	Variable	2.6	--	--	--	2.4	Variable
	Generators[7]	Point	Multiple	3.66	739.8	45	0.18	--	--
	TRU[8]	Volume	One	5.0	--	--	--	1.2	4.7
	Existing Port Truck Activity[9]	Area	One	2.6	--	--	--	2.4	--

Notes:

1. The number of modeled construction equipment sources is based on the number of distinct construction work areas. The number of on-road vehicle sources is based on the geometry of the truck or traffic routes. Each Project generator is modeled as a separate point source.
2. BAAQMD does not have guidance on construction modeling, therefore construction equipment parameters used are based on BAAQMD's San Francisco Community Risk Reduction Plan-Health Risk Assessment (CRRP-HRA). According to the CRRP-HRA methodology, release height of a modeled area source representing construction equipment was set to 5 meters. On-road truck and light-duty release height is based on USEPA haul road guidance, assuming vehicle heights of 2 meters for light-duty vehicles and 3 meters for heavy-duty vehicles. Modeled generator release heights assume the default release height used by BAAQMD in the CRRP-HRA (BAAQMD 2012, STI 2011) plus the height of the generator location. The ballpark generator is assumed to be at grade and each ancillary building generator is assumed to be located either at ground level (unmitigated case) or on the roof of the building (mitigated case).
3. Dashed cells indicate that those parameters are not applicable.
4. According to USEPA's AERMOD guidance, initial vertical dimension of the modeled construction equipment area sources is the release height divided by 4.3. Vehicle initial vertical dimension is based on USEPA's haul road guidance, assuming vehicle heights of 2 meters for light-duty vehicles and 3 meters for heavy-duty vehicles.
5. Initial lateral dimension for on-road vehicles is based on USEPA's haul road guidance. Construction hauling routes are assumed to consist of a single lane; thus, the initial lateral dimension is based on vehicle width of 3 meters. Operational roadways are assumed to be two or more lane roadways; thus, the initial lateral dimension is based on the road width, estimated from the number of road lanes and a standard lane width of 3.7 meters.
6. Construction off-road equipment is modeled as an area source covering the relevant construction work areas, consistent with the BAAQMD's methodology for the San Francisco CRRP-HRA (BAAQMD 2012).
7. Project generators are modeled with default stack parameters presented in a technical memorandum to the BAAQMD (STI 2011). These are consistent with those used in the West Oakland Community Action Plan EIR.
8. Operational TRUs are modeled as a single volume source at the ballpark loading dock. A release height of 5 meters was chosen to be consistent with BAAQMD truck release heights. Based on USEPA's AERMOD guidance, initial lateral and vertical dimensions were determined by dividing the side length by 4.3.
9. Existing Port Truck Activity at Howard Terminal was modeled as an area source with release height and initial vertical dimension the same as on-road truck sources.

Table 62
Modeling Parameters for Construction and Operational Sources
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

AERMOD - Atmospheric Dispersion MODeling
ARB - California Air Resources Board
BAAQMD - Bay Area Air Quality Management District
CEQA - California Environmental Quality Act
CRRP - Community Risk Reduction Plan
HRA - health risk assessment
K - kelvin
m - meter
s - second
USEPA - United States Environmental Protection Agency

References:

Bay Area Air Quality Management District (BAAQMD). 2012. The San Francisco Community Risk Reduction Plan: Technical Support Documentation. December. Available at: http://www.gsweventcenter.com/Draft_SEIR_References%5C2012_12_BAAQMD_SF_CRRP_Methods_and_Findings_v9.pdf

BAAQMD. 2017. California Environmental Quality Act: Air Quality Guidelines. May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed November 2018.

Sonoma Technology, Inc (STI). 2011. Default modeling parameters for stationary sources. Technical Memorandum from John Stilley and Stephen Reid to Phil Martien and Virginia Lau, Bay Area Air Quality Management District. April 1.

United States Environmental Protection Agency (USEPA). 2012. Haul Road Workgroup Final Report Submission to EPA-OAQPS. U.S. EPA Office of Air Quality and Planning Standards, Research Triangle Park, North Carolina. Available at: https://www3.epa.gov/scram001/reports/Haul_Road_Workgroup-Final_Report_Package-20120302.pdf

USEPA. 2012. Haul Road Workgroup Final Report Submission to EPA-OAQPS. U.S. EPA Office of Air Quality and Planning Standards, Research Triangle Park, North Carolina. Available at: https://www3.epa.gov/scram001/reports/Haul_Road_Workgroup-Final_Report_Package-20120302.pdf

USEPA. 2019. User's Guide for the AMS/EPA Regulatory Model (AERMOD). U.S. EPA Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. Available at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf

Table 63
Exposure Parameters for Construction Sources
Oakland Waterfront Ballpark District Project
Oakland, California

Receptor Type	Scenario[1]	Construction Area	Construction Activity	Receptor Age Group	Exposure Parameters[2]					
					Daily Breathing Rate (DBR)	Exposure Duration (ED)	Fraction of Time at Home (FAH)	Exposure Frequency (EF)	Averaging Time (AT)	Intake Factor, Inhalation (IF_{inh})
					L/kg-day	years	unitless	days/year	days	m^3/kg-day
Off-Site Resident	Scenario 1	Phase 1	Demolition	3rd Trimester	361	0.19	1	350	25,550	9.3E-04
		Phase 2	Demolition	3rd Trimester	361	0.059	1	350	25,550	2.9E-04
		Phase 2	Demolition	Age 0-<2 Years	1,090	0.13	1	350	25,550	0.0019
		DDC	Geotechnical Work	3rd Trimester	361	0.059	1	350	25,550	2.9E-04
		DDC	Geotechnical Work	Age 0-<2 Years	1,090	0.37	1	350	25,550	0.0055
		DPC	Geotechnical Work	3rd Trimester	361	0.059	1	350	25,550	2.9E-04
		DPC	Geotechnical Work	Age 0-<2 Years	1,090	0.37	1	350	25,550	0.0055
		Phase 1	Cut Off Wall	Age 0-<2 Years	1,090	0.17	1	350	25,550	0.0025
		Phase 1	Grading and Site Prep	Age 0-<2 Years	1,090	0.72	1	350	25,550	0.011
		Phase 1	Site Utilities	Age 0-<2 Years	1,090	0.43	1	350	25,550	0.0064
		Phase 1	Ballpark Building Construction	Age 0-<2 Years	1,090	1.6	1	350	25,550	0.024
		Phase 1	Ballpark Building Construction	Age 2-<9 Years	631	0.38	1	350	25,550	0.0033
		Phase 1	Mixed Use Building Construction	Age 0-<2 Years	1,090	1.0	1	350	25,550	0.015
		Phase 1	Mixed Use Building Construction	Age 2-<9 Years	631	1.0	1	350	25,550	0.0086
		Phase 1	Paving	Age 0-<2 Years	1,090	0.25	1	350	25,550	0.0037
		Phase 1	Architectural Coating	Age 0-<2 Years	1,090	0.80	1	350	25,550	0.012
		Phase 1	Architectural Coating	Age 2-<9 Years	631	1.0	1	350	25,550	0.0086
		Phase 2	Grading and Site Prep	Age 2-<9 Years	631	0.71	1	350	25,550	0.0061
		Phase 2	Site Utilities	Age 2-<9 Years	631	0.46	1	350	25,550	0.0040
		Phase 2	Mixed Use Building Construction	Age 2-<9 Years	631	3.0	1	350	25,550	0.026
		Phase 2	Paving	Age 2-<9 Years	631	0.50	1	350	25,550	0.0043
		Phase 2	Architectural Coating	Age 2-<9 Years	631	2.2	1	350	25,550	0.019
On-Site or Offsite Resident	Scenario 2	Phase 2	Grading and Site Prep	3rd Trimester	361	0.24	1	350	25,550	0.0012
		Phase 2	Grading and Site Prep	Age 0-<2 Years	1,090	0.47	1	350	25,550	0.0069
		Phase 2	Site Utilities	Age 0-<2 Years	1,090	0.46	1	350	25,550	0.0068
		Phase 2	Mixed Use Building Construction	Age 0-<2 Years	1,090	1.5	1	350	25,550	0.023
		Phase 2	Mixed Use Building Construction	Age 2-<9 Years	631	1.5	1	350	25,550	0.013
		Phase 2	Paving	Age 0-<2 Years	1,090	0.50	1	350	25,550	0.0075
		Phase 2	Architectural Coating	Age 0-<2 Years	1,090	0.70	1	350	25,550	0.010
		Phase 2	Architectural Coating	Age 2-<9 Years	631	1.5	1	350	25,550	0.013

Table 63
Exposure Parameters for Construction Sources
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Two scenarios were evaluated for exposure to Project construction. Scenario 1 starts with Phase 1 construction on 9/1/2020 and Scenario 2 starts with Phase 1 operations on 12/4/2023. The exposure durations for residents during construction reflect the proposed construction schedules under these two exposure starting dates.
2. The total exposure duration, and exposure frequency for residents reflect default exposure assumptions for residents from OEHHA (2015) and BAAQMD (2016). The daily breathing rates for residents reflect recommended daily breathing rates for residents from BAAQMD (2016) as follows: 95th percentile 24-hour daily breathing rate for 3rd trimester and age 0-<2 years; 80th percentile for age 2-<9. Fraction of time spent at home is conservatively assumed to be 1 (i.e., 24 hours/day) for age groups from the third trimester to less than sixteen years old.

Intake Factor Calculation:

IF_{inh} = DBR * FAH * EF * ED * CF / AT

CF = 0.001 (m^3/L)

Abbreviations:

AT - averaging time
BAAQMD - Bay Area Air Quality Management District
DBR - daily breathing rate
ED - exposure duration
EF - exposure frequency
FAH - fraction of time at home
IF_{inh} - intake factor
kg - kilogram
L - liter
m^3 - cubic meter
OEHHA - Office of Environmental Health Hazard Assessment

References:

BAAQMD. 2016. Air Toxics NSR ProgramHealth Risk Assessment (HRA) Guidelines. January.
OEHHA. 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February.

Table 64
Exposure Parameters for Operational Sources
Oakland Waterfront Ballpark District Project
Oakland, California

Scenario[1]	Time Period	Receptor Age Group	Exposure Parameters[2]					
			Daily Breathing Rate (DBR)	Exposure Duration (ED)	Fraction of Time at Home (FAH)	Exposure Frequency (EF)	Averaging Time (AT)	Intake Factor, Inhalation (IF_{inh})
			[L/kg-day]	[years]	[unitless]	[days/year]	[days]	[m^3/kg-day]
0	Existing Howard Terminal	3rd Trimester	361	0.25	1	350	25,550	0.0012
		Age 0-< 2 Years	1,090	2	1	350	25,550	0.030
		Age 2-<16 Years	572	14	1	350	25,550	0.11
		Age 16-< 30 Years	261	14	0.73	350	25,550	0.037
1	Construction	3rd Trimester	361	0.25	1	350	25,550	0.0012
		Age 0-< 2 Years	1,090	2	1	350	25,550	0.030
		Age 2-<16 Years	572	1	1	350	25,550	0.0078
	Phase 1 Operations & Remaining Construction	Age 2-<16 Years	572	3.75	1	350	25,550	0.029
	Full Buildout Operations	Age 2-<16 Years	572	9.25	1	350	25,550	0.072
		Age 16-< 30 Years	261	14	0.73	350	25,550	0.037
2	Phase 1 Operations & Remaining Construction	3rd Trimester	361	0.25	1	350	25,550	0.0012
		Age 0-< 2 Years	1,090	2	1	350	25,550	0.030
		Age 2-<16 Years	572	1.5	1	350	25,550	0.012
	Full Buildout Operations	Age 2-<16 Years	572	12.5	1	350	25,550	0.10
		Age 16-< 30 Years	261	14	0.73	350	25,550	0.037
3	Full Buildout Operations	3rd Trimester	361	0.25	1	350	25,550	0.0012
		Age 0-< 2 Years	1,090	2	1	350	25,550	0.030
		Age 2-<16 Years	572	14	1	350	25,550	0.11
		Age 16-< 30 Years	261	14	0.73	350	25,550	0.037

Notes:

1. One scenario was evaluated for the Existing Howard Terminal Operations with a total exposure duration of 30.25 years. Three scenarios were evaluated for exposure to Project operations. Scenario 1 starts with Phase 1 construction on 9/1/2020, Scenario 2 starts with Phase 1 operations on 12/4/2023, and Scenario 3 starts with Full Buildout on 9/2/2027.

2. The total exposure duration, and exposure frequency for residents reflect default exposure assumptions for residents from OEHHA (2015) and BAAQMD (2016). The daily breathing rates for residents reflect recommended daily breathing rates for residents from BAAQMD (2016) as follows: 95th percentile 24-hour daily breathing rate for 3rd trimester and age 0-<2 years; 80th percentile for age 2-<9, 2-<16, and 16-30 years. Fraction of time spent at home is conservatively assumed to be 1 (i.e. 24 hours/day) for age groups from the third trimester to less than 16 years old. Based on the OEHHA 2015 Guidance, the age group 16 to 30 years old is estimated to be at school or work for 6.5 hours of the day. Therefore, the fraction of time spent at home is assumed to be 0.73 (17.5 hours/24 hours per day) for this age group.

Intake Factor Calculation:

IF_{inh} = DBR * FAH * EF * ED * CF / AT

CF = 0.001 (m^3/L)

Abbreviations:

AT - averaging time

BAAQMD - Bay Area Air Quality Management District

DBR - daily breathing rate

ED - exposure duration

EF - exposure frequency

FAH - fraction of time at home

IF_{inh} - intake factor

kg - kilogram

L - liter

m3 - cubic meter

OEHHA - Office of Environmental Health Hazard Assessment

References:

BAAQMD. 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. January.

OEHHA. 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February.

Table 65
Age Sensitivity Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Receptor Age Group [1]	Age Sensitivity Factor [2]
3rd Trimester	10
Age 0-<2 Years	10
Age 2-<16 Years	3
Age >16 Years	1

Notes:

1. Age sensitivity factors are applicable for the age groups relevant to each receptor type listed in Tables 63 and 64.
2. The age sensitivity factors shown here are recommended in the 2015 OEHHA Hot Spots Guidance (OEHHA 2015) for each age group.

Abbreviation:

OEHHA - Office of Environmental Health Hazard Assessment

Source:

OEHHA. 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February.

Table 66
Carcinogenic Toxicity Value and Speciation Fraction for Toxic Air Contaminants Evaluated
Oakland Waterfront Ballpark District Project
Oakland, California

Fuel[1]	Source	Chemical	CAS Number	Cancer Potency Factor [mg/kg-day]$^{-1}$	Chronic REL (µg/m^3)	Weight Fraction[2]
Diesel	PM_{10}	Diesel PM	9-90-1	1.1	5.0	1.0
Gasoline	TOG	1,3-Butadiene	106-99-0	0.60	2.0	0.0055
		Acetaldehyde	75-07-0	0.010	140	0.0028
		Acrolein	107-02-8	-	0.35	0.0013
		Benzene[3]	71-43-2	0.10	3.0	0.0036
						0.025
		Ethylbenzene[3]	100-41-4	0.0087	2,000	0.0012
						0.011
		Formaldehyde	50-00-0	0.021	9.0	0.016
		Hexane[3]	110543	-	7,000	0.015
						0.016
		Methanol	67-56-1	-	4,000	0.0012
		Naphthalene	91-20-3	0.12	9.0	5.0E-04
		Propylene	115-07-1	-	3,000	0.031
		Styrene	100-42-5	-	900	0.0012
		Toluene[3]	108-88-3	-	300	0.017
						0.058
		Xylenes[3]	1330-20-7	-	700	0.0058
						0.048

Notes:

1. For the health risk analysis, health effects were evaluated for emissions from construction equipment, emergency generators, vehicles, and transportation refrigeration units (TRUs). Construction equipment emissions from diesel equipment were included. Emergency generators were assumed to be all diesel-powered. Vehicles were assumed to be diesel and gasoline-fueled. TRUs were assumed to be diesel.
2. Speciation fractions shown are for gasoline-fueled vehicles.
3. Benzene, ethylbenzene, hexane, toluene, and xylenes are produced from catalytic exhaust and evaporative losses from gasoline engines. For each of these chemicals, the evaporative loss weight fraction is shown before the exhaust weight fraction in this table.

Abbreviations:

ARB - Air Resources Board
Cal/EPA - California Environmental Protection Agency
CAS - chemical abstract services
mg/kg-day - milligrams per kilogram per day
OEHHA - Office of Environmental Health Hazard Assessment
PM - particulate matter
REL - reference exposure level
TOG - Total Organic Gas

Reference:

Cal/EPA. 2016. OEHHA/ARB Consolidated Table of Approved Risk Assessment Health Values. March. Available at: http://www.arb.ca.gov/toxics/healthval/contable.pdf.

Table 67
On-Site Resident Health Impacts from Generators at Varying Elevations
Oakland Waterfront Ballpark District Project
Oakland, California

Impact from Generator Operation[1,2]	Onsite MEIR[3]					
	Unmitigated[4]			Mitigated[5]		
	Ground	Podium[6]	Roof	Ground	Podium	Roof
Excess Lifetime Cancer Risk (in a million)	657	706	26	27	29	1.4
Excess Chronic Hazard Index (unitless)	0.17	0.19	0.0066	0.0073	0.0078	3.7E-04
Excess $PM_{2.5}$ Concentration ($\mu g/m^3$)	0.85	0.92	0.032	0.036	0.039	0.0018

Notes:

1. Generators were modeled at ground-level, podium-height, and rooftop-height. Excess lifetime cancer risk, excess chronic hazard index, and excess $PM_{2.5}$ concentration were evaluated for onsite residents. In all three model runs, the stadium generator was assumed to be at ground-level.
2. This sensitivity analysis was performed on a previous version of generator specifications; therefore, results are somewhat different than actual Project results. However, the conclusions drawn from the sensitivity analysis are still valid.
3. For the purposes of comparing the maximum impacts to onsite residents, onsite receptors were exposed to full buildout conditions (Scenario 3 exposure) for thirty years.
4. The unmitigated scenario assumes each Project generator is operating for 50 hours per year with emission factors consistent with ATCM engine emission factors for PM_{10} and $PM_{2.5}$, assuming that 96% of total PM emissions are PM_{10} and that 93.7% of total PM emissions are $PM_{2.5}$. This is consistent with Table A from the California Emission Inventory Data and Reporting System (CEIDARS) PM Appendix A.
5. The mitigated scenario assumes each Project generator is operating for 20 hours per year with Tier 4 engines.
6. Based on communication with the Project Sponsor, it was assumed that the podium height for each building was 85 feet.

Abbreviations:

ATCM - Airborne Toxic Control Measures
MEIR - maximally exposed individual receptor
m - meter
PM - particulate matter
µg - microgram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

Table 68
Estimated Reductions in Health Impacts from MERV-16 Filtration
Oakland Waterfront Ballpark District Project
Oakland, California

Input

Estimated MERV-16 Efficiency for Particulates[1]	76%

Percent Contribution of DPM to Traffic Impacts[2]

% of Cancer Risk Due to DPM	% of Chronic HI Due to DPM
83%	23%

Overall Applied Reduction from MERV-16 Filtration

Source	Cancer Risk	$PM_{2.5}$ Concentration	Chronic HI
Construction	76%	76%	76%
Generators	76%	76%	76%
Traffic[3]	64%	76%	17%

Notes:

1. The MERV-16 estimated efficiency was derived by multiplying the idealized 95% MERV-16 efficiency by the fraction of air estimated to pass through the building ventilation systems. This average was derived using the Integrated Environmental Solutions Virtual Environment (version 2018.2.0.0) to determine the fraction of air entering a modeled apartment via the ventilation system versus windows or doors.

2. Health impacts from traffic sources include DPM as well as speciated TOG emissions. The fraction of Cancer Risk and Chronic HI attributed to DPM was calculated at each on-site receptor, and the minimum values are conservatively presented here.

3. For Excess Lifetime Cancer Risk and Chronic HI, the minimum DPM contribution to the overall traffic impacts from all three fleets was scaled against the estimated MERV-16 efficiency for particulate pollution. The full MERV-16 efficiency was applied to $PM_{2.5}$ concentration, as $PM_{2.5}$ is assumed to be reduced by MERV-16 filters.

Abbreviations:

DPM - Diesel Particulate Matter

HI - Health Index

MERV - Minimum Efficiency Reporting Value

$PM_{2.5}$ - Particulate Matter less than 10 microns in diameter

TOG - Total Organic Gas

Table 69
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	10	62	--	--	2.0	7.2	--	--
Operational Generators	191	4.1	592	9.4	0.040	0.15	1.5	0.049
Operational Traffic	0.48	0.88	0.51	2.0	0.11	0.88	0.058	3.5
Operational TRUs	0.030	0.018	0.023	0.035	0.036	0.018	0.0011	0.0086
Existing Howard Terminal Operation[7]	--	-2.2	--	-2.2	--	-2.2	--	-0.30
Total Project Contribution	**201**	**65**	**592**	**9.2**	**2.1**	**6.1**	**1.6**	**3.3**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,080	562,940	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,660	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	38	1.8
Scenario[9]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   CF = Conversion Factor (mg/µg)

   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$

   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, which are assumed to be tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table 69
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
9. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 70
Project Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Chronic Hazard Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.019	0.034	--	--	6.8E-04	2.2E-04	--	--
Operational Generators	0.16	--	0.16	5.4E-04	3.1E-05	1.3E-05	3.1E-05	1.3E-05
Operational Traffic	4.8E-04	--	4.8E-04	0.0037	1.4E-03	3.7E-03	1.4E-03	3.7E-03
Operational TRUs	6.3E-06	--	6.3E-06	2.3E-06	2.5E-06	2.3E-06	2.5E-06	2.3E-06
Existing Howard Terminal Operation[7]	--	-5.9E-04	--	-8.1E-05	--	-8.1E-05	--	-8.1E-05
Total Project Contribution	**0.18**	**0.034**	**0.16**	**0.0041**	**0.0021**	**0.0038**	**0.0014**	**0.0036**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2021	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, which are assumed to be tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the chronic hazard index during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table 70
Project Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 71
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	$PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.091	7.9E-03	--	--	3.8E-03	2.5E-03	--	--
Operational Generators	0.78	2.7E-03	0.78	0.0027	1.6E-04	6.6E-05	1.6E-04	6.6E-05
Operational Traffic	0.025	0.18	0.025	0.18	0.020	0.18	0.020	0.18
Operational TRUs	2.9E-05	1.1E-05	2.9E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05
Existing Howard Terminal Operation[7]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Total Project Contribution	**0.89**	**0.19**	**0.80**	**0.19**	**0.024**	**0.19**	**0.020**	**0.18**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emission Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, which are assumed to be tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table 71
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan
OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 72
Maritime Reservation Scenario Construction Scaling Factors
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Scaling Factor[1,2]
DDC	Geotechnical Work	1
DPC	Geotechnical Work	1
Offsite Improvements: Grids 1-19	Demolition	1
	Construct Curb, Gutter, Sidewalk, Ramps	1
	New / Modified Traffic Signal	1
	Street Lighting	1
	Paving	1
	Striping	1
Phase 1	Demolition	1
	Grading and Site Preparation	1
	Grading and Site Preparation Remediation	1
	Crane Removal Demolition	1
	Site Utilities	1
	Cut Off Wall	1
	Ballpark Building Construction	1
	Mixed Use Building Construction	1
	Architectural Coating	1
	Paving	1
	Pedestrian Bike Overpass Grading and Site Preparation	1
	Pedestrian Bike Overpass Site Utilities	1
	Pedestrian Bike Overpass Tower Construction	1
	Pedestrian Bike Overpass Sitework	1
Phase 2	Demolition	0.67
	Grading and Site Preparation	0.67
	Grading and Site Preparation Remediation	0.67
	Site Utilities	0.67
	Mixed Use Building Construction	1
	Paving	0.67
	Architectural Coating	1

Notes:

1. Changes to the Project site plan that would occur with the Maritime Reservation Scenario would occur within the area of the Project site that would be developed after Phase 1. Therefore, only Phase 2 subphases would be affected.

2. The construction schedule and equipment list (types, horsepower, etc. but not emissions) for the Maritime Reservation Scenario were assumed to be the same as the Project. Construction emissions for the Maritime Reservation Scenario were calculated by scaling Project emissions by the change in acreage for on-road vehicles and off-road equipment for horizontal development. Architectural coating and vertical building construction phases are not anticipated to change with this scenario since overall building square footage will be preserved; therefore, these emissions are not scaled.

Abbreviations:

DDC - Deep Dynamic Compaction

DPC - Direct Power Compaction

Table 73
Summary of Unmitigated Maritime Reservation Scenario Construction Criteria Air Pollutant Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Emissions (lbs/year)[1,2,3]			
			ROG	NOx	PM_{10}	$PM_{2.5}$
DPC Ground Improvement Area	Geotechnical Work	2020	110	1,144	49	44
		2021	195	2,028	84	77
DDC Ground Improvement Area	Geotechnical Work	2020	126	1,275	55	51
		2021	223	2,264	96	88
Offsite Improvements[2]: Grids 1-19	Demolition	2021	--	--	--	--
	Construct Curb, Gutter, Sidewalk, Ramps	2021	--	--	--	--
	New / Modified Traffic Signal	2021	--	--	--	--
	Street Lighting	2021	--	--	--	--
	Paving	2021	--	--	--	--
	Striping	2021	--	--	--	--
Phase 1	Demolition	2020	118	1,033	56	52
	Cut Off Wall	2021	132	1,479	57	52
	Grading and Site Preparation	2021	1,106	14,931	495	454
	Grading and Site Preparation Remediation	2021	327	7,008	140	132
	Crane Removal Demolition	2021	169	1,663	74	68
	Site Utilities	2021	59	552	23	21
		2022	157	1,412	57	51
	Ballpark Building Construction	2021	2,162	14,926	617	582
		2022	2,812	20,401	801	751
		2023	542	3,038	110	105
	Mixed Use Building Construction	2021	111	682	29	27
		2022	1,251	8,580	344	320
		2023	1,277	9,132	374	352
	Architectural Coating	2022	10,589	1,766	81	80
		2023	11,050	1,650	75	74
	Paving	2022	138	615	30	27
	Pedestrian Bike Overpass Grading and Site Preparation[2]	2022	--	--	--	--
	Pedestrian Bike Overpass Site Utilities[2]	2022	--	--	--	--
	Pedestrian Bike Overpass Tower Construction[2]	2022	--	--	--	--
		2023	--	--	--	--
	Pedestrian Bike Overpass Sitework[2]	2023	--	--	--	--
Phase 2	Demolition	2020	62	524	28	27
		2021	18	149	7.8	7.3
	Grading and Site Preparation	2023	334	3,529	143	131
		2024	652	7,527	262	243
	Grading and Site Preparation Remediation	2024	110	3,264	54	50
	Site Utilities	2024	140	1,252	48	45
		2025	34	296	11	10
	Mixed Use Building Construction	2024	902	7,588	270	249
		2025	1,966	17,432	576	535
		2026	2,788	24,707	896	834
		2027	1,791	15,534	562	524
	Paving	2025	81	646	30	26
		2026	0.61	4.9	0.22	0.20
	Architectural Coating	2025	13,512	539	24	23
		2026	25,358	999	44	44
		2027	16,897	659	29	29

Year	Summary of Average Daily CAP Emissions by Year (lb/day)[1,2,3,4]			
2020	4.7	45	2.1	2.0
2021	16	**166**	5.8	5.4
2022	**56**	**119**	4.7	4.4
2023	51	**66**	2.7	2.5
2024	6.9	**76**	2.4	2.3
2025	**60**	**73**	2.5	2.3
2026	**108**	**99**	3.6	3.4
2027	**107**	**93**	3.4	3.2

Notes:

1. Emissions sources include gasoline and diesel on-road vehicles and diesel off-road equipment.
2. Offsite Improvements Phase and the Pedestrian Bike Overpass area of Phase 1 are mitigation measures and are only included in the Mitigated scenario.
3. Construction emissions for the Maritime Reservation Scenario were calculated by scaling Project emissions by the change in acreage for on-road vehicles and off-road equipment for horizontal development. Architectural coating and vertical building construction phases are not anticipated to change with this scenario since overall building square footage will be preserved; therefore, these emissions are not scaled. As noted in Table 72, the acreage of Phase 1 does not change between the Project and Maritime Reservation Scenario, thus construction emissions do not change compared to the Project emissions presented in Table 14 until Phase 2.
4. Emissions are averaged over 260 working days per year for all phases and subphases except Phase 1 Ballpark Building Construction, which is averaged over 312 working days per year to account for 6 days/week of construction activity. Emissions in 2020 and 2027 are averaged over the fraction of the year there will be construction (88 days, and 174 days, respectively).

Abbreviations:

CAP - criteria air pollutant
DDC - Deep Dynamic Compaction
DPC - Direct Power Compaction
lbs - pounds
NOx - nitrogen oxides
$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter
PM_{10} - particulate matter less than 10 micrometers in diameter
ROG - reactive organic gases

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Table 74
Summary of Mitigated Maritime Reservation Scenario Construction Criteria Air Pollutant Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Emissions (lbs/year)[1,2,3]			
			ROG	NOx	PM_{10}	$PM_{2.5}$
DPC Ground Improvement Area	Geotechnical Work	2020	43	505	19	18
		2021	79	976	36	34
DDC Ground Improvement Area	Geotechnical Work	2020	50	552	20	19
		2021	91	1,060	39	36
Offsite Improvements[2]: Grids 1-19	Demolition	2021	18	60	1.8	1.8
	Construct Curb, Gutter, Sidewalk, Ramps	2021	55	1,085	16	15
	New / Modified Traffic Signal	2021	31	193	3.6	3.5
	Street Lighting	2021	30	299	5.2	5.1
	Paving	2021	12	27	0.82	0.82
	Striping	2021	5.2	19	0.57	0.57
Phase 1	Demolition	2020	30	118	3.4	3.4
	Cut Off Wall	2021	53	471	8.4	8.3
	Grading and Site Preparation	2021	427	6,207	109	100
	Grading and Site Preparation Remediation	2021	220	5,597	82	78
	Crane Removal Demolition	2021	47	164	5.0	4.9
	Site Utilities	2021	23	119	3.3	2.9
		2022	64	334	8.3	7.3
	Ballpark Building Construction	2021	1,286	5,241	98	95
		2022	1,632	6,437	111	105
		2023	376	1,417	19	17
	Mixed Use Building Construction	2021	72	269	5.2	5.0
		2022	711	2,865	50	48
		2023	646	2,728	48	45
	Architectural Coating	2022	4,830	531	13	12
		2023	5,028	516	13	13
	Paving	2022	98	130	4.1	3.1
	Pedestrian Bike Overpass Grading and Site Preparation[2]	2022	21	148	3.3	2.8
	Pedestrian Bike Overpass Site Utilities[2]	2022	13	87	2.2	1.8
	Pedestrian Bike Overpass Tower Construction[2]	2022	35	168	2.8	2.7
		2023	23	105	1.6	1.6
	Pedestrian Bike Overpass Sitework[2]	2023	5.7	64	1.2	0.70
Phase 2	Demolition	2020	17	61	1.7	1.7
		2021	5.3	19	0.54	0.54
	Grading and Site Preparation	2023	82	433	13	12
		2024	193	2,183	36	33
	Grading and Site Preparation Remediation	2024	52	2,566	25	24
	Site Utilities	2024	51	302	8.0	6.0
		2025	13	79	2.1	1.6
	Mixed Use Building Construction	2024	472	3,372	45	45
		2025	1,016	7,701	103	96
		2026	1,247	9,127	137	129
		2027	824	6,511	89	85
	Paving	2025	40	162	4.9	3.5
		2026	0.30	1.2	0.036	0.027
	Architectural Coating	2025	5,607	168	4.7	4.5
		2026	10,514	301	8.7	8.4
		2027	7,001	194	5.7	5.5

Year	Summary of Average Daily Emissions by Year (lb/day)[1,2,3,4]			
2020	1.6	14	0.50	0.47
2021	8.6	**81**	1.5	1.4
2022	27	37	0.68	0.64
2023	23	19	0.36	0.33
2024	3.0	32	0.44	0.42
2025	26	31	0.44	0.41
2026	45	36	0.56	0.53
2027	45	39	0.54	0.52

Notes:

1. Emissions sources include gasoline and diesel on-road vehicles and diesel off-road equipment.
2. Mitigated emissions assume all Tier 4 Final off-road construction equipment, with minor exceptions as shown in Table 4. The mitigated scenario also includes super-compliant low VOC paint for indoor architectural coating. The Offsite Improvements Phase and the Pedestrian Bike Overpass area within Phase 1 are mitigation measures and are only included in the Mitigated scenario.
3. Construction emissions for the Maritime Reservation Scenario were calculated by scaling Project emissions by the change in acreage for on-road vehicles and off-road equipment for horizontal development. Architectural coating and vertical building construction phases are not anticipated to change with this scenario since overall building square footage will be preserved; therefore, these emissions are not scaled. As noted in Table 72, the acreage of Phase 1 does not change between the Project and Maritime Reservation Scenario, thus construction emissions do not change compared to the Project emissions presented in Table 15 until Phase 2.
4. Emissions are averaged over 260 working days per year for all phases and subphases except Phase 1 Ballpark Building Construction, which is averaged over 312 working days per year to account for 6 days/week of construction activity. Emissions in 2020 and 2027 are averaged over the fraction of the year there will be construction (88 days, and 174 days, respectively).

Abbreviations:

CAP - criteria air pollutant
DDC - Deep Dynamic Compaction
DPC - Direct Power Compaction
lbs - pounds
NOx - nitrogen oxides
$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter
PM_{10} - particulate matter less than 10 micrometers in diameter
ROG - reactive organic gases

Table 75
Summary of Maritime Reservation Scenario Construction Greenhouse Gas Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Annual Emissions[1,2,3,4]	
			Unmitigated	Mitigated
			(Metric Tons)	
			CO_2e	CO_2e
DPC Ground Improvement Area	Geotechnical Work	2020	81	81
		2021	159	159
DDC Ground Improvement Area	Geotechnical Work	2020	97	97
		2021	191	191
Offsite Improvements[3]: Grids 1-19	Demolition	2021	--	53
	Construct Curb, Gutter, Sidewalk, Ramps	2021	--	220
	New / Modified Traffic Signal	2021	--	81
	Street Lighting	2021	--	99
	Paving	2021	--	25
	Striping	2021	--	16
Phase 1	Demolition	2020	96	96
	Cut Off Wall	2021	179	179
	Grading and Site Preparation	2021	1,575	1,575
	Grading and Site Preparation Remediation	2021	1,048	1,048
	Crane Removal Demolition	2021	142	142
	Site Utilities	2021	61	61
		2022	188	188
	Ballpark Building Construction	2021	2,470	2,470
		2022	3,414	3,414
		2023	765	765
	Mixed Use Building Construction	2021	132	132
		2022	1,586	1,586
		2023	1,621	1,621
	Architectural Coating	2022	733	733
		2023	752	752
	Paving	2022	70	70
	Pedestrian Bike Overpass Grading and Site Preparation[3]	2022	--	67
	Pedestrian Bike Overpass Site Utilities[3]	2022	--	39
	Pedestrian Bike Overpass Tower Construction[3]	2022	--	82
		2023	--	56
	Pedestrian Bike Overpass Sitework[3]	2023	--	19
Phase 2	Demolition	2020	50	50
		2021	16	16
	Grading and Site Preparation	2023	307	307
		2024	928	928
	Grading and Site Preparation Remediation	2024	647	647
	Site Utilities	2024	177	177
		2025	46	46
	Mixed Use Building Construction	2024	1,469	1,469
		2025	3,414	3,414
		2026	4,350	4,350
		2027	2,779	2,779
	Paving	2025	91	91
		2026	0.72	0.72
	Architectural Coating	2025	251	251
		2026	463	463
		2027	303	303

Year	Summary of CO_2e Emissions by Year (MT)[1,2,3,4]	
	Unmitigated	Mitigated
2020	324	324
2021	5,971	6,466
2022	5,991	6,180
2023	3,444	3,520
2024	3,220	3,220
2025	3,803	3,803
2026	4,813	4,813
2027	3,082	3,082
Total	**30,648**	**31,408**

Notes:

1. Global warming potentials used in the calculation of CO_2e are 1, 25, and 298 for CO_2, CH_4 and N_2O, respectively.
2. Emissions sources include gasoline and diesel on-road vehicles, diesel and electric off-road equipment, and water use.
3. GHG emissions are not affected by off-road equipment engine tier selection or low VOC architectural coatings. Thus, GHG emissions are constant between the unmitigated and mitigated scenarios. The exception is for Offsite Improvements Phase and the Pedestrian Bike Overpass area of Phase 1 which are mitigation measures and are only constructed during the Mitigated Scenario (thus zero GHGs for the Unmitigated Scenario).
4. Construction emissions for the Maritime Reservation Scenario were calculated by scaling Project emissions by the change in acreage for on-road vehicles and off-road equipment for horizontal development. As noted in Table 72, the acreage of Phase 1 does not change between the Project and Maritime Reservation Scenario, thus construction emissions do not change compared to the Project emissions presented in Table 16 until Phase 2. Electric equipment and water use emissions are conservatively not scaled.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
DPC - Direct Power Compaction
GHG - greenhouse gas
MT - metric tons
N_2O - nitrous oxide
VOC - volatile organic compounds

Table 76
Unmitigated Generator Emissions from Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Generator Information[1]

Scenario	Location	Number of Generators	Engine Control[2]	Size		Fuel Type	Annual Operation[3]
				kW	hp		hr/yr
Project Phase 1 Buildout	Ballpark	1	ATCM	1,500	2,012	Diesel	50
	Non-Ballpark	1	ATCM	250	335	Diesel	50
	Non-Ballpark	2	ATCM	400	536	Diesel	50
	Non-Ballpark	1	ATCM	500	671	Diesel	50
	Non-Ballpark	2	ATCM	750	1006	Diesel	50
Project Full Buildout	Ballpark	1	ATCM	1,500	2,012	Diesel	50
	Non-Ballpark	1	ATCM	250	335	Diesel	50
	Non-Ballpark	2	ATCM	300	402	Diesel	50
	Non-Ballpark	2	ATCM	400	536	Diesel	50
	Non-Ballpark	2	ATCM	500	671	Diesel	50
	Non-Ballpark	2	ATCM	750	1,006	Diesel	50
	Non-Ballpark	3	ATCM	1,000	1,341	Diesel	50
	Non-Ballpark	2	ATCM	1,250	1,676	Diesel	50

Project Phase 1 Buildout Generator Emissions[2]

Location	Size (hp)	Annual Emissions[3] (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Howard Terminal Ballpark	2,012	0.029	0.028	0.51	0.016	0.016	0.016	53
Non-Ballpark	335	0.0030	0.0030	0.053	0.0027	0.0027	0.0026	8.8
	536	0.0096	0.0095	0.17	0.0085	0.0085	0.0083	28
	671	0.006	0.0059	0.11	0.0053	0.0053	0.0052	18
	1006	0.029	0.028	0.51	0.016	0.016	0.016	53
Total Emissions		**0.077**	**0.075**	**1.3**	**0.048**	**0.048**	**0.047**	**160**

Table 76 (cont'd)
Unmitigated Generator Emissions from Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Project Full Buildout Generator Emissions[2]

Location	Size (hp)	Annual Emissions[3] (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Howard Terminal Ballpark	2,012	0.029	0.028	0.51	0.016	0.016	0.016	53
Non-Ballpark	335	0.0030	0.0030	0.053	0.0027	0.0027	0.0026	8.8
	402	0.0072	0.0071	0.13	0.0064	0.0064	0.0062	21
	536	0.0096	0.0095	0.17	0.0085	0.0085	0.0083	28
	671	0.012	0.012	0.21	0.011	0.011	0.010	35
	1006	0.029	0.028	0.51	0.016	0.016	0.016	53
	1,341	0.058	0.057	1.0	0.032	0.032	0.031	105
	1,676	0.048	0.047	0.84	0.027	0.027	0.026	88
Total Emissions		**0.20**	**0.19**	**3.4**	**0.12**	**0.12**	**0.12**	**391**

Notes:

1. Number, size, and fuel of emergency generators for the Maritime Reservation Scenario were provided by the Project sponsor.
2. Unmitigated emission factors are consistent with the Airborne Toxics Control Measures (ATCM). CO_2e emission factor based on AP-42 (USEPA 1995).
3. Operation for routine maintenance and testing is conservatively assumed to be 50 hours per year, the maximum allowable by the ATCM for Stationary Compression Ignition Engines (17 CCR 93115).

Abbreviations:

ATCM - Airborne Toxics Control Measure
CCR - California Code of Regulations
CO_2e - carbon dioxide equivalents
DPM - diesel particulate matter
g - grams
hp - horsepower
hr - hour
kW - kilowatt
MT - metric tons
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
TOG - total organic gases
USEPA - United States Environmental Protection Agency
yr - year

References:

California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf
California Building Code, Part 2, Volume 2, Chapter 27 - Electrical. Available online at: https://up.codes/viewer/california/ca-building-code-2016-v2/chapter/27/electrical#27.
USEPA. 1995. AP 42, Volume I, Fifth Edition. §3.4. Large Stationary Diesel and All Stationary Dual-Fuel Engines. Available online at: http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf

Table 77
Mitigated Generator Emissions from Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Generator Information[1]

Scenario	Location	Number of Generators	Engine Control[2]	Size		Fuel Type	Annual Operation[3]
				kW	hp		hr/yr
Project Phase 1 Buildout	Ballpark	1	Tier 4	1,500	2,012	Diesel	20
	Non-Ballpark	1	Tier 4	250	335	Diesel	20
	Non-Ballpark	2	Tier 4	400	536	Diesel	20
	Non-Ballpark	1	Tier 4	500	671	Diesel	20
	Non-Ballpark	2	Tier 4	750	1006	Diesel	20
Project Full Buildout	Ballpark	1	Tier 4	1,500	2,012	Diesel	20
	Non-Ballpark	1	Tier 4	250	335	Diesel	20
	Non-Ballpark	2	Tier 4	300	402	Diesel	20
	Non-Ballpark	2	Tier 4	400	536	Diesel	20
	Non-Ballpark	2	Tier 4	500	671	Diesel	20
	Non-Ballpark	2	Tier 4	750	1,006	Diesel	20
	Non-Ballpark	3	Tier 4	1,000	1,341	Diesel	20
	Non-Ballpark	2	Tier 4	1,250	1,676	Diesel	20

Project Phase 1 Buildout Generator Emissions

Location	Size (hp)	Annual Emissions (ton/yr)						Annual Emissions (MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Howard Terminal Ballpark	2,012	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
Non-Ballpark	335	0.0011	0.0011	0.0022	1.1E-04	1.1E-04	1.1E-04	3.5
	536	0.0036	0.0035	0.0071	3.5E-04	3.5E-04	3.5E-04	11
	671	0.0023	0.0022	0.0044	2.2E-04	2.2E-04	2.2E-04	7.0
	1006	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
Total Emissions		**0.020**	**0.020**	**0.058**	**0.0025**	**0.0025**	**0.0025**	**64**

Table 77 (cont'd)
Mitigated Generator Emissions from Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Project Full Buildout Generator Emissions

Location	Size (hp)	Annual Emissions (ton/yr)						Annual Emissions (MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Howard Terminal Ballpark	2,012	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
Non-Ballpark	335	0.0011	0.0011	0.0022	1.1E-04	1.1E-04	1.1E-04	3.5
	402	0.0027	0.0027	0.0053	2.7E-04	2.7E-04	2.7E-04	8.4
	536	0.0036	0.0035	0.0071	3.5E-04	3.5E-04	3.5E-04	11
	671	0.0045	0.0044	0.0089	4.4E-04	4.4E-04	4.4E-04	14
	1006	0.0068	0.0066	0.022	8.9E-04	8.9E-04	8.9E-04	21
	1,341	0.014	0.013	0.044	0.0018	0.0018	0.0018	42
	1,676	0.011	0.011	0.037	0.0015	0.0015	0.0015	35
Total Emissions		**0.050**	**0.049**	**0.15**	**0.0062**	**0.0062**	**0.0062**	**157**

Notes:

1. Number, size, and fuel of emergency generators for the Maritime Reservation Scenario were provided by the Project Sponsor.
2. Mitigated emissions assume Tier 4 controls. CO_2e emission factor based on AP-42 (USEPA 1995).
3. Operation for routine maintenance and testing is assumed to be 20 hours per year.

Abbreviations:

ATCM - Airborne Toxics Control Measure
CCR - California Code of Regulations
CO_2e - carbon dioxide equivalents
DPM - diesel particulate matter
g - grams
hp - horsepower
hr - hour
kW - kilowatt
MT - metric tons
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
TOG - total organic gases
USEPA - United States Environmental Protection Agency
yr - year

References:

California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf

California Building Code, Part 2, Volume 2, Chapter 27 - Electrical. Available online at: https://up.codes/viewer/california/ca-building-code-2016-v2/chapter/27/electrical#27.

USEPA. 1995. AP 42, Volume I, Fifth Edition. §3.4. Large Stationary Diesel and All Stationary Dual-Fuel Engines. Available online at: http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf

Table 78
Summary of Unmitigated Operational CAP and GHG Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1] [ton/year]				CAP Emissions[1] [lb/day]				GHG Emissions[1] [MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
A's Related Existing Conditions[2] (2018)									
Area Sources	2.9	9.8E-04	3.8E-04	3.8E-04	16	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	872
Natural Gas Use	0.017	0.16	0.012	0.012	0.09	0.9	0.065	0.065	170
Water and Wastewater	--	--	--	--	--	--	--	--	83
Solid Waste	--	--	--	--	--	--	--	--	500
Mobile Sources	3.0	3.3	3.8	0.8	17	18	21	4.7	6,954
Stationary Sources	--	--	--	--	--	--	--	--	--
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0018	0.019	5.4E-04	5.0E-04	0.0099	0.11	0.0030	0.0027	0.37
Truck Idling	--	--	--	--	--	--	--	--	--
Total Emissions	**6.0**	**3.5**	**3.8**	**0.9**	**33**	**19**	**21**	**4.7**	**8,581**
Existing Conditions[2] (2018)									
Area Sources	4.8	9.8E-04	3.8E-04	3.8E-04	26	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	1,126
Natural Gas Use	0.021	0.19	0.015	0.015	0.12	1.1	0.08	0.08	211
Water and Wastewater	--	--	--	--	--	--	--	--	104
Solid Waste	--	--	--	--	--	--	--	--	652
Mobile Sources	3.7	4.1	4.8	1.1	21	23	26	5.9	8,812
Stationary Sources	0.057	1.0	0.032	0.031	0.31	5.5	0.17	0.17	105
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0020	0.022	6.2E-04	5.7E-04	0.011	0.12	0.0034	0.0031	0.42
Truck Idling	0.085	0.76	0.0035	0.0034	0.46	4.1	0.019	0.019	94
Total Emissions	**9**	**6.1**	**4.8**	**1.1**	**48**	**33**	**26**	**6.2**	**11,106**

Table 78
Summary of Unmitigated Operational CAP and GHG Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1] [ton/year]				CAP Emissions[1] [lb/day]				GHG Emissions[1] [MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Phase 1 Buildout Conditions[3,4] (2023)									
Area Sources[5]	8.1	0.046	0.022	0.022	45	0.25	0.12	0.12	6.8
Electricity Use	--	--	--	--	--	--	--	--	2,629
Natural Gas Use	0.13	1.2	0.091	0.091	0.73	6.5	0.50	0.50	1,317
Water and Wastewater	--	--	--	--	--	--	--	--	446
Solid Waste	--	--	--	--	--	--	--	--	1,329
Mobile Sources	6.2	11	11	2.5	34	61	60	14	19,575
Stationary Sources	0.075	1.3	0.048	0.047	0.41	7.3	0.27	0.26	160
EV Charging	-3.7E-04	-8.7E-04	-2.3E-05	-2.1E-05	-0.0020	-0.0047	-1.3E-04	-1.2E-04	-3.5
TRU Operation	0.0023	0.019	2.0E-04	1.9E-04	0.012	0.10	0.0011	0.0010	0.41
Truck Idling	0.079	0.52	0.0021	0.0020	0.434	2.9	0.011	0.011	88
Total Emissions	**15**	**14**	**11**	**2.7**	**80**	**78**	**61**	**15**	**25,548**
Total Unmitigated Net New Emissions	**8.6**	**10.8**	**7.3**	**1.8**	**47**	**59**	**40**	**9.9**	**16,967**
Full Project Buildout Conditions[3,4] (2027)									
Area Sources[5]	24	0.26	0.12	0.12	134	1.4	0.68	0.68	37
Electricity Use	--	--	--	--	--	--	--	--	5,733
Natural Gas Use	0.39	3.5	0.27	0.27	2.1	19	1.5	1.5	3,872
Water and Wastewater	--	--	--	--	--	--	--	--	1,116
Solid Waste	--	--	--	--	--	--	--	--	2,611
Mobile Sources	11	32	26	6.1	63	174	143	33	45,027
Stationary Sources	0.19	3.4	0.12	0.12	1.1	19	0.65	0.63	391
EV Charging	-0.020	-0.040	-0.0013	-0.0012	-0.11	-0.22	-0.0072	-0.0066	-217
TRU Operation	0.0027	0.020	1.4E-04	1.3E-04	0.015	0.11	7.8E-04	7.2E-04	0.46
Truck Idling	0.096	0.62	0.0026	0.0025	0.53	3.4	0.014	0.013	107
Total Emissions	**37**	**40**	**27**	**6.6**	**201**	**217**	**146**	**36**	**58,679**
Total Unmitigated Net New Emissions	**31**	**36**	**23**	**5.7**	**168**	**198**	**125**	**31**	**50,097**

Table 78
Summary of Unmitigated Operational CAP and GHG Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emissions estimated using methods consistent with CalEEMod® version 2016.3.2, as detailed in previous tables. Unmitigated emissions assume generators compliant with the Airborne Toxics Control Measures (ATCM), with 50 hours per year of operation for routine maintenance and testing, the maximum allowable by the ATCM for Stationary Compression Ignition Engines (17 CCR 93115).
2. A's Related Existing Conditions emissions do not include emissions from non-A's events at the Coliseum. The Existing Conditions include all emissions from the A's Related Existing Conditions, plus NFL games and other events.
3. Annual average emissions were calculated assuming 365 days per year, even though operations will not occur for the entire 365 days per year in 2023 or 2027.
4. Because building square footage will remain the same, operational emissions for MRS are assumed to be the same as Project for all emissions sources other than generators, which are detailed in the previous tables.
5. Area sources include emissions from architectural coating, consumer products, and landscaping.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
CO_2e - carbon dioxide equivalent
EV - Electric vehicle
GHG - greenhouse gas
lb - pounds
MT - metric ton
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
TRU - transportation refrigeration unit
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 79
Summary of Mitigated Operational CAP and GHG Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1] [ton/year]				CAP Emissions[1] [lb/day]				GHG Emissions[1] [MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
A's Related Existing Conditions[2] (2018)									
Area Sources	2.9	9.8E-04	3.8E-04	3.8E-04	16	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	872
Natural Gas Use	0.017	0.16	0.012	0.012	0.09	0.9	0.065	0.065	170
Water and Wastewater	--	--	--	--	--	--	--	--	83
Solid Waste	--	--	--	--	--	--	--	--	500
Mobile Sources	3.0	3.3	3.8	0.8	17	18	21	4.7	6,954
Stationary Sources	--	--	--	--	--	--	--	--	--
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0018	0.019	5.4E-04	5.0E-04	0.0099	0.11	0.0030	0.0027	0.37
Truck Idling	--	--	--	--	--	--	--	--	--
Total Emissions	**6.0**	**3.5**	**3.8**	**0.9**	**33**	**19**	**21**	**4.7**	**8,581**
Existing Conditions[2] (2018)									
Area Sources	4.8	9.8E-04	3.8E-04	3.8E-04	26	0.0054	0.0021	0.0021	0.22
Electricity Use	--	--	--	--	--	--	--	--	1,126
Natural Gas Use	0.021	0.19	0.015	0.015	0.12	1.1	0.08	0.08	211
Water and Wastewater	--	--	--	--	--	--	--	--	104
Solid Waste	--	--	--	--	--	--	--	--	652
Mobile Sources	3.7	4.1	4.8	1.1	21	23	26	5.9	8,812
Stationary Sources	0.057	1.0	0.032	0.031	0.31	5.5	0.17	0.17	105
EV Charging	--	--	--	--	--	--	--	--	--
TRU Operation	0.0020	0.022	6.2E-04	5.7E-04	0.011	0.12	0.0034	0.0031	0.42
Truck Idling	0.085	0.76	0.0035	0.0034	0.46	4.1	0.019	0.019	94
Total Emissions	**9**	**6.1**	**4.8**	**1.1**	**48**	**33**	**26**	**6.2**	**11,106**

Table 79
Summary of Mitigated Operational CAP and GHG Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1]								GHG Emissions[1]
	[ton/year]				[lb/day]				[MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Phase 1 Buildout Conditions[3,4,5] (2023)									
Area Sources[6]	7.8	0.046	0.022	0.022	43	0.25	0.12	0.12	6.8
Electricity Use	--	--	0	--	--	--	--	--	2,629
Natural Gas Use	0.13	1.2	0.091	0.091	0.73	6.5	0.50	0.50	1,317
Water and Wastewater	--	--	0	--	--	--	--	--	446
Solid Waste	--	--	0	--	--	--	--	--	1,329
Mobile Sources	6.2	11	11	2.5	34	61	60	14	19,575
Stationary Sources	0.020	0.058	0.0025	0.0025	0.11	0.32	0.013	0.013	64
EV Charging	0.000	0.00	0.0000	0.0000	0.00	0.0	0.000	0.000	-4
TRU Operation	0.0023	0.019	2.0E-04	1.9E-04	0.012	0.10	0.0011	0.001	0.41
Truck Idling	0.079	0.52	0.0021	0.0020	0.43	2.9	0.011	0.011	88.26
Total Emissions	**14**	**13**	**11**	**2.6**	**78**	**71**	**60**	**14**	**25,452**
Total Mitigated Net New Emissions	**8.3**	**9.5**	**7.2**	**1.8**	**45**	**52**	**40**	**9.7**	**16,871**
Full Project Buildout Conditions[3,4,5] (2027)									
Area Sources[6]	24	0.26	0.12	0.12	130	1.4	0.68	0.68	37
Electricity Use	--	--	--	--	--	--	--	--	5,733
Natural Gas Use	0.39	3.5	0.27	0.27	2.1	19	1.5	1.5	3,872
Water and Wastewater	--	--	--	--	--	--	--	--	1,116
Solid Waste	--	--	--	--	--	--	--	--	2,611
Mobile Sources	11	32	26	6.1	63	174	143	33	45,027
Stationary Sources	0.049	0.15	0.0062	0.0062	0.27	0.82	0.034	0.034	157
EV Charging	-0.020	-0.040	-0.0013	-0.0012	-0.11	-0.22	-0.0072	-0.0066	-217
TRU Operation	0.0027	0.020	1.4E-04	1.3E-04	0.015	0.11	7.8E-04	7.2E-04	0.46
Truck Idling	0.096	0.62	0.0026	0.0025	0.53	3.4	0.014	0.013	107
Total Emissions	**36**	**36**	**27**	**6.5**	**196**	**199**	**145**	**36**	**58,444**
Total Mitigated Net New Emissions	**30**	**33**	**23**	**5.6**	**163**	**180**	**125**	**31**	**49,862**

Table 79
Summary of Mitigated Operational CAP and GHG Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Emissions estimated using methods consistent with CalEEMod® version 2016.3.2, as detailed in previous tables. Mitigated emissions assume generators have Tier 4 engines, with 20 hours per year of operation for routine maintenance and testing, and super-compliant low VOC paint for non-residential indoor architectural coating.
2. A's Related Existing Conditions emissions do not include emissions from non-A's events at the Coliseum. The Existing Conditions include all emissions from the A's Related Existing Conditions, plus NFL games and other events.
3. Annual average emissions were calculated assuming 365 days per year, even though operations will not occur for the entire 365 days per year in 2023 or 2027.
4. Because building square footage will remain the same, operational emissions for MRS are assumed to be the same as Project for all emissions sources other than generators, which are detailed in the previous tables.
5. Area sources include emissions from architectural coating, consumer products, and landscaping.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
CO_2e - carbon dioxide equivalent
EV - Electric vehicle
GHG - greenhouse gas
lb - pounds
MT - metric ton
NOx - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
TRU - transportation refrigeration unit
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 80
Unmitigated Net New Overlapping Construction and Operational CAP Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Calendar Year	CAP Emissions[1]							
	[tons/yr]				[lb/day][2]			
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$
Construction Only								
2020	0.21	2.0	0.094	0.087	4.7	45	2.1	2.0
2021	2.3	23	0.81	0.75	16	166	5.8	5.4
2022	7.6	17	0.68	0.64	56	119	4.7	4.4
2023	6.6	8.9	0.36	0.34	51	66	2.7	2.5
2024	0.90	10	0.32	0.29	6.9	76	2.4	2.3
2025	7.8	9.5	0.32	0.30	60	73	2.5	2.3
2026	14	13	0.47	0.44	108	99	3.6	3.4
2027	9.3	8.1	0.30	0.28	107	93	3.4	3.2
2028	--	--	--	--	--	--	--	--
Net New Operational Emissions[3]								
2020	--	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	--	--
2022	--	--	--	--	--	--	--	--
2023	2.0	1.4	2.4	0.56	11	7.9	13	3.1
2024	8.6	11	7.3	1.8	47	59	40	10
2025	8.6	11	7.3	1.8	47	59	40	10
2026	8.6	11	7.3	1.8	47	59	40	10
2027	16	19	12	3.1	87	105	68	17
2028	31	36	23	5.7	168	198	125	31
Construction + Net New Operational Emissions[3]								
2020	0.21	2.0	0.094	0.087	4.7	45	2.1	2.0
2021	2.3	23	0.81	0.75	16	166	5.8	5.4
2022	7.6	17	0.68	0.64	56	119	4.7	4.4
2023	8.6	10	2.8	0.90	61	74	16	5.6
2024	10	21	7.6	2.1	54	135	42	12
2025	16	20	7.6	2.1	107	132	42	12
2026	23	24	7.8	2.3	156	158	44	13
2027	25	27	13	3.4	195	198	72	20
2028	31	36	23	5.7	168	198	125	31
Maximum Annual Emissions	**31**	**36**	**23**	**5.7**	**195**	**198**	**125**	**31**

Notes:

1. Emissions details for construction are shown in Table 73 and emissions details for operations are shown in Table 78.
2. Total construction emissions are averaged over 260 working days per year for all phases and subphases except Phase 1 Ballpark Building Construction, which is averaged over 312 working days per year to account for 6 days/week of construction activity. Emissions in 2020 and 2027 are averaged over the fraction of the year there will be construction (88 days, and 174 days, respectively). Total operational emissions are divided by 365 days per year to convert to pounds per day.
3. Net new operational emissions are scaled for partial years of phased operations in 2023 and 2027 by multiplying by the ratio of number of days of operations of that year to 365 total days (30 days for 2023 and 120 days for 2027). For 2023, ballpark emissions are not scaled since the full season of MLB activity will occur in 2023. Only Phase 1 ancillary land use emissions are scaled by the ratio of 30 days to 365 days.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
lb - pounds
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 81
Mitigated Net New Overlapping Construction and Operational CAP Emissions for the Maritime Reservation Scenario
Oakland Waterfront Ballpark District Project
Oakland, California

Calendar Year	CAP Emissions[1]							
	[tons/yr]				[lb/day][2]			
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$
Construction Only								
2020	0.071	0.62	0.022	0.021	1.6	14	0.50	0.47
2021	1.2	11	0.21	0.20	8.6	81	1.5	1.4
2022	3.7	5.4	0.10	0.092	27	37	0.68	0.64
2023	3.1	2.6	0.048	0.044	23	19	0.36	0.33
2024	0.38	4.2	0.057	0.054	3.0	32	0.44	0.42
2025	3.3	4.1	0.057	0.053	26	31	0.44	0.41
2026	5.9	4.7	0.073	0.069	45	36	0.56	0.53
2027	3.9	3.4	0.047	0.045	45	39	0.54	0.52
2028	--	--	--	--	--	--	--	--
Net New Operational Emissions[3]								
2020	--	--	--	--	--	--	--	--
2021	--	--	--	--	--	--	--	--
2022	--	--	--	--	--	--	--	--
2023	1.8	0.90	2.4	0.55	10	4.9	13	3.0
2024	8.3	10	7.2	1.8	45	52	40	10
2025	8.3	10	7.2	1.8	45	52	40	10
2026	8.3	10	7.2	1.8	45	52	40	10
2027	15	17	12	3.0	84	94	68	17
2028	30	33	23	5.6	163	180	125	31
Construction + Net New Operational Emissions[3]								
2020	0.071	0.62	0.022	0.021	1.6	14	0.50	0.47
2021	1.2	11	0.21	0.20	8.6	81	1.5	1.4
2022	3.7	5.4	0.10	0.092	27	37	0.68	0.64
2023	4.9	3.5	2.4	0.59	33	24	13	3.3
2024	8.7	14	7.3	1.8	48	85	40	10
2025	12	14	7.3	1.8	71	83	40	10
2026	14	14	7.3	1.8	91	88	40	10
2027	19	21	12	3.1	129	133	68	17
2028	30	33	23	5.6	163	180	125	31
Maximum Annual Emissions	**30**	**33**	**23**	**5.6**	**163**	**180**	**125**	**31**

Notes:

1. Emissions details for construction are shown in Table 74 and emissions details for operations are shown in Table 79.
2. Total construction emissions are averaged over 260 working days per year for all phases and subphases except Phase 1 Ballpark Building Construction, which is averaged over 312 working days per year to account for 6 days/week of construction activity. Emissions in 2020 and 2027 are averaged over the fraction of the year there will be construction (88 days, and 174 days, respectively). Total operational emissions are divided by 365 days per year to convert to pounds per day.
3. Net new operational emissions are scaled for partial years of phased operations in 2023 and 2027 by multiplying by the ratio of number of days of operations of that phase to 365 total days (30 days for Phase 1 and 120 days for 2027). For 2023, ballpark emissions are not scaled since the full season of MLB activity will occur in 2023. Only Phase 1 ancillary land use emissions are scaled by the ratio of 30 days to 365 days.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
lb - pounds
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Table 82
Maritime Reservation Scenario Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	15	77	--	--	3.6	8.4	--	--
Operational Generators	191	6.3	591	9.0	0.10	0.23	1.5	0.049
Operational Traffic	0.48	1.38	0.51	2.0	0.17	1.4	0.058	3.5
Operational TRUs	0.030	0.035	0.023	0.035	0.031	0.035	0.0011	0.0086
Existing Howard Terminal Operation[7]	--	-2.2	--	-2.2	--	-2.2	--	-0.30
Total Project Contribution	**206**	**82**	**592**	**8.9**	**3.9**	**7.9**	**1.6**	**3.3**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,080	563,040	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,660	4,183,540	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	38	1.8
Scenario[9]	Scenario 2	Scenario 2	Scenario 3	Scenario 3	Scenario 2	Scenario 2	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   CF = Conversion Factor (mg/µg)

   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$

   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, which are assumed to be tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table 82
Maritime Reservation Scenario Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
9. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 83
Maritime Reservation Scenario Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Chronic Hazard Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.049	0.058	--	--	2.4E-03	6.4E-03	--	--
Operational Generators	0.16	9.1E-04	0.16	5.3E-04	3.1E-05	3.7E-05	3.1E-05	1.3E-05
Operational Traffic	4.8E-04	7.3E-04	4.8E-04	3.7E-03	1.1E-03	7.3E-04	1.4E-03	3.7E-03
Operational TRUs	6.3E-06	9.3E-06	6.3E-06	2.3E-06	2.3E-06	9.3E-06	2.5E-06	2.3E-06
Existing Howard Terminal Operation[7]	--	-5.9E-04	--	-8.1E-05	--	-5.9E-04	--	-8.1E-05
Total Project Contribution	**0.21**	**0.059**	**0.16**	**0.0041**	**0.0035**	**0.0065**	**0.0014**	**0.0036**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180	563,020	563,080	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920	4,183,640	4,183,660	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	1.8	1.8
Year	2027	2026	2028	2028	2027	2026	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, which are assumed to be tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the chronic hazard index during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table 83
Maritime Reservation Scenario Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 84
Maritime Reservation Scenario PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	$PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.23	0.28	--	--	9.5E-03	3.5E-03	--	--
Operational Generators	0.78	4.4E-03	0.78	0.0026	1.6E-04	6.5E-05	1.6E-04	6.5E-05
Operational Traffic	0.025	0.035	0.025	0.18	0.020	0.18	0.020	0.18
Operational TRUs	2.9E-05	4.3E-05	2.9E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05
Existing Howard Terminal Operation[7]	--	-4.6E-03	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Total Project Contribution	**1.03**	**0.31**	**0.80**	**0.19**	**0.029**	**0.19**	**0.020**	**0.18**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2026	2028	2028	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emission Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, which are assumed to be tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table 84
Maritime Reservation Scenario PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan
OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 85
Summary of Nearby Stationary Source Impacts at Project MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	97	824	824	Diesel ICE	0.85	0.1	0.1	0.025	4.0E-05	0
16284	Verizon Wireless	0.019	4.2E-04	0	93	827	827	Diesel ICE	0.85	0.1	0.1	0.016	2.5E-05	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	433	520	520	Diesel ICE	0.15	0.12	0.12	0.0065	1.8E-04	0
17073	T-Mobile	0.17	0.0038	0	368	852	852	Diesel ICE	0.18	0.06	0.06	0.030	2.3E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	410	943	943	Generic Decay	0.42	0.15	0.15	0.0019	4.4E-06	4.2E-05
19696	Safety-Kleen Systems, Inc.	0.27	2.1E-04	0	948	246	246	Generic Decay	0.15	0.58	0.58	0.039	1.2E-04	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	424	524	524	Diesel ICE	0.16	0.12	0.12	0.064	9.4E-04	0
5133	Mr. Espresso	0.28	0.0025	0.25	731	590	590	Generic Decay	0.22	0.30	0.30	0.063	7.6E-04	0.076
11887	Dynegy Oakland LLC	4.0	0.026	4.2	853	1,442	1,442	Generic Decay	0.17	0.00	0.00	0.69	0	0
											Total:	**0.93**	**0.0023**	**0.076**

Onsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	939	256	256	Diesel ICE	0.040	0.310	0.31	0.0012	2.1E-04	0
16284	Verizon Wireless	0.019	4.2E-04	0	936	253	253	Diesel ICE	0.040	0.310	0.31	7.4E-04	1.3E-04	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	1,287	618	618	Diesel ICE	0	0	0.090	0	1.4E-04	0
17073	T-Mobile	0.17	0.0038	0	1,099	569	569	Diesel ICE	0	0	0.10	0	3.8E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	1,069	598	598	Generic Decay	0	0	0.29	0	8.8E-06	8.5E-05
22778	Solstice Press[3]	--	--	--	1,223	861	861	Generic Decay	0	0	0.17	0	0	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	1,278	608	608	Diesel ICE	0	0	0.090	0	7.1E-04	0
5133	Mr. Espresso	0.28	0.0025	0.25	1,537	936	936	Generic Decay	0	0	0.15	0	3.7E-04	0.037
11887	Dynegy Oakland LLC	4.0	0.026	4.2	1,122	977	977	Generic Decay	0	0	0.14	0	0.0035	0.57
											Total:	**0.0019**	**0.0055**	**0.60**

Notes:

1. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD.
2. Unscaled health risk values were estimated using facility emissions provided by BAAQMD and BAAQMD's Health Risk Calculator Tool. These values were scaled by distance using the diesel IC engines multiplier tool or the BAAQMD's generic distance decay curve, as indicated above.
3. No emissions or health impact values were provided for Solstice Press.

Abbreviations:

IC - internal combustion
ICE - internal combustion engine
MEIR - maximally exposed individual receptor
$\mu g/m^3$ - micrograms per cubic meters
$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter

RAMBOLL

Table 86
Summary of Nearby Roadway Impacts at Project MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Roadway	Reported ADT[1]	Section of Roadway measured	Centroid of Road Segment		Distance from Roadway for Cancer MEIR	Distance from Roadway for $PM_{2.5}$ MEIR	MEIR Direction from Street[2]	BAAQMD Roadway Screening Analysis Tables[2]
			UTMx	UTMy				$PM_{2.5}$ Concentration
	(vehicles/day)		m	m	(ft)	(ft)		($\mu g/m^3$)
Brush Street	18,550	From 7th Street to 11th Street	563,267	4,184,130	1,659	745	East	0.039
5th Street	13,850	From Castro Street to MLK	563,189	4,183,969	1,075	164	South	0.057
7th Street	18,050	From Brush Street to Castro Street	563,396	4,184,074	1,708	869	South	0.014
							Total	**0.11**

Notes:

1. ADT for existing conditions of the surface streets were obtained from Fehr & Peers. Only roadways with traffic volumes between 10,000 and 30,000 ADT were included in this analysis. There were no roadways with traffic volumes between 10,000 and 30,000 ADT of the offsite cancer MEIR or the onsite cancer and $PM_{2.5}$ MEIRs.

2. Screening values for the surface streets were obtained from BAAQMD Roadway Screening Analysis Calculator (BAAQMD 2015). The risk and concentrations depends on the direction of the road from the Project (e.g., due to wind patterns).

Abbreviations:

$\mu g/m^3$ - microgram per cubic meter
ADT - average daily traffic
BAAQMD - Bay Area Air Quality Management District
CEQA - California Environmental Quality Act
ft - feet
HI - hazard index
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter
MEIR - maximally exposed individual receptor

References:

BAAQMD. 2015. Roadway Screening Analysis Calculator. Available online at:
http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/screeningcalculator_4_16_15-xlsx.xlsx?la=en

Table 87
Summary of Cumulative Impacts at Project MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0023	0.076	0.0019	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	13	--	0.27
Major Streets[4,5]	4.1	--	0.060	2.9	--	0.029
Railways[4]	67	--	0.017	17	--	0.082
Project Construction	7.2	2.2E-04	0.0025	2.0	6.8E-04	0.0038
Project Operational Generators	0.15	1.3E-05	6.6E-05	0.040	3.1E-05	1.6E-04
Project Operational Traffic	0.88	0.0037	0.18	0.11	0.0014	0.020
Project Operational TRUs	0.018	2.3E-06	1.1E-05	0.036	2.5E-06	1.1E-05
Existing Howard Terminal Operation	-2.2	-8.1E-05	-6.4E-04	--	--	--
Total	**97**	**0.0061**	**1.0**	**35**	**0.0076**	**1.0**

Notes:

1. Details for each source are shown in the preceding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

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Table 88
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Mitigated Project	Construction	2.0	0.0038	7.2	0.0025
	Operational Generators	0.040	1.6E-04	0.15	6.6E-05
	Operational Traffic	0.11	0.020	0.88	0.18
	Operational TRUs	0.036	1.1E-05	0.018	1.1E-05
	Existing Howard Terminal Operation	--	--	-2.2	-6.4E-04
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.105
	Light Heavy Duty Trucks	0.53	0.005	0.715	0.009
	Heavy and Medium Duty Trucks	1.3	0.012	1.721	0.019
	Non-Truck Vehicles	1.1	0.119	1.523	0.244
Other	Ferries	18	0.018	12.180	0.011
	Schnitzer Ships	6.1	0.006	4.055	0.004
	Schnitzer Trucks	0.057	0.004	0.022	0.002
	Truck Related Business	3.1	0.002	1.849	0.001
Permitted	CASS	8.7E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	2.0E-06	0.022	0.000	0.031
	Dynegy	0.0033	0.000	0.010	0.001
	EBMUD	0.63	0.025	0.693	0.027
	Other Facilities	1.3	0.048	1.505	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	46	0.350	21.512	0.157
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.8	0.004	2.869	0.003
	Bunkering Tugs and Pumps	5.3	0.005	3.403	0.003
	Cargo Handling	7.3	0.009	6.487	0.008
	Drayage Trucks	1.2	0.021	2.438	0.026
	Dredging	13	0.013	8.771	0.009
	Road Dust	--	0.017	--	0.015
	Harbor Craft	97	0.076	54.344	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	0.9	0.001	1.002	0.001
	OGV Berthing	24	0.058	21.436	0.052
	OGV Maneuvering	35	0.038	26.918	0.031
Rail	Rail Lines	24	0.102	121.331	0.026
	Railyard	31	0.035	26.897	0.029
Street	Road Dust	--	1.166	--	1.746
	Light Heavy Duty Trucks	0.48	0.006	0.903	0.010
	Heavy and Medium Duty Trucks	0.66	0.014	1.195	0.051
	Non-Truck Vehicles	1.1	0.108	1.857	0.186
	Total	**324**	**2.4**	**332**	**3.1**

Table 88
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Health impact values are shown for the mitigated Project MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.
2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment
MEIR - maximally exposed individual receptor
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
$\mu g/m^3$ - micrograms per cubic meter

Table 89
Summary of 2024 West Oakland Cumulative Impacts at Project MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Mitigated Project	2.1	0.024	6.1	0.19
Highway	2.9	0.19	4.0	0.38
Other	21	0.020	14	0.012
Permitted	1.9	0.14	2.2	0.15
Dynegy	0.0033	3.8E-04	0.010	8.2E-04
Schnitzer	53	0.36	26	0.16
Port	186	0.24	128	0.20
Rail	54	0.14	148	0.055
Street	2.2	1.3	4.0	2.0
Total	**324**	**2.4**	**332**	**3.1**

Notes:

1. Health impact values are shown for the mitigated Project MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table 90
Summary of Nearby Stationary Source Impacts at Maritime Reservation Scenario MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	97	97	824	Diesel BUG	0.85	0.9	0.1	0.025	5.7E-04	0
16284	Verizon Wireless	0.019	4.2E-04	0	93	93	827	Diesel BUG	0.85	0.9	0.1	0.016	3.6E-04	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	433	433	520	Diesel BUG	0.15	0.15	0.12	0.0065	2.3E-04	0
17073	T-Mobile	0.17	0.0038	0	368	368	852	Diesel BUG	0.18	0.18	0.06	0.030	6.9E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	410	410	943	Generic Decay	0.42	0.42	0.15	0.0019	1.3E-05	4.2E-05
19696	Safety-Kleen Systems, Inc.	0.27	2.1E-04	0	948	948	246	Generic Decay	0.15	0.15	0.58	0.039	3.1E-05	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	424	424	524	Diesel BUG	0.16	0.16	0.12	0.064	0.0013	0
5133	Mr. Espresso	0.28	0.0025	0.25	731	731	590	Generic Decay	0.22	0.22	0.30	0.063	5.7E-04	0.076
11887	Dynegy Oakland LLC	4.0	0.026	4.2	853	853	1,442	Generic Decay	0.17	0.17	0.00	0.69	0.0044	0
											Total:	**0.93**	**0.0082**	**0.076**

Onsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	508	256	256	Diesel BUG	0.120	0.310	0.31	0.0035	2.1E-04	0
16284	Verizon Wireless	0.019	4.2E-04	0	505	253	253	Diesel BUG	0.120	0.310	0.31	0.0022	1.3E-04	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	834	618	618	Diesel BUG	0	0	0.090	0.0026	1.4E-04	0
17073	T-Mobile	0.17	0.0038	0	637	569	569	Diesel BUG	0	0.100	0.100	0	3.8E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	614	598	598	Generic Decay	0.28	0.29	0.29	0.0012	8.8E-06	8.5E-05
22778	Solstice Press[3]	--	--	--	1,124	861	861	Generic Decay	0	0	0.17	0	0	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	827	608	608	Diesel BUG	0	0	0.090	0.024	7.1E-04	0
5133	Mr. Espresso	0.28	0.0025	0.25	1,073	936	936	Generic Decay	0	0	0	0	3.7E-04	0.037
11887	Dynegy Oakland LLC	4.0	0.026	4.2	797	977	977	Generic Decay	0	0	0	0.79	0.0035	0.57
											Total:	**0.82**	**0.0055**	**0.60**

Notes:

1. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the Maritime Reservation Scenario MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD.
2. Unscaled health risk values were estimated using facility emissions provided by BAAQMD and BAAQMD's Health Risk Calculator Tool. These values were scaled by distance using the diesel IC engines multiplier tool or the BAAQMD's generic distance decay curve. For sources that are greater than 1,000 feet from the MEIR, the decay factor is 0.
3. No emissions or health impact values were provided for Solstice Press.

Abbreviations:

BUG - backup generator
IC - internal combustion
MEIR - maximally exposed individual receptor
$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter

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Table 91
Summary of Nearby Roadway Impacts at Maritime Reservation Scenario MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Roadway	Reported ADT[1]	Section of Roadway measured	Centroid of Road Segment		Distance from Roadway for $PM_{2.5}$ MEIR	MEIR Direction from Street[2]	BAAQMD Roadway Screening Analysis Tables[2]
			UTMx	UTMy			$PM_{2.5}$ Concentration
	(vehicles/day)		m	m	(ft)		($\mu g/m^3$)
Brush Street	18,550	From 7th Street to 11th Street	563,267	4,184,130	745	East	0.039
5th Street	13,850	From Castro Street to MLK	563,189	4,183,969	164	South	0.057
7th Street	18,050	From Brush Street to Castro Street	563,396	4,184,074	869	South	0.014
						Total	**0.11**

Notes:

1. ADT for existing conditions of the surface streets were obtained from Fehr & Peers. Only roadways with traffic volumes between 10,000 and 30,000 ADT were included in this analysis. There were no roadways with traffic volumes between 10,000 and 30,000 ADT within 1,000 feet of the offsite cancer Maritime Reservation Scenario MEIR so cancer values are not shown above. There were no roadways with traffic volumes between 10,000 and 30,000 ADT of the onsite Maritime Reservation Scenario MEIR for any health risks.
2. Screening values for the surface streets were obtained from BAAQMD Roadway Screening Analysis Calculator (BAAQMD 2015). The risk and concentrations depends on the direction of the road from the project (e.g., due to wind patterns).

Abbreviations:

$\mu g/m^3$ - microgram per cubic meter
ADT - average daily traffic
BAAQMD - Bay Area Air Quality Management District
CEQA - California Environmental Quality Act
ft - feet
HI - hazard index
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter
MEIR - maximally exposed individual receptor

References:

BAAQMD. 2015. Roadway Screening Analysis Calculator. Available online at:
http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/screeningcalculator_4_16_15-xlsx.xlsx?la=en

Table 92
Summary of Cumulative Impacts at Maritime Reservation Scenario MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Lifetime Excess Cancer Risk[1] (in a million)	Noncancer Chronic HI_1	$PM_{2.5}$ Concentration[1] ($\mu g/m^3$)	Lifetime Excess Cancer Risk[1] (in a million)	Noncancer Chronic HI_1	$PM_{2.5}$ Concentration[1] ($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0082	0.076	0.82	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	16	--	0.27
Major Streets[4,5]	4.1	--	0.060	3.6	--	0.029
Railways[4]	67	--	0.017	26	--	0.082
Project Construction	8.4	0.0064	0.0035	3.6	0.0024	0.0095
Project Operational Generators	0.23	3.7E-05	6.5E-05	0.10	3.1E-05	1.6E-04
Project Operational Traffic	1.4	7.3E-04	0.18	0.17	0.0011	0.020
Project Operational TRUs	0.035	9.3E-06	1.1E-05	0.031	2.3E-06	1.1E-05
Existing Howard Terminal Operation	-2.2	-5.9E-04	-6.4E-04	--	--	--
Total	**99**	**0.015**	**1.0**	**51**	**0.0090**	**1.0**

Notes:

1. Details for each source are shown in the preceding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Maritime Reservation Scenario area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

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Table 93
Detailed Summary of 2024 West Oakland Cumulative Impacts at Maritime Reservation Scenario MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Mitigated Project	Construction	3.6	0.0095	8.4	0.0035
	Operational Generators	0.10	1.6E-04	0.23	6.5E-05
	Operational Traffic	0.17	0.020	1.4	0.18
	Operational TRUs	0.031	1.1E-05	0.035	1.1E-05
	Existing Howard Terminal Operation	--	--	-2.2	-6.4E-04
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.10
	Light Heavy Duty Trucks	0.61	0.0054	0.71	0.0088
	Heavy and Medium Duty Trucks	1.5	0.012	1.7	0.019
	Non-Truck Vehicles	1.3	0.12	1.5	0.24
Other	Ferries	15	0.018	12	0.011
	Schnitzer Ships	4.9	0.0058	4.1	0.0041
	Schnitzer Trucks	0.034	0.0041	0.022	0.0016
	Truck Related Business	17	0.0022	1.8	7.3E-04
Permitted	CASS	9.6E-05	0.0029	1.0E-04	0.0034
	CA Waste	--	0.0088	--	0.010
	California Cereal	3.0E-06	0.022	3.0E-06	0.031
	Dynegy	0.0044	3.8E-04	0.010	8.2E-04
	EBMUD	0.66	0.025	0.69	0.027
	Other Facilities	1.3	0.048	1.5	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	26	0.35	22	0.16
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.9	0.0037	2.9	0.0029
	Bunkering Tugs and Pumps	4.1	0.0047	3.4	0.0034
	Cargo Handling	6.7	0.0091	6.5	0.0079
	Drayage Trucks	1.5	0.021	2.4	0.026
	Dredging	10	0.013	8.8	0.0093
	Road Dust	--	0.017	--	0.015
	Harbor Craft	70	0.076	54	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	1.0	0.0013	1.0	0.0014
	OGV Berthing	22	0.058	21	0.052
	OGV Maneuvering	30	0.038	27	0.031
Rail	Rail Lines	39	0.10	121	0.026
	Railyard	28	0.035	27	0.029
Street	Road Dust	--	1.2	--	1.7
	Light Heavy Duty Trucks	0.63	0.0056	0.90	0.010
	Heavy and Medium Duty Trucks	0.87	0.014	1.2	0.051
	Non-Truck Vehicles	1.4	0.11	1.9	0.19
	Total	**290**	**2.4**	**334**	**3.1**

Table 93
Detailed Summary of 2024 West Oakland Cumulative Impacts at Maritime Reservation Scenario MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Health impact values are shown for the mitigated Maritime Reservation Scenario MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.
2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table 94

Summary of 2024 West Oakland Cumulative Impacts at Maritime Reservation Scenario MEIR

Oakland Waterfront Ballpark District Project

Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Mitigated Project	3.9	0.03	7.9	0.19
Highway	3.4	0.19	4.0	0.38
Other	32	0.020	14	0.012
Permitted	2.0	0.14	2.2	0.15
Dynegy	0.0044	3.8E-04	0.010	8.2E-04
Schnitzer	31	0.36	26	0.16
Port	148	0.24	128	0.20
Rail	67	0.137	148	0.05
Street	2.9	1.29	4.0	2.0
Total	**290**	**2.4**	**334**	**3.1**

Notes:

1. Health impact values are shown for the mitigated Maritime Reservation Scenario MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table 95
Variant Construction Phasing Schedule
Oakland Waterfront Ballpark District Project
Oakland, California

Variant	Construction Area[1]	Construction Activity[1]	Construction Schedule[1]		
			Phase Start Date	Phase End Date	Number of Work Days
Peaker Power Plant Variant	Peaker Power Plant	Building Renovation	2/24/2022	2/28/2023	264
	Tank Structure/Parcel	Demolition	7/1/2021	9/1/2021	45
		Grading and Site Preparation	11/15/2021	11/25/2021	9
Aerial Gondola Variant	Aerial Gondola	Grading and Site Preparation	9/2/2021	12/22/2021	80
		Foundations and Structure	12/23/2021	6/10/2022	122
		Architectural Finish/Escalators	6/13/2022	10/28/2022	100
		Cabling and Equipment	10/31/2022	3/31/2023	110

Notes:

1. Construction areas, activities, and schedule were provided by the Project sponsor.

Table 96
Variant Construction Off-Road Equipment List
Oakland Waterfront Ballpark District Project
Oakland, California

Variant	Construction Area	Construction Activity	Equipment Type[1,2]	CalEEMod® Equipment Type	Fuel[1]	Number[1]	HP[1]	kW[1]	Load Factor[3]	Equipment Start Date[1,4]	Equipment End Date[1,4]	Number of Days	Hours per Day[1]	Utilizations for Duration[5]	Equipment Tier[6]
Peaker Power Plant Variant	Peaker Power Plant	Building Renovation	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	--	0.73	2/24/2022	2/28/2023	264	8	10%	Tier 4 Final
			Gradall-type Forklifts	Forklifts	Diesel	2	93	--	0.20	2/24/2022	2/28/2023	264	8	80%	Tier 4 Final
			Air Compressors	Air Compressors	Electric	1	--	7.5	0.48	2/24/2022	2/28/2023	264	8	30%	--
			Drywall stud impact guns	Other Construction Equipment	Electric	2	--	1	0.42	2/24/2022	2/28/2023	264	8	35%	--
			Bobcat	Rubber Tired Loaders	Diesel	1	71	--	0.36	2/24/2022	2/28/2023	264	8	40%	Tier 4 Final
			Cranes	Cranes	Diesel	1	226	--	0.29	2/24/2022	2/28/2023	264	8	50%	Tier 4 Final
	Tank Structure/Parcel	Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	2	81	--	0.73	7/1/2021	9/1/2021	45	8	50%	Tier 4 Final
			Excavators	Excavators	Diesel	2	158	--	0.38	7/1/2021	9/1/2021	45	8	80%	Tier 4 Final
			Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	--	0.37	7/1/2021	9/1/2021	45	8	100%	Tier 4 Final
		Grading and Site Preparation	Scrapers/Blades/Rollers	Scrapers	Diesel	2	500	--	0.48	11/15/2021	11/25/2021	9	8	90%	Tier 4 Final
Aerial Gondola Variant	Aerial Gondola	Grading and Site Preparation	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	1	97	--	0.37	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
			Scrapers/Blades/Rollers	Scrapers	Diesel	1	500	--	0.48	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
			Water Trucks	Off-highway trucks	Diesel	1	402	--	0.38	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
			Generators	Generator Sets	Diesel	1	84	--	0.74	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
			Excavators	Excavators	Diesel	2	162	--	0.38	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
			Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	1	97	--	0.37	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
			Rubber Tired Loaders	Rubber Tired Loaders	Diesel	1	199	--	0.36	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
			Water Trucks	Off-highway trucks	Diesel	1	402	--	0.38	9/2/2021	12/22/2021	80	8	75%	Tier 4 Final
		Foundations and Structure	Pile Driving Rigs	Bore/Drill Rigs	Diesel	2	206	--	0.50	12/23/2021	6/10/2022	122	8	33%	Tier 4 Final
			Concrete Boom Pumps	Other Construction Equipment	Diesel	2	480	--	0.42	12/23/2021	6/10/2022	122	8	75%	Tier 4 Final
			Bobcat	Rubber Tired Loaders	Diesel	2	71	--	0.36	12/23/2021	6/10/2022	122	8	85%	Tier 4 Final
			Small Excavator	Excavators	Diesel	2	404	--	0.38	12/23/2021	6/10/2022	122	8	25%	Tier 4 Final
			Large Excavator	Excavators	Diesel	2	523	--	0.38	12/23/2021	6/10/2022	122	8	25%	Tier 4 Final
			Crawler Cranes	Cranes	Diesel	2	530	--	0.29	12/23/2021	6/10/2022	122	8	50%	Tier 4 Final
			Gradall-type Forklifts	Forklifts	Diesel	2	93	--	0.20	12/23/2021	6/10/2022	122	8	50%	Tier 4 Final
			Cutting/chopping saws	Other Construction Equipment	Electric	2	--	5	0.42	12/23/2021	6/10/2022	122	8	100%	--
		Architectural Finish/Escalators	Air Compressors	Air Compressors	Diesel	2	125	--	0.48	6/13/2022	10/28/2022	100	8	85%	Tier 4 Final
			Air Compressors	Air Compressors	Electric	2	--	7.5	0.48	6/13/2022	10/28/2022	100	8	85%	--
		Cabling and Equipment	Cranes	Cranes	Diesel	1	226	--	0.29	10/31/2022	3/31/2023	110	8	75%	Tier 4 Final
			Crawler Cranes	Cranes	Diesel	2	530	--	0.29	10/31/2022	3/31/2023	110	8	75%	Tier 4 Final
			Mobile Cranes	Cranes	Diesel	2	530	--	0.29	10/31/2022	3/31/2023	110	8	75%	Tier 4 Final
			Gradall-type Forklifts	Forklifts	Diesel	2	93	--	0.20	10/31/2022	3/31/2023	110	8	50%	Tier 4 Final

Notes:

1. Construction equipment list, fuel, number, size in HP or kW, start and end dates, hours of operation per day, and utilization were provided by the Project sponsor.
2. Water truck emissions are calculated in Table 98.
3. Load factors were assumed to be the CalEEMod® default values.
4. Equipment was assumed to operate throughout the entirety of the phase.
5. Utilizations for duration represent the usage percentage during the indicated equipment date range. Utilization percentage is multiplied by the number of hours per day in the calculation of off-road emissions.
6. This analysis assumes Tier 4 Final engines for all Variant construction. Dashes indicate there is no applicable tier for electric equipment.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
HP - horsepower
kW - kilowatts

Table 97
Variant Construction Water Truck Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area[1]	Construction Activity	Year	Water Truck Use Data[2]				Water Truck Emissions[3,4]						
			Miles	Idle-hrs	Starts	Hours	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2	CH_4	CO_2e
							(lbs)				(MT)		
Aerial Gondola	Grading and Site Preparation	2021	9,600	32	960	960	18	148	5.8	3.9	19	3.8E-04	19

Notes:

1. No water truck emissions were assumed for the Peaker Power Plant Variant.
2. Water truck usage data comes from the following assumptions:
   - Number of water trucks and schedule are provided in Table 96.
   - Hours are calculated as number of equipment * utilization percent * number of construction days * hours/day * load factor as provided in Table 96.
   - Starts are calculated as hours * 1 start/hour.
   - Miles are calculated as hours * 10 miles per hour.
   - Idle-hrs are calculated as starts * 1 idle/start * 2 minutes/idle. Idling is restricted to 2 minutes/idle.
3. Emission factors are located in Table 9 under the fleet mix "Water Trucks".
4. Global warming potentials used in the calculation of CO_2e are 1 and 25 for CO_2 and CH_4, respectively.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
hrs - hours
lb - pound
MT - metric ton
NOx - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
ROG - reactive organic gases
CO_2e - carbon dioxide equivalent

Table 98
Variant Construction Water Use Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area[1]	Construction Activity	Year	Number of Work Days	Average Acreage Needing Water[2] (acres)	Water Usage[2] (gal/acre/ day)	Number of Water Trucks	Total Water Usage (million gal)	Outdoor Water Electric Intensity Factor[3] (kWh/million gal)	Electricity Usage (MWh)	Total CO_2e Emissions[4] (MT)
Aerial Gondola	Grading and Site Preparation	2021	80	7.2	8,000	2	4.6	3,500	16	2.2
									16	**2.2**

Notes:

1. No water truck emissions were assumed for the Peaker Power Plant Variant.
2. Acreage is the acreage of the phase area. Water usage is assumed to be similar to the Project with 8,000 gal/acre/day for Grading and Site Preparation and 4,000 gal/acre/day for all other subphases.
3. Electric intensity factors were taken from Table 9.2 in Appendix D of the CalEEMod User's Guide as the sum of supply water, treat water and distribute water electric intensity factors. Since the water use reported here is only for fugitive dust control, indoor water use-related emissions and wastewater treatment-related emissions are not estimated here.
4. Greenhouse gas emission factor calculations are shown in Table 21. For CO_2, the 2020 emission factor was conservatively used (297 lb/MWh) for all construction years. For CH_4 and N_2O, emission factors were retrieved from eGRID2018, Table 1 for the CAMX subregion (0.033, and 0.004 lb/MWh, respectively).

Abbreviations:

CalEEMod® - California Emissions Estimator Model
gal - gallons
kWh - kilowatt-hours
lb - pound
MT - metric tonnes
MWh - megawatt-hours

References:

CalEEMod User's Guide (Available online at: http://www.aqmd.gov/caleemod/user's-guide)
PG&E, Pacific Gas and Electric - Gas and power company for California (https://www.pge.com)
USEPA. 2018. eGRID2016 Summary Tables. Available at: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid.

Table 99
Variant Construction Trip Generation Rates
Oakland Waterfront Ballpark District Project
Oakland, California

Variant	Construction Area	Construction Activity	Construction One-Way Trips per Type and Activity[1]		
			Worker	Vendor	Hauling
Peaker Power Plant Variant	Peaker Power Plant	Building Renovation	26,400	5,280	0
	Tank Structure/Parcel	Demolition	675	675	400
		Grading and Site Preparation	45	45	0
Aerial Gondola Variant	Aerial Gondola	Grading and Site Preparation	1,920	0	50
		Foundations and Structure	4,392	2,440	0
		Architectural Finish/Escalators	8,000	600	0
		Cabling and Equipment	5,500	660	0

Default Trip Length (miles)[2]	10.8	7.3	20
Fleet Mix Assumptions[3]	50% LDA, 25% LDT1, and 25% LDT2, consistent with CalEEMod	T6 (MHDT) and T7 (HHDT), consistent with CalEEMod	T7 (HHDT), consistent with CalEEMod

Notes:

1. Worker, vendor, and hauling trips for each activity were provided by the Project sponsor.
2. CalEEMod® default trip lengths were used for each trip type.
3. CalEEMod® default fleet mix assumptions were used for each trip type.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
LDA - All Passenger Vehicles
LDT1 - Light-Duty Trucks
LDT2 - Light-Duty Trucks
MHDT - Medium-Heavy-Duty Trucks
HHDT - Heavy-Heavy-Duty Trucks

Table 100
Variant Construction Off-Road Electric Equipment Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Equipment Type[1]	CalEEMod® Equipment Type	Fuel[1]	Number[1]	HP[1]	kW[1]	Load Factor[2]	Equipment Start Date[1]	Equipment End Date[1]	Number of Days	Hours per Day[1]	Utilizations for Duration[1]	Electricity Usage[3] (kWh)
Peaker Power Plant	Building Renovation	Air Compressors	Air Compressors	Electric	1	10	7.5	0.48	2/24/2022	2/28/2023	264	8	30%	2,268
		Drywall stud impact guns	Other Construction Equipment	Electric	2	1.3	1.0	0.42	2/24/2022	2/28/2023	264	8	35%	621
Aerial Gondola	Foundations and Structure	Cutting/chopping saws	Other Construction Equipment	Electric	2	7	5.0	0.42	12/23/2021	6/10/2022	122	8	100%	4,099
	Architectural Finish/Escalators	Air Compressors	Air Compressors	Electric	2	10	7.5	0.48	6/13/2022	10/28/2022	100	8	85%	4,868
													Total	11,856

Construction Area	Construction Activity	Year	Electricity Usage[4] (kWh)	Emissions (MT/year)[5,6]			
				CO_2	CH_4	N_2O	CO_2e
Peaker Power Plant	Building Renovation	2022	2,435	0.33	3.6E-05	4.4E-06	0.33
		2023	454	0.061	6.8E-06	8.2E-07	0.062
Aerial Gondola	Foundations and Structure	2021	218	0.029	3.3E-06	4.0E-07	0.030
		2022	3,881	0.52	5.8E-05	7.0E-06	0.53
	Architectural Finish/Escalators	2022	4,868	0.66	7.3E-05	8.8E-06	0.66
						Total	1.6

Notes:

1. Construction equipment list, fuel, number, size in HP or kW, start and end dates, hours of operation per day, and utilization were provided by the Project sponsor. Utilization refers to the percentage of the phase that equipment is expected to be in use.
2. Equipment load factors were estimated from the Air Resource Board's OFFROAD database.
3. Electricity Usage was calculated using the following equation:

   Electricity Usage = Σ(N * kW * LF * Hr * U)

   N: number of Equipment Pieces
   kW: equipment power
   LF: Load Factor
   U: Utilization

4. Electricity usage split by year using phase length.
5. Greenhouse gas emission factor calculations are shown in Table 21. For CO_2, the 2020 emission factor was conservatively used (297 lb/Mwh) for all construction years. For CH_4 and N_2O, emission factors were retrieved from eGRID2018, Table 1 for the CAMX subregion (0.033, and 0.004 lb/MWh, respectively).
6. Global warming potentials used in the calculation of CO2e are 1, 25 and 298 for CO2, CH4 and N2O, respectively, and are from IPCC AR4.

Abbreviations:

AR4 - Fourth Assessment Report
IPCC - Intergovernmental Panel on Climate Change
CalEEMod - California Emissions Estimator Model
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
HP - horsepower
KWh - kilowatt hour(s)
lb - pound(s)
kw - kilowatt
MT - metric ton(s)
MWh - megawatt hour(s)
N_2O - nitrous oxide

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Available online at
IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. Available online at: https://www.ipcc.ch/report/ar4/wg1/
USEPA. 2018. eGRID2016 Summary Tables. Available at: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid.

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Table 101
Summary of Variant Construction Criteria Air Pollutant Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Variant	Construction Area	Construction Activity	Year	Emissions (lbs/day)[1,2]				Emissions (lbs/year)[1,2]			
				ROG	NOx	PM_{10}	$PM_{2.5}$	ROG	NOx	PM_{10}	$PM_{2.5}$
Peaker Power Plant Variant[3]	Peaker Power Plant	Building Renovation	2022	0.36	1.8	0.023	0.022	92	474	6.0	5.8
			2023	0.061	0.30	0.0033	0.0032	16	79	0.86	0.84
	Tank Structure/Parcel	Demolition	2021	0.068	0.65	0.013	0.012	18	170	3.3	3.2
		Grading and Site Preparation	2021	0.017	0.081	0.0023	0.0023	4.4	21	0.60	0.60
Aerial Gondola Variant	Aerial Gondola	Grading and Site Preparation	2021	0.23	1.2	0.042	0.035	60	319	11	9.0
		Foundations and Structure	2021	0.027	0.18	0.0034	0.0034	7.0	47	0.89	0.88
			2022	0.43	2.9	0.052	0.051	111	745	13	13
		Architectural Finish/Escalators	2022	0.13	0.37	0.0082	0.0080	35	97	2.1	2.1
		Cabling and Equipment	2022	0.12	0.49	0.014	0.014	32	128	3.6	3.6
			2023	0.17	0.69	0.019	0.019	45	180	5.1	5.0

Notes:

1. Emissions sources include gasoline and diesel on-road vehicles and diesel off-road equipment.
2. Emissions reflect Tier 4 Final equipment.
3. The Peaker Power Plant and Tank Structure/Parcel are part of the same variant. However, their associated construction emissions occur on two adjacent plots of land and represent different construction activities.

Abbreviations:

lbs - pounds

NOx - oxides of nitrogen

PM_{10} - particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter

ROG - reactive organic gases

Table 102
Summary of Variant Construction Greenhouse Gas Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Variant	Construction Area	Construction Activity	Year	CO_2e Emissions (MT/year)[1,2,3]
Peaker Power Plant Variant[4]	Peaker Power Plant	Building Renovation	2022	185
			2023	34
	Tank Structure/Parcel	Demolition	2021	63
		Grading and Site Preparation	2021	16
Aerial Gondola	Aerial Gondola	Grading and Site Preparation	2021	163
		Foundations and Structure	2021	22
			2022	359
		Architectural Finish/Escalators	2022	79
		Cabling and Equipment	2022	100
			2023	144

Notes:

1. Global warming potentials used in the calculation of CO_2e are 1, 25 and 298 for CO_2, CH_4 and N_2O, respectively, and are from IPCC AR4.
2. Emissions sources include gasoline and diesel on-road vehicles and electric and diesel off-road equipment.
3. GHG emissions are not affected by off-road equipment engine tier selection.
4. The Peaker Power Plant and Tank Structure/Parcel are part of the same variant. However, their associated construction emissions occur on two adjacent plots of land and represent different construction activities.

Abbreviations:

AR4 - Fourth Assessment Report
CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide Equivalent
GHG - greenhouse gas
IPCC - Intergovernmental Panel on Climate Change
MT - metric ton
N_2O - Nitrogen Oxide

References:

IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. Available online at: https://www.ipcc.ch/report/ar4/wg1/

Table 103
Emissions from Aerial Gondola Energy Usage
Oakland Waterfront Ballpark District Project
Oakland, California

Aerial Gondola Station	Annual Electricity Use (kWh)[1]
Jack London Station	3,387,500
10th St. Station	1,456,250
Tower 3rd St. Station	43,050
Total	4,886,800

Aerial Gondola Energy Use

Electricity Use Rate (kWh/yr)	Annual Electricity Use (MWh/yr)	Natural Gas Use Rate (kBTU/unit-yr)	Annual Natural Gas Use (MMBtu/yr)
4,886,800	4,887	--	--

Aerial Gondola Energy Use Emissions[2]

Emissions (tons/yr)				CO_2e Emissions[3] (MT CO_2e/yr)
ROG	NOx	PM_{10}	$PM_{2.5}$	
0	0	0	0	477

Notes:

1. Electricity use from the Aerial Gondola and associated building loads was provided by SCJ Alliance on 4/3/2019.
2. CAPs emissions for Aerial Gondola energy use are zero because the energy is electricity only.
3. Greenhouse gas emission factor calculations are shown in Table 21. For CO_2, the 2027 emission factor was used (213 lb/MWh) since 2027 is the first year of Full Buildout. For CH_4 and N_2O, emission factors were retrieved from eGRID2018, Table 1 for the CAMX subregion (0.033, and 0.004 lb/MWh, respectively).

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CO_2e - carbon dioxide equivalents
kBTU - thousand British Thermal Unit
kWh - kilowatt hour
MMBTU - million British Thermal Unit
MWh - megawatt hour
MT - metric ton
NO_X - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
St. - street
yr - year

References:

CalEEMod Version 2016.3.2 Available Online at: http://www.caleemod.com

SCJ Alliance. 2019. Technical Memorandum: Oakland Gondola Electric Service. April 3.

USEPA. 2018. eGRID2016 Summary Tables. Available at: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid.

Table 104
Summary of Emissions from Emergency Generators for Variants
Oakland Waterfront Ballpark District Project
Oakland, California

Generator Information

Variant	Location[1]	Number of Generators	Engine Controls		Size[1]		Fuel Type	Annual Operation[2]
			Unmitigated	Mitigated	kW	HP		hr/yr
Aerial Gondola	Jack London Square Station	1	ATCM	Tier 4	1,500	2,012	Diesel	50
	Convention Center Station	1	ATCM	Tier 4	750	1,006	Diesel	50
	Tower	1	ATCM	Tier 4	150	201	Diesel	50
Peaker Power Plant	Fuel Tank Parcel	1	ATCM	Tier 4	250	335	Diesel	50 / 20

Unmitigated Emissions

Variant	Location	Annual Unmitigated Emissions (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Aerial Gondola	Jack London Square Station	0.029	0.028	0.51	0.016	0.016	0.016	53
	Convention Center Station	0.014	0.014	0.25	0.0080	0.0080	0.0078	26
	Tower	0.0018	0.0018	0.032	0.0016	0.0016	0.0016	5.3
Peaker Power Plant	Fuel Tank Parcel	0.0030	0.0030	0.053	0.0027	0.0027	0.0026	8.8
	Total Emissions	**0.048**	**0.047**	**0.84**	**0.028**	**0.028**	**0.028**	**93**

Mitigated Emissions

Variant	Location	Annual Mitigated Emissions (ton/yr)						(MT/yr)
		TOG	ROG	NO_x	DPM	PM_{10}	$PM_{2.5}$	CO_2e
Aerial Gondola	Jack London Square Station	0.017	0.017	0.055	0.0022	0.0022	0.0022	53
	Convention Center Station	0.0084	0.0083	0.028	0.0011	0.0011	0.0011	26
	Tower	0.0017	0.0017	0.0033	1.7E-04	1.7E-04	1.7E-04	5.3
Peaker Power Plant	Fuel Tank Parcel	0.0011	0.0011	0.0022	1.1E-04	1.1E-04	1.1E-04	3.5
	Total Emissions	**0.028**	**0.028**	**0.089**	**0.0036**	**0.0036**	**0.0036**	**88**

Notes:

1. The sizes and locations of the emergency generators were provided by Meyers+ Engineering.
2. Operation for routine maintenance and testing for the Aerial Gondola generators is conservatively assumed to be 50 hours per year, the maximum allowable by the Airborne Toxics Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115). Operation for routine maintenance and testing for the Fuel Tank Parcel generator is assumed to be 50 hours per year in the unmitigated scenario, and 20 hours per year in the mitigated scenario.

Abbreviations:

ATCM - Airborne Toxics Control Measure
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
DPM - diesel particulate matter
g - grams
hp - horsepower
hr - hour
kW - kilowatt
MT - metric tons
NOx - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
TOG - total organic gases
yr - year

References:

California Air Resources Board. Airborne Toxic Control Measures (ATCM), 17 CCR § 93115. Available online at: https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf

California Building Code, Part 2, Volume 2, Chapter 27 - Electrical. Available online at: https://up.codes/viewer/california/ca-building-code-2016-v2/chapter/27/electrical#27.

USEPA. 1995. AP 42, Volume I, Fifth Edition. §3.4. Large Stationary Diesel and All Stationary Dual-Fuel Engines. Available online at: http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf

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Table 105
Mobile Emissions Reductions from Aerial Gondola Variant
Oakland Waterfront Ballpark District Project
Oakland, California

Aerial Gondola Trip Rate and VMT Reduction

Land Use and Scenario			Gondola VTR[1] (%)	Annual Trip Reduction (trips/year)	Annual VMT Reduction (mi/year)
Ballpark Stadium	A's Games	Weekday Evening	3%	-31,857	-436,441
		Weekday Day	3%	-11,088	-151,906
		Weekend	2%	-14,634	-212,193
	Other Events[2]	Concerts	3%	-7,236	-85,385
		Other	3%	-6,300	-74,340
		Corporate/ Community	3%	-4,500	-53,100
		Plaza	3%	-1,392	-16,426
	A's Games Deliveries		0%	0	0
	Event Deliveries		0%	0	0
	Arena Management[3]		13%	-1,238	-11,765
	Sports Team Management[3]		13%	-5,821	-55,297
Residential[3]			13%	-284,037	-3,408,444
Office[3]			13%	-280,878	-3,370,536
Retail[3]			13%	-220,974	-2,651,688
Restaurant[3]			13%	-257,556	-3,090,672
Hotel[3]			13%	-94,237	-1,130,844
Performance Venue		Attendees[3]	13%	-31,200	-374,400
		Deliveries	0%	0	0
			0%	0	0
VMT Reductions from Aerial Gondola					**-15,123,436**

Scenario	Fugitive PM_{10}	Fugitive $PM_{2.5}$	Units
Emission Factor	2.6E-04	3.9E-05	lb/VMT
Aerial Gondola Emissions Reduction	-2.0	-0.30	tons/year

Aerial Gondola Emissions Reductions

Trip Type	Mobile Exhaust Emissions Reduction from Aerial Gondola Use[4]				
	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2e
	[tons/yr]				[MT/yr]
A's Games	-0.065	-0.048	-0.044	-0.018	-218
Events	-0.019	-0.013	-0.012	-0.0048	-58
Non-Residential Ancillary	-0.86	-2.9	-0.63	-0.27	-3,633
Residential Ancillary	-0.28	-0.96	-0.20	-0.086	-1,178
Total	**-1.2**	**-3.9**	**-0.89**	**-0.38**	**-5,086**

Notes:

1. Aerial Gondola Vehicle Trip Reduction (VTR) values were provided by Fehr & Peers.
2. Other, corporate/community, and plaza activities at ballpark are assumed to have the same VTR % as concerts.
3. VTR values based on a weighted average of weekday and weekend values for Full Buildout non-ballpark development activities from Fehr & Peers.
4. Mobile exhaust emissions reductions from Aerial Gondola Use are calculated using the mobile emission factors shown in Table 25.

Abbreviations:

CalEEMod - California Emissions Estimator Model
CO_2e - carbon dioxide equivalents
lb - pound
mi - mile
MT - metric ton
NO_X - oxides of nitrogen
PM - particulate matter
ROG - reactive organic gases
VMT - vehicle miles traveled
VTR - vehicle trip reduction
yr - year

References:

Fehr & Peers (F&P). 2019. Memorandum: Howard Terminal Project AB 734 Analysis. August 21. Table 25 (Change in VMT from Additional TMP Measures).

Table 107
Direct GHG Emissions from Fuel Consumption at the Peaker Power Plant
Oakland Waterfront Ballpark District Project
Oakland, California

CO_2 Intensity of Jet Fuel Combustion [1]

72.22	kg CO_2/MMBtu
159	lb CO_2/MMBtu

Historical Power Generation of Peaker Power Plant (2010-2018)

Year	Electricity Fuel Consumption (MMBTU)[2]	Net Electricity Generation (MWh)[2]	Electricity energy intensity (MMBTU/MWh)	CO_2 intensity (lb CO_2/MWh)
2010	147,254	10,746	13.7	2,181
2011	85,493	6,144	13.9	2,215
2012	164,195	11,966	13.7	2,184
2013	40,744	2,996	13.6	2,165
2014	109,277	7,404	14.8	2,349
2015	330,211	22,938	14.4	2,291
2016	83,245	5,625	14.8	2,356
2017	29,287	2,009	14.6	2,320
2018	65,556	3,852	17.0	2,709
Average		**8,187**	**--**	**2,308**

Greenhouse Gas Energy Emission Factors

Greenhouse Gas	CO_2	CH_4	N_2O	CO_2e	Units
Global Warming Potential[3]	1	25	298	-	CO_2e
Peaker Power Plant (2010-2018 average)[3]	2,308	0.029	0.0062	2,310	lb/MWh
Estimated Intensity Factor for Grid-Averaged Electricity Delivered in 2027[4]	--	--	--	215	lb/MWh
Difference in GHG Intensity[5]				2,095	lb/MWh

Avoided GHG Emissions from Peaker Power Conversion

Parameter	Low	Average	High	Units
Range of Peaker Power Electricity Generation over 2010-2018	2,009	8,187	22,938	MWh/year
GHG Avoided[5]	1,910	7,783	21,807	MT CO_2e/year

Notes:

1. The carbon intensity of jet fuel is based on data from US EPA (2018), "Emission Factors for Greenhouse Gas Inventories".
2. Data from Form EIA-923 detailed data for 2010-2018 for Dynegy Oakland Power Plant.
3. Data obtained from The Climate Registry CRIS Public Reports.
4. The intensity factor for 2027 is estimated using a linear interpolation between the electricity intensity factors derived in Table 21. This intensity factor is derived from historic PG&E data and therefore includes the jet fuel peaker plant. Since the Peaker Plant is being decommissioned, it is likely that this factor would be lowered, causing a larger reduction in emissions. This reduction is accounted for in the Indirect Power Plant calculation presented in Table 108.
5. CO_2e avoided is calculated using the minimum, average, and maximum electricity generated annually by Peaker Power Plant over 2010-2018 multiplied by the difference in CO_2e intensity between the Peaker Power Plant and PG&E. Peaker Power Plant's CO_2e intensity is estimated as grid-averaged electricity, based on information provided by Vistra.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
GHG - greenhouse gas
kg - kilogram
lb - pound
MMBtu - million british thermal units
MT - metric ton
MWh - megawatt-hour
N_2O - nitrous oxide

References:

US EPA. 2018. Emission Factors for Greenhouse Gas Inventories. Available at: https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf
Form EIA-923. 2010-2018. Available at: https://www.eia.gov/electricity/data/eia923/
The Climate Registry CRIS Public Reports. Available at: https://www.theclimateregistry.org/our-members/cris-public-reports/

Table 108
Indirect GHG Emissions from Grid Improvements for the Peaker Power Plant Variant
Oakland Waterfront Ballpark District Project
Oakland, California

Electricity Stored by Battery

Input	Units
90	MW battery capacity[1]
4	hours of maximum storage per day[1]
40%	Annual Average Renewable Curtailment[2]
85%	Round Trip Efficiency[3]
45,068	MWh/yr Battery Electricity[3]

CO_2e Intensity Factor per Total Non-Renewable Electricity[4]

Input	Units
444	lbs CO_2/MWh delivered
0.029	lbs CH_4/MWh delivered
0.0062	lbs N_2O/MWh delivered
446	lbs CO_2e/MWh delivered

Avoided Indirect GHG Emissions from Peaker Power Plant Conversion

Parameter	Average	Units
Indirect GHG Avoided[5]	9,129	MT CO_2e/year

Notes:

1. According to Vistra, the battery energy storage system facility will be up to a maximum of 90 MW/360 MWh.
2. The annual average charge rate of the battery energy storage system is calculated based on the monthly curtailment of solar and wind renewable power sources from May 2014 through August 2019, as reported by the California Independent System Operator (CAISO 2019). The battery energy storage system is assumed to be fully charged using solar and wind power that would have otherwise been curtailed during peak curtailment months and proportionally lower charge rates during other months of the year. This is a conservative estimate as it is based on historical curtailment. As California increases solar and wind generation capacity, the battery energy storage system could potentially be fully charged even in the historically low-curtailment months.
3. The battery round-trip efficiency is the fraction of energy put into the storage that can be retrieved, and is a combination of the charge efficiency and discharge efficiency of the storage bank. More details available at the National Renewable Energy Laboratory (NREL).
4. The CO_2 intensity factor presented here is calculated in Table 21 for the non-RPS eligible electricity. The indirect effect of installing battery storage on-site is that this factor should be reduced, as non-RPS eligible fossil fueled peaker plants will no longer need to operate since battery storage will improve grid reliability. The CH_4 and N_2O intensity factors are consistent with the CalEEMod® version 2016.3.2. defaults for PG&E.

Table 108
Indirect GHG Emissions from Grid Improvements for the Peaker Power Plant Variant
Oakland Waterfront Ballpark District Project
Oakland, California

5. Battery energy storage systems have rapid response times and are more efficient compared to fossil-fueled peaker plants because they can store energy from renewable sources, which are often generated during off-peak demand periods and supply it back to the grid during peak demand periods. Thus, the installation of the energy storage system would result in a ramping down of existing fossil fueled peaker plants and/or eliminate the need for additional fossil fueled peaker plants to provide grid stability. The calculation assumes that the battery storage system is charged from renewable power sources such as solar and wind power generation during off-peak periods, based on average renewable curtailment rates from CAISO in the period from May 2014 through August 2019. The indirect GHG emissions presented here represent the avoided GHG emissions that would not occur across the grid as the battery energy storage system would provide improvements to grid reliability, promote the transition to more renewably sourced electricity, and eliminate the need for additional fossil fueled peaker plant operation.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
GHG - greenhouse gas
kg - kilogram
lb - pound
MT - metric ton
MWh - megawatt-hour
N_2O - nitrous oxide
PGE - Pacific Gas & Electric

References:

California Independent System Operator (CAISO 2019). Available at: http://www.caiso.com/informed/Pages/ManagingOversupply.aspx (Accessed: September 2019)
National Renewable Energy Laboratory (NREL). 2019. Cole, Wesley and Frazier, A. Will. June. Available online at: https://www.nrel.gov/docs/fy19osti/73222.pdf. Accessed February 2020.

Table 109
Summary of Peaker Power Plant Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions Avoided[1]								GHG Emissions Avoided[2]
	[ton/year]				[lb/day]				[MT/year]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Direct Emissions from Gas Turbines[3]	-0.23	-8.1	-0.70	-0.70	-1.3	-44	-3.9	-3.9	-7,783
Indirect Emissions from Grid Improvements[4]	--	--	--	--	--	--	--	--	-9,129
Emergency Standby Diesel Engine	-0.0017	-0.022	-0.0015	-0.0015	-0.010	-0.12	-0.0084	-0.0084	--
Wipe Cleaning[5]	-0.20	--	--	--	-1.1	--	--	--	--
Total Emissions from Plant Decommissioning	**-0.44**	**-8.1**	**-0.71**	**-0.71**	**-2.4**	**-44**	**-3.9**	**-3.9**	**-16,912**

Notes:

1. Average daily CAP emissions avoided calculated assuming 365 days of operation per year.
2. GHG emissions avoided are based on average historical operating conditions for facility from 2010-2018.
3. Gas turbine emissions based on average historical operating conditions for facility from 2010-2018.
4. Battery energy storage systems have rapid response times and are more efficient compared to fossil-fueled peaker plants because they can store energy from renewable sources during off-peak durations and supply them back during peak demand periods. The installation of the energy storage system would likely result in a ramping down of existing fossil fueled plants and/or eliminate the need for additional fossil fueled plants to provide grid stability and conditioning formerly supplemented by the Peaker Power Plant. The indirect GHG emissions presented here represent the reduced GHG emissions that occur across the grid as the battery energy storage system would provide improvements to grid reliability and promote the transition to more renewably sourced electricity.
5. Wipe cleaning emissions based on solvent evaporation rate and assume that 100% of solvent volatilizes.

Abbreviations:

CAP - Criteria Air Pollutant
lb - pounds
GHG - greenhouse gas
MT - metric ton
NOx - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
ROG - reactive organic gases

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Table 110
Summary of Operational Variant Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source[1]	Unmitigated CAP Emissions								GHG Emissions
	[ton/year]				[lb/day]				[MT/year]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Aerial Gondola - Energy	--	--	--	--	--	--	--	--	477
Aerial Gondola - Generators	0.044	0.79	0.026	0.025	0.24	4.3	0.14	0.14	84
Aerial Gondola - Mobile	-1.2	-3.9	-0.89	-0.38	-6.7	-22	-4.9	-2.1	-5,086
Aerial Gondola - Fugitive Dust	--	--	-2.0	-0.30	--	--	-11	-1.6	--
Peaker Power Plant Decommissioning	-0.44	-8.1	-0.71	-0.71	-2.4	-44	-3.9	-3.9	-16,912
Peaker Power Plant Generator	0.0030	0.053	0.0027	0.0026	0.016	0.29	0.015	0.014	8.8
Total Aerial Gondola Emissions	**-1.2**	**-3.1**	**-2.8**	**-0.6**	**-6.4**	**-17.2**	**-15.5**	**-3.5**	**-4,525**
Total Peaker Power Plant Emissions	**-0.4**	**-8.0**	**-0.7**	**-0.7**	**-2.4**	**-44.0**	**-3.8**	**-3.8**	**-16,903**

Emissions Source[1]	Mitigated CAP Emissions								GHG Emissions
	[ton/year]				[lb/day]				[MT/year]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Aerial Gondola - Energy	--	--	--	--	--	--	--	--	477
Aerial Gondola - Generators	0.027	0.086	0.0035	0.0035	0.15	0.47	0.019	0.019	84
Aerial Gondola - Mobile	-1.2	-3.9	-0.89	-0.38	-6.7	-22	-4.9	-2.1	-5,086
Aerial Gondola - Fugitive Dust	--	--	-2.0	-0.30	--	--	-11	-1.6	--
Peaker Power Plant Decommissioning	-0.44	-8.1	-0.71	-0.71	-2.4	-44	-3.9	-3.9	-16,912
Peaker Power Plant Generator	0.0011	0.0022	1.1E-04	1.1E-04	0.006	0.012	0.0006	0.0006	3.5
Total Aerial Gondola Emissions	**-1.2**	**-3.8**	**-2.9**	**-0.7**	**-6.5**	**-21.1**	**-15.6**	**-3.7**	**-4,525**
Total Peaker Power Plant Emissions	**-0.4**	**-8.1**	**-0.7**	**-0.7**	**-2.4**	**-44.3**	**-3.9**	**-3.9**	**-16,909**

Notes:

1. Emissions shown here are summarized from detailed calculations shown in Tables 103 through 109.

Abbreviations:

CAP - Criteria Air Pollutant
lb - pounds
GHG - greenhouse gas
MT - metric ton
NOx - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
ROG - reactive organic gases

Table 111
Project + Aerial Gondola Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	0.38	--	--	--	0.044	--	--
Gondola Generator[8]	2.2	0.51	0.63	8.8	0.026	0.071	0.078	0.090
Project Contribution[9]	201	67	592	5.0	2.1	8.3	1.6	3.6
Existing Howard Terminal Operation[10]	--	-2.2	--	-0.82	--	-2.2	--	-0.30
Total Variant+Project Contribution	**203**	**66**	**593**	**13**	**2.2**	**6.2**	**1.7**	**3.4**

	MEIR Location[11]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,640	562,940	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,380	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	2	1.8	38	1.8
Scenario[12]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   CF = Conversion Factor (mg/µg)
   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)
   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table 111
Project + Aerial Gondola Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Three additional generators are included in the Gondola variant. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Project impacts include the Project construction and operation, excluding impacts due to the Gondola variant.
10. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
11. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
12. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Because variant construction is completed in Phase 1, no variant construction impacts occur in Scenario 2. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 112
Project + Aerial Gondola Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Chronic Health Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	1.6E-04	--	--	--	--	--	--
Gondola Generator[8]	4.0E-05	--	4.0E-05	2.5E-04	7.6E-06	2.4E-05	7.6E-06	2.4E-05
Project Contribution[9]	0.18	0.034	0.16	0.0045	0.0021	0.0039	0.0014	0.0037
Existing Howard Terminal Operation[10]	--	-5.9E-04	--	-3.5E-04	--	-8.1E-05	--	-8.1E-05
Total Variant+Project Contribution	**0.18**	**0.034**	**0.16**	**0.0044**	**0.0021**	**0.0039**	**0.0014**	**0.0036**

MEIR Location[11]								
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,100	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,700	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2021	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to Chronic HI during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table 112
Project + Aerial Gondola Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Three additional generators are included in the Gondola variant. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Project impacts include the Project construction and operation, excluding impacts due to the Gondola variant.
10. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
11. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 113
Project + Aerial Gondola PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	--	--	--	--	--	--	--
Gondola Generator[8]	2.0E-04	8.6E-04	2.0E-04	8.6E-04	3.8E-05	1.2E-04	3.8E-05	1.2E-04
Project Contribution[9]	0.89	0.19	0.80	0.19	0.024	0.19	0.020	0.18
Existing Howard Terminal Operation[10]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Total Variant+Project Contribution	**0.89**	**0.19**	**0.80**	**0.19**	**0.024**	**0.19**	**0.020**	**0.18**

	MEIR Location[11]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emission Rate (g/s)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table 113
Project + Aerial Gondola PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Three additional generators are included in the Gondola variant. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Project impacts include the Project construction and operation, excluding impacts due to the Gondola variant.
10. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
11. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
PM - particulate matter
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 114
Project + Peaker Power Plant Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Peaker Power Plant Construction[7]	--	0.81	--	--	--	0.057	--	--
Peaker Power Plant Generator[8]	10	0.049	0.080	0.10	0.10	0.0013	0.10	0.0014
Downwash Effects[9]	69	0.13	0.20	0.25	3.0	0.0022	3.0	0.0024
Project Contribution[10]	201	67	592	11	1.7	8.3	1.6	3.6
Existing Howard Terminal Operation[11]	--	-2.2	--	-2.2	--	-2.2	--	-0.30
Total Variant+Project Contribution	**280**	**66**	**592**	**10**	**4.8**	**6.1**	**4.7**	**3.3**

MEIR by Scenario	MEIR Location[12]							
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
UTMx (m)	563,420	563,080	562,820	563,080	563,420	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,660	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	38	1.8	38	1.8
Scenario[13]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   CF = Conversion Factor (mg/µg)
   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)
   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops which are assumed to be tested and
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

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Table 114
Project + Peaker Power Plant Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. An additional generator is included in the Peaker Power Plant variant. The impacts from this generator are calculated from the year in which it goes into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts due to the Peaker Power Plant variant.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
13. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Because variant construction is completed in Phase 1, no variant construction impacts occur in Scenario 2. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 115
Project + Peaker Power Plant Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Chronic Health Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Peaker Power Plant Construction[7]	--	2.1E-04	--	--	--	--	--	--
Peaker Power Plant Generator[8]	2.6E-06	--	2.6E-06	1.3E-05	7.4E-08	1.9E-07	7.4E-08	1.9E-07
Downwash Effects[9]	6.4E-06	--	6.4E-06	3.1E-05	1.5E-07	3.2E-07	1.5E-07	3.2E-07
Project Contribution[10]	0.18	0.034	0.16	0.0045	0.0021	0.0039	0.0014	0.0037
Existing Howard Terminal Operation[11]	--	-5.9E-04	--	-3.5E-04	--	-8.1E-05	--	-8.1E-05
Total Variant+Project Contribution	**0.18**	**0.034**	**0.16**	**0.0042**	**0.0021**	**0.0038**	**0.0014**	**0.0036**

	MEIR Location[12]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,100	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,700	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2021	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops which are assumed to be tested and
3. Values are shown as "--" to indicate that these sources do not contribute to the Chronic HI during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

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Table 115
Project + Peaker Power Plant Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. An additional generator is included in the Peaker Power Plant variant. The impacts from this generator are calculated from the year in which it goes into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts due to the Peaker Power Plant variant.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 116
Project + Peaker Power Plant PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Peaker Power Plant Construction[7]	--	--	--	--	--	--	--	--
Peaker Power Plant Generator[8]	1.2E-05	4.0E-05	1.2E-05	4.0E-05	3.7E-07	9.4E-07	3.7E-07	9.4E-07
Downwash Effects[9]	3.1E-05	6.1E-05	3.1E-05	6.1E-05	7.6E-07	1.6E-06	7.6E-07	1.6E-06
Project Contribution[10]	0.89	0.19	0.80	0.19	0.024	0.19	0.020	0.18
Existing Howard Terminal Operation[11]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Total Variant+Project Contribution	**0.89**	**0.19**	**0.80**	**0.19**	**0.024**	**0.19**	**0.020**	**0.18**

	MEIR Location[12]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emission Rate (g/s)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops which are assumed to be tested and
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

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Table 116
Project + Peaker Power Plant PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. An additional generator is included in the Peaker Power Plant variant. The impacts from this generator are calculated from the year in which it goes into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts due to the Peaker Power Plant variant.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
PM - particulate matter
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 117
Project + Gondola + Peaker Power Plant Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	0.38	--	--	--	0.044	--	--
Gondola Generator[8]	2.2	0.51	0.63	8.8	0.077	0.071	0.078	0.090
Peaker Power Plant Construction[7]	--	0.81	--	--	--	0.057	--	--
Peaker Power Plant Generator[8]	10	0.049	0.080	1.30	0.10	0.0013	0.10	0.0014
Downwash Effects[9]	69	0.13	0.20	0.01	3.0	0.0022	3.0	0.0024
Project Contribution[10]	201	67	592	5	1.7	8.3	1.6	3.6
Existing Howard Terminal Operation[11]	--	-2.2	--	-0.8	--	-2.2	--	-0.30
Total Variant+Project Contribution	**283**	**67**	**593**	**14**	**4.9**	**6.3**	**4.8**	**3.4**

	MEIR Location[12]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,640	563,420	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,380	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	38	1.8	38	1.8
Scenario[13]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   CF = Conversion Factor (mg/µg)
   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)
   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops tested and maintained for up to 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project and both variants.
5. Off-site MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project and both variants.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

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Table 117
Project + Gondola + Peaker Power Plant Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variants occur during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Aditional generators are included in the variants, one for the Peaker Power Plant and three for the Gondola. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts from the variants.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
13. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Because variant construction is completed in Phase 1, no variant construction impacts occur in Scenario 2. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

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Table 118
Project + Gondola + Peaker Power Plant Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Chronic Health Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	1.1E-02	--	--	--	--	--	--
Gondola Generator[8]	4.0E-05	--	4.0E-05	2.5E-04	7.6E-06	2.4E-05	7.6E-06	2.4E-05
Peaker Power Plant Construction[7]	--	3.1E-03	--	--	--	--	--	--
Peaker Power Plant Generator[8]	2.6E-06	--	2.6E-06	1.3E-05	7.4E-08	1.9E-07	7.4E-08	1.9E-07
Downwash Effects[9]	6.4E-06	--	6.4E-06	3.1E-05	1.5E-07	3.2E-07	1.5E-07	3.2E-07
Project Contribution[10]	0.18	0.021	0.16	0.0045	0.0021	0.0039	0.0014	0.0037
Existing Howard Terminal Operation[11]	--	-2.2E-04	--	-3.5E-04	--	-8.1E-05	--	-8.1E-05
Total Variant+Project Contribution	**0.18**	**0.034**	**0.16**	**0.0044**	**0.0021**	**0.0039**	**0.0014**	**0.0036**

	MEIR Location[12]							
MEIR by Scenario	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
UTMx (m)	562,820	563,640	562,820	563,100	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,400	4,183,580	4,183,700	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2022	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops tested and maintained for up to 20 hrs/yr.

3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.

4. On-site MEIR was identified as the on-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Project and both variants.

5. Off-site MEIR was identified as the off-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Project and both variants.

6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table 118
Project + Gondola + Peaker Power Plant Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variants occur during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Aditional generators are included in the variants, one for the Peaker Power Plant and three for the Gondola. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts from the variants.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 119
Project + Gondola + Peaker Power Plant PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	--	--	--	--	--	--	--
Gondola Generator[8]	2.0E-04	8.6E-04	2.0E-04	8.6E-04	3.8E-05	1.2E-04	3.8E-05	1.2E-04
Peaker Power Plant Construction[7]	--	--	--	--	--	--	--	--
Peaker Power Plant Generator[8]	1.2E-05	4.0E-05	1.2E-05	4.0E-05	3.7E-07	9.4E-07	3.7E-07	9.4E-07
Downwash Effects[9]	3.1E-05	6.1E-05	3.1E-05	6.1E-05	7.6E-07	1.6E-06	7.6E-07	1.6E-06
Project Contribution[10]	0.89	0.19	0.80	0.19	0.024	0.19	0.020	0.18
Existing Howard Terminal Operation[11]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Total Variant+Project Contribution	**0.89**	**0.19**	**0.80**	**0.19**	**0.024**	**0.19**	**0.020**	**0.18**

	MEIR Location[12]							
MEIR by Scenario	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$

   Where:

   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)

   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)

   E = Emission Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops tested and maintained for up to 20 hrs/yr.

3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.

4. On-site MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project and both variants.

5. Off-site MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project and both variants.

6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table 119
Project + Gondola + Peaker Power Plant PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variants occur during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Aditional generators are included in the variants, one for the Peaker Power Plant and three for the Gondola. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts from the variants.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
PM - particulate matter
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 120
Summary of Nearby Stationary Source Impacts at Project + Aerial Gondola MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Facilit ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	97	824	824	Diesel ICE	0.85	0.1	0.1	0.025	4.0E-05	0
16284	Verizon Wirelesss	0.019	4.2E-04	0	93	827	827	Diesel ICE	0.85	0.1	0.1	0.016	2.5E-05	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	433	520	520	Diesel ICE	0.15	0.12	0.12	0.0065	1.8E-04	0
17073	T-Mobile	0.17	0.0038	0	368	852	852	Diesel ICE	0.18	0.06	0.06	0.030	2.3E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	410	943	943	Generic Decay	0.42	0.15	0.15	0.0019	4.4E-06	4.2E-05
19696	Safety-Kleen Systems, Inc.	0.27	2.1E-04	0	948	246	246	Generic Decay	0.15	0.58	0.58	0.039	1.2E-04	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	424	524	524	Diesel ICE	0.16	0.12	0.12	0.064	9.4E-04	0
5133	Mr. Espresso	0.28	0.0025	0.25	731	590	590	Generic Decay	0.22	0.30	0.30	0.063	7.6E-04	0.076
11887	Dynergy Oakland LLC	4.0	0.026	4.2	853	1,442	1,442	Generic Decay	0.17	0.00	0.00	0.69	0	0
											Total:	**0.93**	**0.0023**	**0.076**

Onsite MEIR

Facilit ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	939	256	256	Diesel ICE	0.040	0.310	0.31	0.0012	2.1E-04	0
16284	Verizon Wirelesss	0.019	4.2E-04	0	936	253	253	Diesel ICE	0.040	0.310	0.31	7.4E-04	1.3E-04	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	1,287	618	618	Diesel ICE	0	0	0.090	0	1.4E-04	0
17073	T-Mobile	0.17	0.0038	0	1,099	569	569	Diesel ICE	0	0	0.10	0	3.8E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	1,069	598	598	Generic Decay	0	0	0.29	0	8.8E-06	8.5E-05
22778	Solstice Press[3]	--	--	--	1,223	861	861	Generic Decay	0	0	0.17	0	0	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	1,278	608	608	Diesel ICE	0	0	0.090	0	7.1E-04	0
5133	Mr. Espresso	0.28	0.0025	0.25	1,537	936	936	Generic Decay	0	0	0.15	0	3.7E-04	0.037
11887	Dynergy Oakland LLC	4.0	0.026	4.2	1,122	977	977	Generic Decay	0	0	0.14	0	0.0035	0.57
											Total:	**0.0019**	**0.0055**	**0.60**

Notes:

1. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD.
2. Unscaled health risk values were estimated using facility emissions provided by BAAQMD and BAAQMD's Health Risk Calculator Tool. These values were scaled by distance using the diesel IC engines multiplier tool or the BAAQMD's generic distance decay curve, as indicated above.
3. No emissions or health impact values were provided for Soilstice Press.

Abbreviations:

IC - internal combustion
ICE - internal combustion engine
MEIR - maximally exposed individual receptor
$\mu g/m^3$ - micrograms per cubic meters
$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter

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Table 121
Summary of Nearby Roadway Impacts at Project + Aerial Gondola MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Roadway	Reported ADT[1]	Section of Roadway measured	Centroid of Road Segment		Distance from Roadway for $PM_{2.5}$ MEIR	MEIR Direction from Street[2]	BAAQMD Roadway Screening Analysis Tables[2]
			UTMx	UTMy			$PM_{2.5}$ Concentration
	(vehicles/day)		m	m	(ft)		($\mu g/m^3$)
Brush Street	18,550	From 7th Street to 11th Street	563,267	4,184,130	745	East	0.039
5th Street	13,850	From Castro Street to MLK	563,189	4,183,969	164	South	0.057
7th Street	18,050	From Brush Street to Castro Street	563,396	4,184,074	869	South	0.014
						Total	**0.11**

Notes:

1. ADT for existing conditions of the surface streets were obtained from Fehr & Peers. Only roadways with traffic volumes between 10,000 and 30,000 ADT were included in this analysis. There were no roadways with traffic volumes between 10,000 and 30,000 ADT within 1,000 feet of the offsite cancer MEIR so cancer values are not shown above. There were no roadways with traffic volumes between 10,000 and 30,000 ADT of the onsite MEIR.

2. Screening values for the surface streets were obtained from BAAQMD Roadway Screening Analysis Calculator (BAAQMD 2015). The risk and concentrations depends on the direction of the road from the Project + Aerial Gondola MEIRs (e.g., due to wind patterns).

Abbreviations:

$\mu g/m^3$ - microgram per cubic meter
ADT - average daily traffic
BAAQMD - Bay Area Air Quality Management District
CEQA - California Environmental Quality Act
ft - feet
HI - hazard index
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter
MEIR - maximally exposed individual receptor

References:

BAAQMD. 2015. Roadway Screening Analysis Calculator. Available online at:
http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/screeningcalculator_4_16_15-xlsx.xlsx?la=en

Table 122
Summary of Cumulative Impacts at Project + Aerial Gondola MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0023	0.076	0.0019	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	13	--	0.27
Major Streets[4,5]	4.1	--	0.060	2.9	--	0.029
Railways[4]	67	--	0.017	17	--	0.082
Gondola Construction	0.044	--	--	--	--	--
Gondola Generator	0.071	2.4E-05	1.2E-04	0.026	7.6E-06	3.8E-05
Project Contribution	8.3	0.0039	0.19	2.1	0.0021	0.024
Existing Howard Terminal Operation	-2.2	-8.1E-05	-6.4E-04	--	--	--
Total	**97**	**0.0062**	**1.0**	**35**	**0.0076**	**1.0**

Notes:

1. Details for each source are shown in the preceeding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools. For Gondola Construction, "--" indicates no risk was calculated as the MEIR corresponds to a scenario or year in which construction is already completed.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

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Table 123
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Aerial Gondola MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Project	Gondola Construction	--	--	0.04	--
	Gondola Generator	0.03	3.8E-05	0.07	1.2E-04
	Project Contribution	2.15	0.0237	8.3	0.186
	Existing Howard Terminal Operation	--	--	-2.2	-0.001
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.105
	Light Heavy Duty Trucks	0.53	0.005	0.715	0.009
	Heavy and Medium Duty Trucks	1.3	0.012	1.721	0.019
	Non-Truck Vehicles	1.1	0.119	1.523	0.244
Other	Ferries	18	0.018	12.180	0.011
	Schnitzer Ships	6.1	0.006	4.055	0.004
	Schnitzer Trucks	0.057	0.004	0.022	0.002
	Truck Related Business	3.1	0.002	1.849	0.001
Permitted	CASS	8.7E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	2.0E-06	0.022	0.000	0.031
	Dynegy	0.0033	0.000	0.010	0.001
	EBMUD	0.63	0.025	0.693	0.027
	Other Facilities	1.3	0.048	1.505	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	46	0.350	21.512	0.157
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.8	0.004	2.869	0.003
	Bunkering Tugs and Pumps	5.3	0.005	3.403	0.003
	Cargo Handling	7.3	0.009	6.487	0.008
	Drayage Trucks	1.2	0.021	2.438	0.026
	Dredging	13	0.013	8.771	0.009
	Road Dust	--	0.017	--	0.015
	Harbor Craft	97	0.076	54.344	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	0.9	0.001	1.002	0.001
	OGV Berthing	24	0.058	21.436	0.052
	OGV Maneuvering	35	0.038	26.918	0.031
Rail	Rail Lines	24	0.102	121.331	0.026
	Railyard	31	0.035	26.897	0.029
Street	Road Dust	--	1.166	--	1.746
	Light Heavy Duty Trucks	0.48	0.006	0.903	0.010
	Heavy and Medium Duty Trucks	0.66	0.014	1.195	0.051
	Non-Truck Vehicles	1.1	0.108	1.857	0.186
	Total	**324**	**2.4**	**332**	**3.1**

Table 123
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Aerial Gondola MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Health impact values are shown for the Project + Aerial Gondola MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table 124
Summary of 2024 West Oakland Cumulative Impacts at Project + Aerial Gondola MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project	2.2	0.02	6.2	0.19
Highway	2.9	0.19	4.0	0.38
Other	21	0.020	14	0.012
Permitted	1.9	0.14	2.2	0.15
Dynegy	0.0033	3.8E-04	0.010	8.2E-04
Schnitzer	53	0.36	26	0.16
Port	186	0.24	128	0.20
Rail	54	0.137	148	0.05
Street	2.2	1.29	4.0	2.0
Total	**324**	**2.4**	**332**	**3.1**

Notes:

1. Health impact values are shown for the Project + Aerial Gondola MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table 125
Summary of Nearby Stationary Source Impacts at Project + Peaker Power Plant MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	97	824	824	Diesel ICE	0.85	0.1	0.1	0.025	4.0E-05	0
16284	Verizon Wirelesss	0.019	4.2E-04	0	93	827	827	Diesel ICE	0.85	0.1	0.1	0.016	2.5E-05	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	433	520	520	Diesel ICE	0.15	0.12	0.12	0.0065	1.8E-04	0
17073	T-Mobile	0.17	0.0038	0	368	852	852	Diesel ICE	0.18	0.06	0.06	0.030	2.3E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	410	943	943	Generic Decay	0.42	0.15	0.15	0.0019	4.4E-06	4.2E-05
2112	Aratex Uniform Services	0.16	0.0012	0.39	1,602	1,518	1,518	Generic Decay	0	0	0	0	0	0
19696	Safety-Kleen Systems, Inc.	0.27	2.1E-04	0	948	246	246	Generic Decay	0.15	0.58	0.58	0.039	1.2E-04	0
2650	Nor-Cal Metal Fabricators	0.0021	1.4E-05	0.0068	1,782	1,858	1,858	Generic Decay	0	0	0	0	0	0
208	Schnitzer Steel Products Company	85	0.19	2.1	1,997	2,666	2,666	Generic Decay	0	0	0	0	0	0
22778	Solstice Press[3]	--	--	--	1,002	1,315	1,315	Generic Decay	0	0	0	0	0	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	424	524	524	Diesel ICE	0.16	0.12	0.12	0.064	9.4E-04	0
5133	Mr. Espresso	0.28	0.0025	0.25	731	590	590	Generic Decay	0.22	0.30	0.30	0.063	7.6E-04	0.076
11887	Dynergy Oakland LLC	4.0	0.026	4.2	853	1,442	1,442	Generic Decay	0.17	0.00	0.00	0.69	0	0
											Total:	**0.93**	**0.0023**	**0.076**

Onsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	97	256	256	Diesel ICE	0.850	0.310	0.31	0.025	2.1E-04	0
16284	Verizon Wirelesss	0.019	4.2E-04	0	93	253	253	Diesel ICE	0.850	0.310	0.31	0.016	1.3E-04	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	433	618	618	Diesel ICE	0	0	0.090	0.0065	1.4E-04	0
17073	T-Mobile	0.17	0.0038	0	368	569	569	Diesel ICE	0	0	0.10	0	3.8E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	410	598	598	Generic Decay	0	0	0.29	0.0019	8.8E-06	8.5E-05
19696	Safety-Kleen Systems, Inc.	0.27	2.1E-04	0	948	1,051	1,051	Generic Decay	0	0	0	0.039	0	0
22778	Solstice Press[3]	--	--	--	1,002	861	861	Generic Decay	0	0	0.17	0	0	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	424	608	608	Diesel ICE	0	0	0.090	0.064	7.1E-04	0
5133	Mr. Espresso	0.28	0.0025	0.25	731	936	936	Generic Decay	0	0	0.15	0.063	3.7E-04	0.037
11887	Dynergy Oakland LLC	4.0	0.026	4.2	853	977	977	Generic Decay	0	0	0.14	0.69	0.0035	0.57
											Total:	**0.90**	**0.0055**	**0.60**

Notes:

1. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD.
2. Unscaled health risk values were estimated using facility emissions provided by BAAQMD and BAAQMD's Health Risk Calculator Tool. These values were scaled by distance using the diesel IC engines multiplier tool or the BAAQMD's generic distance decay curve, as indicated above.
3. No emissions or health impact values were provided for Solstice Press.

Abbreviations:

IC - internal combustion
ICE - internal combustion engine
MEIR - maximally exposed individual receptor
$\mu g/m^3$ - micrograms per cubic meters
$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter

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Table 126
Summary of Nearby Roadway Impacts at Project + Peaker Power Plant MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Roadway	Reported ADT[1]	Section of Roadway measured	Centroid of Road Segment		Distance from Roadway for $PM_{2.5}$ MEIR	MEIR Direction from Street[2]	BAAQMD Roadway Screening Analysis Tables[2]
			UTMx	UTMy			$PM_{2.5}$ Concentration
	(vehicles/day)		m	m	(ft)		($\mu g/m^3$)
Brush Street	18,550	From 7th Street to 11th Street	563,267	4,184,130	745	East	0.039
5th Street	13,850	From Castro Street to MLK	563,189	4,183,969	164	South	0.057
7th Street	18,050	From Brush Street to Castro Street	563,396	4,184,074	869	South	0.014
						Total	**0.11**

Notes:

1. ADT for existing conditions of the surface streets were obtained from Fehr & Peers. Only roadways with traffic volumes between 10,000 and 30,000 ADT were included in this analysis. There were no roadways with traffic volumes between 10,000 and 30,000 ADT within 1,000 feet of the offsite cancer MEIR so cancer values are not shown above. There were no roadways with traffic volumes between 10,000 and 30,000 ADT of the onsite MEIR.

2. Screening values for the surface streets were obtained from BAAQMD Roadway Screening Analysis Calculator (BAAQMD 2015). The risk and concentrations depends on the direction of the road from the MEIRs (e.g., due to wind patterns).

Abbreviations:

$\mu g/m^3$ - microgram per cubic meter
ADT - average daily traffic
BAAQMD - Bay Area Air Quality Management District
CEQA - California Environmental Quality Act
ft - feet
HI - hazard index
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter
MEIR - maximally exposed individual receptor

References:

BAAQMD. 2015. Roadway Screening Analysis Calculator. Available online at:
http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/screeningcalculator_4_16_15-xlsx.xlsx?la=en

Table 127
Summary of Cumulative Impacts at Project + Peaker Power Plant MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0023	0.076	0.90	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	4.0	--	0.27
Major Streets[4,5]	4.1	--	0.060	4.4	--	0.029
Railways[4]	67	--	0.017	90	--	0.082
Power Plant Construction	0.057	--	--	--	--	--
Power Plant Generator	0.0013	1.9E-07	9.4E-07	0.10	7.4E-08	3.7E-07
Downwash Effects	0.0022	3.2E-07	1.6E-06	3.0	1.5E-07	7.6E-07
Project Contribution	8.3	0.0039	0.19	1.7	0.0021	0.024
Existing Howard Terminal Operation	-2.2	-8.1E-05	-6.4E-04	--	--	--
Total	**97**	**0.0061**	**1.0**	**104**	**0.0076**	**1.0**

Notes:

1. Details for each source are shown in the preceeding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

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Table 128
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Peaker Power Plant MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Project	Power Plant Construction	--	--	0.057	--
	Power Plant Generator	0.10	3.7E-07	0.0013	9.4E-07
	Downwash Effects	3	7.6E-07	0.0022	1.6E-06
	Project Contribution	1.7	0.024	8.3	0.19
	Existing Howard Terminal Operation	--	--	-2.2	-0.001
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.105
	Light Heavy Duty Trucks	0.78	0.005	0.715	0.009
	Heavy and Medium Duty Trucks	1.7	0.012	1.721	0.019
	Non-Truck Vehicles	1.5	0.119	1.523	0.244
Other	Ferries	20	0.018	12.180	0.011
	Schnitzer Ships	4.0	0.006	4.055	0.004
	Schnitzer Trucks	0.013	0.004	0.022	0.002
	Truck Related Business	2.0	0.002	1.849	0.001
Permitted	CASS	9.3E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	2.0E-06	0.022	0.000	0.031
	Dynegy	0.0663	0.000	0.010	0.001
	EBMUD	0.61	0.025	0.693	0.027
	Other Facilities	2.4	0.048	1.505	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	16	0.350	21.512	0.157
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.3	0.004	2.869	0.003
	Bunkering Tugs and Pumps	3.1	0.005	3.403	0.003
	Cargo Handling	5.6	0.009	6.487	0.008
	Drayage Trucks	2.2	0.021	2.438	0.026
	Dredging	9	0.013	8.771	0.009
	Road Dust	--	0.017	--	0.015
	Harbor Craft	54	0.076	54.344	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	0.8	0.001	1.002	0.001
	OGV Berthing	20	0.058	21.436	0.052
	OGV Maneuvering	26	0.038	26.918	0.031
Rail	Rail Lines	68	0.102	121.331	0.026
	Railyard	22	0.035	26.897	0.029
Street	Road Dust	--	1.166	--	1.746
	Light Heavy Duty Trucks	0.90	0.006	0.903	0.010
	Heavy and Medium Duty Trucks	1.57	0.014	1.195	0.051
	Non-Truck Vehicles	2.0	0.108	1.857	0.186
	Total	**272**	**2.4**	**332**	**3.1**

Table 128
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Peaker Power Plant MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Health impact values are shown for the Project + Peaker Power Plant MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.
2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table 129
Summary of 2024 West Oakland Cumulative Impacts at Project + Peaker Power Plant MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project	4.8	0.02	6.1	0.19
Highway	4.0	0.19	4.0	0.38
Other	22	0.020	14	0.012
Permitted	3.0	0.14	2.2	0.15
Dynegy	0.0663	3.8E-04	0.010	8.2E-04
Schnitzer	20	0.36	26	0.16
Port	123	0.24	128	0.20
Rail	90	0.137	148	0.05
Street	4.4	1.29	4.0	2.0
Total	**272**	**2.4**	**332**	**3.1**

Notes:

1. Health impact values are shown for the Project + Peaker Power Plant MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table 130
Summary of Emissions from the No Project Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1,2]								GHG Emissions[1,2]
	[ton/year]				[lb/day]				[MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
No Project Alternative									
Trucks	0.24	3.8	0.017	0.010	1.3	21	0.095	0.055	745
Total Emissions	**0.24**	**3.8**	**0.017**	**0.010**	**1.3**	**21**	**0.095**	**0.055**	**745**

Notes:

1. Howard Terminal gate transaction data and emissions inventory for 2018 provided by Port of Oakland and represents all gate transactions, as shown in Table 131.
2. Existing truck activity and emissions calculated based on methodology in Port of Oakland 2017 Seaport Air Emissions Inventory (Ramboll 2018). Emissions from existing truck activity are based on the Howard Terminal truck trips (estimated from gate transactions) that are assumed to be relocated as a result of the Project.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CAP - Criteria Air Pollutant
CO_2e - carbon dioxide equivalent
GHG - greenhouse gas
lb - pounds
MT - metric ton
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com
Ramboll. 2018. Port of Oakland: 2017 Seaport Air Emissions Inventory. August. https://www.portofoakland.com/files/PDF/Port_Oakland_2017_Emissions_Inventory.pdf

Table 131
Existing Howard Terminal Truck Emissions for HRA Modeling
Oakland Waterfront Ballpark District Project
Oakland, California

2018 Howard Terminal Gate Transactions[1]

Truck Parking and Container Depot Facilities	Monthly	Annual
ABM Facility	19,241	230,892
Non-ABM Facilities	8,800	105,600
	Total	**336,492**

Howard Terminal Truck Activity[2,3]

Queue at Gate	Queue at Exit Gate	Idling in Terminal	VMT	Speed	Annual Truck Roundtrips[3]	Total Annual Truck-Miles In Terminal
hr/trip	hr/trip	hr/trip	mi/trip	mph		
0.12	0	0.17	0.60	10	168,246	100,948

Howard Terminal HRA Emissions

Source Group	$PM_{2.5}$ Emissions		DPM Emissions	
	ton/yr	g/s	ton/yr	g/s
FULLBLD	0.010	2.9E-04	0.0064	1.8E-04

Notes:

1. 2018 Howard Terminal gate transaction data provided by Port of Oakland and represents all gate transactions.
2. Existing truck activity and emissions calculated based on methodology in Port of Oakland 2017 Seaport Air Emissions Inventory (Ramboll 2018). Emissions from existing truck activity are based on the Howard Terminal truck trips (estimated from gate transactions) that are assumed to be relocated as a result of the Project.
3. Per the Port of Oakland, all 50 acres of Howard Terminal facilities will relocate off Seaport property. The truck trips shown here are estimated using 2018 gate transaction data, assuming that 100% of ABM trips and non-ABM trips are relocated off Seaport property.

Abbreviations:

ABM - ABM Parking Services
DPM - diesel particulate matter
g - grams
hr - hour
HRA - health risk assessment
mi - miles
mph - miles per hour
$PM_{2.5}$ - particulate matter < 2.5 µm
yr - year
s - second

References:

Port of Oakland. 2019. Email correspondence between Eric Naprella (Port of Oakland) and Hillary Gitelman (ESA). March 15.

Ramboll. 2018. Port of Oakland: 2017 Seaport Air Emissions Inventory. August. https://www.portofoakland.com/files/PDF/Port_Oakland_2017_Emissions_Inventory.pdf

Table 132
Existing Howard Terminal Truck HRA Results
Oakland Waterfront Ballpark District Project
Oakland, California

Condition	Excess Lifetime Cancer Risk[1] (in a million)	Chronic HI[2] (unitless)	$PM_{2.5}$ Concentration[3] (in a million)
	Off-Site MEIR[4]	Off-Site MEIR[4]	Off-Site MEIR[4]
Impact	2.2	0.0006	0.0046
UTMx (m)	563,080	563,080	563,080
UTMy (m)	4,183,660	4,183,660	4,183,660
Receptor Height (m)	1.8	1.8	1.8

Notes:

1. Lifetime excess cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year period. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-Site receptors are exposed to all Project construction and subsequent Project operations. On-Site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   CF = Conversion Factor (mg/µg)

   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$

   ASF = Age Sensitivity Factor (unitless)

Table 132
Existing Howard Terminal Truck HRA Results
Oakland Waterfront Ballpark District Project
Oakland, California

Notes (continued):

2. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

3. $PM_{2.5}$ concentrations from construction and operations are conservatively combined even though they may represent different maximum years. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project and Grade Separation Alternative construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 and Grade Separation Alternative construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$

   Where:

   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)

   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)

   E = Emissions Rate (g/s)

Table 132
Existing Howard Terminal Truck HRA Results
Oakland Waterfront Ballpark District Project
Oakland, California

Notes (continued):

[4.] A portion of existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
SCA - Standard Conditions of Approval
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

Table 133
Summary of CAP and GHG Emissions from the Reduced Intensity Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Residential and Commercial Square Footage Reduction[1]	77%

Project Phase	**Residential Space[2]**	**Office Space[2]**	**Retail Space[2]**
Phase 1	126 DU (138,600 ft^2)	58,333 ft^2	7,000 ft^2
Phase 2	574 DU (631,400 ft^2)	291,667 ft^2	56,000 ft^2
Full Project Buildout	700 DU (770,000 ft^2)	350,000 ft^2	63,000 ft^2

Emissions Source	**CAP Emissions[3]**				**GHG Emissions[3]**
	[lb/day]				[MT CO2e/yr]
	ROG	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
2028					
Operations Only	52	54	41	11	17,913

Notes:

1. The Reduced Intensity Alternative assumes that the ballpark, hotel, and performance venue will be constructed, in addition to a reduced amount of residential and commercial square footage. Therefore, emissions from the ballpark, hotel and performance venue are fixed, whereas the residential and office/retail square emissions are reduced by 77%. Emissions are shown for 2028, which is the highest year of Project operational emissions. In 2028, construction is complete and the Full Project Buildout is operational. Operational year 2028 was compared to 2021, 2026, and 2027. Emissions from operational year 2028 were higher than the other years analyzed. Therefore, the operational emissions from all other years are below 2028 emissions shown. To obtain the values shown above, emissions were broken out by land use.

2. The residential and commercial space listed is the area that can be built in addition to the fixed ballpark, hotel, and performance venue. Phase 1 and Phase 2 are added together to achieve Full Project Buildout.

3. This analysis is based on the Project's mitigated emissions inventory.

Abbreviations:

CO_2e - carbon dioxide equivalent
DU - dwelling unit
ft^2 - square foot
lb - pound
MT - metric ton
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

Table 134
Grade Separation Alternative Phasing Schedule
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area[1]	Construction Activity[1]	Construction[1]		
		Phase Start Date	Phase End Date	Number Work Days[2]
Overcrossing	Site Utilities	1/1/2021	10/1/2021	196
	Demolition	10/1/2021	10/31/2021	21
	Geotechnical Work	11/1/2021	3/1/2022	87
	Abutement	3/1/2022	6/1/2022	67
	Grading and Site Preparation	6/1/2022	10/1/2022	88
	Structural Work	6/1/2022	6/1/2023	262
Undercrossing	Site Utilities	1/1/2021	1/1/2022	261
	Demolition	1/1/2022	2/1/2022	22
	Construct Shoofly	9/1/2021	1/1/2022	88
	Geotechnical Work (Bridges)	1/1/2022	4/1/2022	65
	Build Road & Vehicular Bridges	4/1/2022	1/1/2023	196
	Excavate and Shore	1/1/2023	3/1/2024	305
	Grading and Site Preparation	3/1/2024	5/1/2024	44
	Demolish Shoofly	1/1/2023	2/1/2023	23

Notes:

1. Construction areas, activities, and schedule provided by the Project sponsor. The Grade Separation Alternative will involve construction of a single overcrossing or single undercrossing, located at either Brush Street or Market Street. The phasing is assumed to be the same for both Brush Street and Market Street options.
2. Construction activities assumed to occur 5 days per week.

Table 135
Grade Separation Alternative Off-Road Equipment List
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Equipment Type[1,2]	CalEEMod® Equipment Type	Fuel	Number	HP	Load Factor[3]	Equipment Start Date	Equipment End Date	Number of Days	Hours per Day	Utilizations for Duration[4]	Unmitigated Equipment Tier[5]	Mitigated Equipment Tier[5]
Overcrossing	Site Utilities	Excavators	Excavators	Diesel	4	162	0.38	1/1/2021	10/1/2021	196	8	95%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	1/1/2021	10/1/2021	196	8	100%	Fleet-Average Tier	Tier 4 Final
		Rubber Tired Loaders	Rubber Tired Loaders	Diesel	2	199	0.36	1/1/2021	10/1/2021	196	8	100%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	2	84	0.74	1/1/2021	10/1/2021	196	8	70%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	1/1/2021	10/1/2021	196	8	100%	Fleet-Average Tier	Tier 4 Final
	Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	0.73	10/1/2021	10/31/2021	21	8	25%	Fleet-Average Tier	Tier 4 Final
		Excavators	Excavators	Diesel	1	158	0.38	10/1/2021	10/31/2021	21	8	100%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	10/1/2021	10/31/2021	21	8	100%	Fleet-Average Tier	Tier 4 Final
		Crushing / Proc. Equipment	Crushing/Proc. Equipment	Diesel	1	85	0.78	10/1/2021	10/31/2021	21	8	75%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	10/1/2021	10/31/2021	21	8	75%	Fleet-Average Tier	Tier 4 Final
	Geotechnical Work	Excavators	Excavators	Diesel	2	158	0.38	11/1/2021	3/1/2022	87	8	20%	Fleet-Average Tier	Tier 4 Final
		Dozer	Rubber Tired Loaders	Diesel	1	215	0.36	11/1/2021	3/1/2022	87	8	10%	Fleet-Average Tier	Tier 4 Final
		Cranes	Cranes	Diesel	2	226	0.29	11/1/2021	3/1/2022	87	8	90%	Fleet-Average Tier	Tier 3
		Drill	Bore/Drill Rigs	Diesel	2	433	0.50	11/1/2021	3/1/2022	87	8	90%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	2	84	0.74	11/1/2021	3/1/2022	87	8	70%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	11/1/2021	3/1/2022	87	8	75%	Fleet-Average Tier	Tier 4 Final
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	0.42	11/1/2021	3/1/2022	87	8	20%	Fleet-Average Tier	Tier 4 Final
	Abutement	Excavators	Excavators	Diesel	2	158	0.38	3/1/2022	6/1/2022	67	8	20%	Fleet-Average Tier	Tier 4 Final
		Dozer	Rubber Tired Loaders	Diesel	1	215	0.36	3/1/2022	6/1/2022	67	8	10%	Fleet-Average Tier	Tier 4 Final
		Cranes	Cranes	Diesel	2	226	0.29	3/1/2022	6/1/2022	67	8	80%	Fleet-Average Tier	Tier 3
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	3/1/2022	6/1/2022	67	8	80%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	4	84	0.74	3/1/2022	6/1/2022	67	8	70%	Fleet-Average Tier	Tier 4 Final
		Gradall Type Forklifts	Forklifts	Diesel	4	111	0.20	3/1/2022	6/1/2022	67	8	100%	Fleet-Average Tier	Tier 4 Final
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	0.42	3/1/2022	6/1/2022	67	8	20%	Fleet-Average Tier	Tier 4 Final
	Grading and Site Preparation	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	6/1/2022	10/1/2022	88	8	100%	Fleet-Average Tier	Tier 4 Final
		Scrapers/Blades/Rollers	Scrapers	Diesel	2	500	0.48	6/1/2022	10/1/2022	88	8	10%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	6/1/2022	10/1/2022	88	8	75%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	2	84	0.74	6/1/2022	10/1/2022	88	8	70%	Fleet-Average Tier	Tier 4 Final
		Excavators	Excavators	Diesel	2	158	0.38	6/1/2022	10/1/2022	88	8	60%	Fleet-Average Tier	Tier 4 Final
		Pavers	Pavers	Diesel	2	130	0.42	6/1/2022	10/1/2022	88	8	20%	Fleet-Average Tier	Tier 4 Final
		Paving Equipment	Paving Equipment	Diesel	2	132	0.36	6/1/2022	10/1/2022	88	8	20%	Fleet-Average Tier	Tier 4 Final
		Rollers	Rollers	Diesel	2	80	0.38	6/1/2022	10/1/2022	88	8	20%	Fleet-Average Tier	Tier 4 Final
	Structural Work	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	3	97	0.37	6/1/2022	6/1/2023	262	8	80%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	6	84	0.74	6/1/2022	6/1/2023	262	8	100%	Fleet-Average Tier	Tier 4 Final
		Gradall Type Forklifts	Forklifts	Diesel	4	111	0.20	6/1/2022	6/1/2023	262	8	80%	Fleet-Average Tier	Tier 4 Final
		Cranes	Cranes	Diesel	3	226	0.29	6/1/2022	6/1/2023	262	8	90%	Fleet-Average Tier	Tier 3
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	0.42	6/1/2022	6/1/2023	262	8	15%	Fleet-Average Tier	Tier 4 Final

Table 135
Grade Separation Alternative Off-Road Equipment List
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Equipment Type[1,2]	CalEEMod® Equipment Type	Fuel	Number	HP	Load Factor[3]	Equipment Start Date	Equipment End Date	Number of Days	Hours per Day	Utilizations for Duration[4]	Unmitigated Equipment Tier[5]	Mitigated Equipment Tier[5]
Undercrossing	Site Utilities	Excavators	Excavators	Diesel	4	162	0.38	1/1/2021	1/1/2022	261	8	95%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	1	97	0.37	1/1/2021	1/1/2022	261	8	100%	Fleet-Average Tier	Tier 4 Final
		Rubber Tired Loaders	Rubber Tired Loaders	Diesel	2	199	0.36	1/1/2021	1/1/2022	261	8	100%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	2	84	0.74	1/1/2021	1/1/2022	261	8	70%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	1/1/2021	1/1/2022	261	8	75%	Fleet-Average Tier	Tier 4 Final
	Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	0.73	1/1/2022	2/1/2022	22	8	25%	Fleet-Average Tier	Tier 4 Final
		Excavators	Excavators	Diesel	1	158	0.38	1/1/2022	2/1/2022	22	8	100%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	1/1/2022	2/1/2022	22	8	100%	Fleet-Average Tier	Tier 4 Final
		Crushing / Proc. Equipment	Crushing/Proc. Equipment	Diesel	1	85	0.78	1/1/2022	2/1/2022	22	8	75%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	1/1/2022	2/1/2022	22	8	100%	Fleet-Average Tier	Tier 4 Final
	Construct Shoofly	Concrete/Industrial Saws	Concrete/Industrial Saws	Diesel	1	81	0.73	9/1/2021	1/1/2022	88	8	25%	Fleet-Average Tier	Tier 4 Final
		Excavators	Excavators	Diesel	2	158	0.38	9/1/2021	1/1/2022	88	8	100%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	9/1/2021	1/1/2022	88	8	100%	Fleet-Average Tier	Tier 4 Final
		Gradall Type Forklifts	Forklifts	Diesel	2	111	0.20	9/1/2021	1/1/2022	88	8	100%	Fleet-Average Tier	Tier 4 Final
		Rollers	Rollers	Diesel	1	80	0.38	9/1/2021	1/1/2022	88	8	30%	Fleet-Average Tier	Tier 4 Final
	Geotechnical Work (Bridges)	Excavators	Excavators	Diesel	2	158	0.38	1/1/2022	4/1/2022	65	8	20%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	1/1/2022	4/1/2022	65	8	100%	Fleet-Average Tier	Tier 4 Final
		Cranes	Cranes	Diesel	2	226	0.29	1/1/2022	4/1/2022	65	8	90%	Fleet-Average Tier	Tier 3
		Drill	Bore/Drill Rigs	Diesel	2	433	0.50	1/1/2022	4/1/2022	65	8	90%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	2	84	0.74	1/1/2022	4/1/2022	65	8	70%	Fleet-Average Tier	Tier 4 Final
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	0.42	1/1/2022	4/1/2022	65	8	15%	Fleet-Average Tier	Tier 4 Final
	Build Road & Vehicular Bridges	Cranes	Cranes	Diesel	4	226	0.29	4/1/2022	1/1/2023	196	8	100%	Fleet-Average Tier	Tier 3
		Generators	Generator Sets	Diesel	4	84	0.74	4/1/2022	1/1/2023	196	8	100%	Fleet-Average Tier	Tier 4 Final
		Gradall Type Forklifts	Forklifts	Diesel	2	111	0.20	4/1/2022	1/1/2023	196	8	75%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	4/1/2022	1/1/2023	196	8	80%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	2	402	0.38	4/1/2022	1/1/2023	196	8	80%	Fleet-Average Tier	Tier 4 Final
	Excavate and Shore	Excavators	Excavators	Diesel	4	158	0.38	1/1/2023	3/1/2024	305	8	70%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	1/1/2023	3/1/2024	305	8	80%	Fleet-Average Tier	Tier 4 Final
		Cranes	Cranes	Diesel	4	226	0.29	1/1/2023	3/1/2024	305	8	80%	Fleet-Average Tier	Tier 3
		Drill	Bore/Drill Rigs	Diesel	2	433	0.50	1/1/2023	3/1/2024	305	8	20%	Fleet-Average Tier	Tier 4 Final
		Generators	Generator Sets	Diesel	4	84	0.74	1/1/2023	3/1/2024	305	8	70%	Fleet-Average Tier	Tier 4 Final
		Concrete Boom Pumps	Other Construction Equipment	Diesel	1	480	0.42	1/1/2023	3/1/2024	305	8	15%	Fleet-Average Tier	Tier 4 Final
	Grading and Site Preparation	Pavers	Pavers	Diesel	2	130	0.42	3/1/2024	5/1/2024	44	8	50%	Fleet-Average Tier	Tier 4 Final
		Paving Equipment	Paving Equipment	Diesel	2	132	0.36	3/1/2024	5/1/2024	44	8	50%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	3/1/2024	5/1/2024	44	8	75%	Fleet-Average Tier	Tier 4 Final
		Rollers	Rollers	Diesel	2	80	0.38	3/1/2024	5/1/2024	44	8	50%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	3/1/2024	5/1/2024	44	8	100%	Fleet-Average Tier	Tier 4 Final
	Demolish Shoofly	Excavators	Excavators	Diesel	1	158	0.38	1/1/2023	2/1/2023	23	8	100%	Fleet-Average Tier	Tier 4 Final
		Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	Diesel	2	97	0.37	1/1/2023	2/1/2023	23	8	100%	Fleet-Average Tier	Tier 4 Final
		Water Trucks	Off-Highway Trucks	Diesel	1	402	0.38	1/1/2023	2/1/2023	23	8	100%	Fleet-Average Tier	Tier 4 Final

Notes:

1. Construction equipment list, fuel, size in HP, start and end dates, hours of operation per day, and utilization were provided by the Project sponsor. The Grade Separation Alternative will involve construction of a single overcrossing or single undercrossing at either Brush Street or Market Street. The off-road equipment list is assumed to be the same for both Brush Street and Market Street options.
2. Water truck emissions are shown in Table 136.
3. Equipment load factors were estimated from the Air Resource Board's OFFROAD database.
4. Utilizations for duration represent the usage percentage during the indicated equipment date range. Utilization percentage is multiplied by the number of hours per day in the calculation of off-road emissions.
5. Mitigation assumes Tier 4 Final engines, except for Cranes as shown above.

Abbreviations:

HP - horsepower CalEEMod® - California Emissions Estimator Model

Table 136
Grade Separation Alternative Construction Water Truck Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Water Truck Use Data[1]				Water Truck Emissions[2,3]						
			Miles	Idle-hrs	Starts	Hours	ROG	NOx	PM_{10}	$PM_{2.5}$	CO_2	CH_4	CO_2e
							(lbs)				(MT)		
Overcrossing	Site Utilities	2021	15,680	52	1,568	1,568	29	242	10	6.4	32	6.1E-04	32
	Demolition	2021	1,260	4.2	126	126	2.3	19	0.76	0.52	2.5	4.9E-05	2.5
	Geotechnical Work	2021	2,700	9.0	270	270	5.0	42	1.6	1.1	5.4	1.1E-04	5.4
	Geotechnical Work	2022	2,520	8.4	252	252	2.1	32	1.0	0.57	5.0	4.4E-05	5.0
	Grading and Site Preparation	2022	5,280	18	528	528	4.4	67	2.2	1.2	10	9.2E-05	10
Undercrossing	Site Utilities	2021	15,660	52	1,566	1,566	13	199	6.5	3.5	31	2.7E-04	31
	Demolition	2022	1,760	5.9	176	176	3.3	27	1.1	0.72	3.6	6.9E-05	3.6
	Build Road & Vehicular Bridges	2022	25,088	84	2,509	2,509	21	318	10	5.7	50	4.4E-04	50
	Grading and Site Preparation	2024	2,640	8.8	264	264	2.2	33	1.1	0.60	5.2	4.6E-05	5.2
	Demolish Shoofly	2023	1,840	6.1	184	184	0.16	20	0.60	0.26	3.5	3.3E-06	3.5

Notes:

1. Water truck usage data comes from the following assumptions:
   - Number of water trucks and schedule are provided in Table 135.
   - Hours are calculated as number of equipment * utilization percent * number of construction days * hours/day * load factor as provided in Table 135.
   - Starts are calculated as hours * 1 start/hour.
   - Miles are calculated as hours * 10 miles per hour.
   - Idle-hrs are calculated as starts * 1 idle/start * 2 minutes/idle. Idling is restricted to 2 minutes/idle.
2. Emission factors are located in Table 9 under the fleet mix "Water Trucks".
3. Global warming potentials used in the calculation of CO_2e are 1 and 25 for CO_2 and CH_4, respectively.

Abbreviations:

CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - carbon dioxide equivalent
lb - pound
MT - metric ton
NOx - nitrogen oxides
ROG - reactive organic gases
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns

Table 137
Grade Separation Alternative Water Use GHG Emissions
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area		Construction Subphase	Year	Number of Work Days	Average Acreage Needing Water[1] (acres)	Water Usage (gal/acre/ day)	Number of Water Trucks	Utilization (%)	Total Water Usage (million gal)	Outdoor Water Electric Intensity Factor[2] (kWh/million gal)	Electricity Usage (MWh)	Total CO_2e Emissions[3,4] (MT)
Brush Street	Overpass	Site Utilities	2021	196	1.4	4,000	1	100%	1.1	3,500	3.9	0.53
		Demolition	2021	21	1.4	4,000	1	75%	0.12		0.41	0.056
		Geotechnical Work	2021	45	1.4	4,000	1	75%	0.25		0.89	0.12
			2022	42	1.4	4,000	1	75%	0.24		0.83	0.11
		Grading and Site Preparation	2022	88	1.4	8,000	1	75%	1.0		3.5	0.47
									Total		**9.5**	**1.3**
	Underpass	Site Utilities	2021	261	1.4	4,000	1	75%	1.5	3,500	5.1	0.70
		Demolition	2022	22	1.4	4,000	1	100%	0.12		0.43	0.059
		Build Road & Vehicular Bridges	2022	196	1.4	4,000	2	80%	1.1		3.9	0.53
		Grading and Site Preparation	2024	44	1.4	8,000	1	75%	0.50		1.7	0.24
		Demolish Shoofly	2023	23	1.4	4,000	1	100%	0.13		0.45	0.062
									Total		**12**	**1.6**
Market Street	Overpass	Site Utilities	2021	196	1.4	4,000	1	100%	1.1	3,500	3.8	0.51
		Demolition	2021	21	1.4	4,000	1	75%	0.12		0.40	0.055
		Geotechnical Work	2021	45	1.4	4,000	1	75%	0.25		0.87	0.12
			2022	42	1.4	4,000	1	75%	0.23		0.81	0.11
		Grading and Site Preparation	2022	88	1.4	8,000	1	75%	1.0		3.4	0.46
									Total		**9.2**	**1.3**
	Underpass	Site Utilities	2021	261	1.4	4,000	1	75%	1.4	3,500	5.0	0.68
		Demolition	2022	22	1.4	4,000	1	100%	0.12		0.42	0.058
		Build Road & Vehicular Bridges	2022	196	1.4	4,000	2	80%	1.1		3.8	0.51
		Grading and Site Preparation	2024	44	1.4	8,000	1	75%	0.48		1.7	0.23
		Demolish Shoofly	2023	23	1.4	4,000	1	100%	0.13		0.44	0.060
									Total		**11**	**1.5**

Notes:

1. Acreage is the acreage of the construction area. Water usage per acre per day was assumed to be similar to Project estimates: 8,000 gal/acre/day for Grading and Site Preparation and 4,000 gal/acre/day for all other subphases.
2. Electric intensity factors were taken from Table 9.2 in Appendix D of the CalEEMod User's Guide as the sum of supply water, treat water and distribute water electric intensity factors. Since the water use reported here is only for fugitive dust control, indoor water use-related emissions and wastewater treatment-related emissions are not estimated here.
3. The energy intensity factor estimated here was taken from the local utility Pacific Gas & Electric. See Table 21 for derivation of factors.
4. Greenhouse gas emission factor calculations are shown in Table 21. For CO_2, the 2020 emission factor was conservatively used (297 lb/MWh) for all construction years. For CH_4 and N_2O, emission factors were retrieved from eGRID2018, Table 1 for the CAMX subregion (0.033, and 0.004 lb/MWh, respectively).

Abbreviations:

CH_4 - Methane
CO_2 - Carbon Dioxide
CO_2e - Carbon dioxide-equivalent
gal - Gallons
GHG - Greenhouse gases
kWh - kilowatt-hours
lbs - pounds
MT - Metric Tons
MWh - megawatt-hours
N_2O - Nitrous Oxide

References:

CalEEMod User's Guide (Available online at: http://www.aqmd.gov/caleemod/user's-guide)
PG&E, Pacific Gas and Electric - Gas and power company for California (https://www.pge.com/)
USEPA. 2018. eGRID2016 Summary Tables. Available at: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid.

RAMBOLL

Table 138
Grade Separation Alternative Trip Generation Rates
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area and Activity	Construction One-Way Trips per Type and Activity[1]		
	Worker	Vendor	Hauling
Brush Street Overcrossing			
Site Utilities	5,880	1,960	0
Demolition	336	420	0
Geotechnical Work	2,610	870	0
Abutement	2,680	1,005	0
Grading and Site Preparation	1,760	440	0
Structural Work	15,720	2,620	0
Total One-Way Trips	**28,986**	**7,315**	**0**
Brush Street Undercrossing			
Site Utilities	7,830	2,610	0
Demolition	352	440	0
Construct Shoofly	2,112	440	0
Geotechnical Work (Bridges)	1,950	650	0
Build Road & Vehicular Bridges	9,800	3,920	0
Excavate and Shore	15,250	4,575	13,200
Grading and Site Preparation	880	220	0
Demolish Shoofly	414	0	0
Total One-Way Trips	**38,588**	**12,855**	**13,200**
Market Street Overcrossing			
Site Utilities	5,880	1,960	0
Demolition	336	420	0
Geotechnical Work	2,610	870	0
Abutement	2,680	1,005	0
Grading and Site Preparation	1,760	440	0
Structural Work	15,720	2,620	0
Total One-Way Trips	**28,986**	**7,315**	**0**
Market Street Undercrossing			
Site Utilities	7,830	2,610	0
Demolition	352	440	0
Construct Shoofly	2,112	440	0
Geotechnical Work (Bridges)	1,950	650	0
Build Road & Vehicular Bridges	9,800	3,920	0
Excavate and Shore	15,250	4,575	12,000
Grading and Site Preparation	880	220	0
Demolish Shoofly	414	0	0
Total One-Way Trips	**38,588**	**12,855**	**12,000**

Default Trip Length (miles)[2]	10.8	7.3	20
Fleet Mix Assumptions[3]	50% LDA, 25% LDT1, and 25% LDT2, consistent with CalEEMod®	T6 (MHDT) and T7 (HHDT), consistent with CalEEMod®	T7 (HHDT), consistent with CalEEMod®

Notes:

1. Worker, vendor and hauling trips for each activity were provided by the Project sponsor. The Grade Separation Alternative will involve construction of only one of the four options presented in the above table.
2. CalEEMod® default trip lengths were used for each trip type.
3. CalEEMod® default fleet mix assumptions were used for each trip type.

EMFAC Vehicle Category Abbreviations

LDA - All Passenger Vehicles

LDT1 - All Light-Duty Trucks in Weight Class 0-3,750 lbs

LDT2 - Gas, Diesel Light-Duty Trucks in Weight Class 3,751-5,750 lbs

MHDT - Gas, Diesel Medium-Heavy-Duty vehicles in Weight Class 12,001-33,000 lbs

HHDT- Gas, Diesel Heavy-Heavy-Duty vehicles in Weight Class 33,001-60,000 lbs

References:

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. Available online at http://www.caleemod.com/

Table 139
Summary of Unmitigated Construction Criteria Air Pollutant Emissions for Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Unmitigated Annual Emissions[1,2] (lb/year)							
			ROG	NO_x	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)	ROG	NO_x	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)
			Brush Street				Market Street			
Overcrossing	Site Utilities	2021	533	5,139	231	214	533	5,139	231	214
	Demolition	2021	27	244	12	11	27	244	12	11
	Geotechnical Work	2021	114	1,170	46	43	114	1,170	46	43
		2022	95	940	37	34	95	940	37	34
	Abutement	2022	182	1,743	86	81	182	1,743	86	81
	Grading and Site Preparation	2022	140	1,347	64	59	140	1,347	64	59
	Structural Work	2022	627	5,892	288	276	627	5,892	288	276
		2023	413	3,852	180	172	413	3,852	180	172
Undercrossing	Site Utilities	2021	635	6,227	273	254	635	6,227	273	254
	Demolition	2022	27	234	11	10	27	234	11	10
	Construct Shoofly	2021	123	1,124	64	59	123	1,124	64	59
	Geotechnical Work (Bridges)	2022	161	1,579	66	62	161	1,579	66	62
	Build Road & Vehicular Bridges	2022	692	6,954	315	295	692	6,954	315	295
	Excavate and Shore	2023	833	9,119	345	325	831	8,984	344	324
		2024	137	1,484	54	51	136	1,460	54	51
	Grading and Site Preparation	2024	39	379	17	15	39	379	17	15
	Demolish Shoofly	2023	13	127	5.8	5.1	13	127	5.8	5.1

Construction Area	Year	Summary of Unmitigated Annual Average Daily CAP Emissions[1,2,3] by Year (lb/day)							
		ROG	NOx	PM_{10} (exhaust)	PM_{25} (exhaust)	ROG	NOx	PM_{10} (exhaust)	PM_{25} (exhaust)
Overcrossing	2021	2.6	25	1.1	1.0	2.6	25	1.1	1.0
	2022	4.0	38	1.8	1.7	4.0	38	1.8	1.7
	2023	1.6	15	0.69	0.66	1.6	15	0.69	0.66
	2024	--	--	--	--	--	--	--	--
Undercrossing	2021	2.9	28	1.3	1.2	2.9	28	1.3	1.2
	2022	3.4	34	1.5	1.4	3.4	34	1.5	1.4
	2023	3.3	36	1.3	1.3	3.2	35	1.3	1.3
	2024	2.0	21	0.81	0.75	2.0	21	0.81	0.75

Notes:

1. Unmitigated emissions assume fleet-average equipment tiers for each calendar year. The emissions above include emissions from diesel off-road equipment and gasoline and diesel on-road equipment. The tables show values for all four possible construction options for the Grade Separation Alternative. The Grade Separation Alternative will involve construction of only a single overcrossing or single undercrossing at either Brush Street or Market Street.
2. Emissions are identical for the overcrossing whether it is constructed at Brush Street or Market Street, as displayed in the table. Emissions are identical for the undercrossing whether it is constructed at Brush Street or Market Street in all subphases but Excavation and Shoring.
3. Emissions are averaged over 260 working days per year for all construction areas and subphases. Emissions in 2024 (for the undercrossing options) are averaged over the fraction of the year that there will be construction (88 days).

Abbreviations:

lb - pound
ROG - reactive organic gases
NO_x - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
CAP - criteria air pollutants

Table 140
Summary of Mitigated Construction Criteria Air Pollutant Emissions for Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Mitigated Annual Emissions[1,2] (lb/year)							
			ROG	NO_x	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)	ROG	NO_x	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)
			Brush Street				Market Street			
Overcrossing	Site Utilities	2021	165	869	27	24	165	869	27	24
	Demolition	2021	9.0	67	1.8	1.5	9.0	67	1.8	1.5
	Geotechnical Work	2021	48	404	14	13	48	404	14	13
		2022	41	366	12	12	41	366	12	12
	Abutement	2022	52	468	15	15	52	468	15	15
	Grading and Site Preparation	2022	41	229	6.6	5.6	41	229	6.6	5.6
	Structural Work	2022	177	1,598	55	55	177	1,598	55	55
		2023	123	1,125	39	39	123	1,125	39	39
Undercrossing	Site Utilities	2021	183	991	28	25	183	991	28	25
	Demolition	2022	9.7	72	1.9	1.6	9.7	72	1.9	1.6
	Construct Shoofly	2021	32	139	3.8	3.8	32	139	3.8	3.8
	Geotechnical Work (Bridges)	2022	64	532	18	18	64	532	18	18
	Build Road & Vehicular Bridges	2022	234	2,952	102	97	234	2,952	102	97
	Excavate and Shore	2023	317	4,513	117	117	315	4,379	116	116
		2024	55	782	20	20	54	759	20	20
	Grading and Site Preparation	2024	14	86	2.4	1.9	14	86	2.4	1.9
	Demolish Shoofly	2023	4.5	35	1.0	0.70	4.5	35	1.0	0.70

Construction Area	Year	Summary of Mitigated Annual Average Daily CAP Emissions[1,2,3] by Year (lb/day)							
		ROG	NO_x	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)	ROG	NO_x	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)
Overcrossing	2021	0.85	5.2	0.16	0.15	0.85	5.2	0.16	0.15
	2022	1.2	10	0.34	0.34	1.2	10	0.34	0.34
	2023	0.47	4.3	0.15	0.15	0.5	4.3	0.15	0.15
	2024	--	--	--	--	--	--	--	--
Undercrossing	2021	0.83	4.3	0.12	0.11	0.83	4.3	0.12	0.11
	2022	1.2	14	0.47	0.45	1.2	14	0.47	0.45
	2023	1.2	17	0.46	0.45	1.2	17	0.45	0.45
	2024	0.78	9.9	0.26	0.25	0.77	9.6	0.26	0.25

Notes:

1. Mitigated construction emissions reflect all Tier 4 Final off-road construction equipment, except as noted in Table 135. The emissions above include emissions from diesel off-road equipment and gasoline and diesel on-road equipment.
2. Emissions are identical for the overcrossing whether it is constructed at Brush Street or Market Street, as displayed in the table. Emissions are identical for the undercrossing whether it is constructed at Brush Street or Market Street in all subphases but Excavation and Shoring.
3. Emissions are averaged over 260 working days per year for all construction areas and subphases. Emissions in 2024 (for the undercrossing options) are averaged over the fraction of the year that there will be construction (88 days).

Abbreviations:

lb - pound
ROG - reactive organic gases
NO_x - nitrogen oxides
PM_{10} - particulate matter less than 10 microns
$PM_{2.5}$ - particulate matter less than 2.5 microns
CAP - criteria air pollutants

Table 141
Summary of Construction Greenhouse Gas Emissions for Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Construction Area	Construction Activity	Year	Annual Emissions[1,2,3] (Metric Tons) CO_2e	
			Brush Street	Market Street
Overcrossing	Site Utilities	2021	486	486
	Demolition	2021	25	25
	Geotechnical Work	2021	132	132
		2022	122	122
	Abutement	2022	154	154
	Grading and Site Preparation	2022	138	138
	Structural Work	2022	517	517
		2023	367	367
Undercrossing	Site Utilities	2021	600	600
	Demolition	2022	27	27
	Construct Shoofly	2021	100	100
	Geotechnical Work (Bridges)	2022	195	195
	Build Road & Vehicular Bridges	2022	606	606
	Excavate and Shore	2023	1,169	1,138
		2024	201	196
	Grading and Site Preparation	2024	44	44
	Demolish Shoofly	2023	16	16

Construction Area	Year	Summary of CO_2e Emissions by Year (Metric Tons)[1,2,3]	
		Brush Street	Market Street
Overcrossing	2021	643	643
	2022	932	932
	2023	367	367
	2024	--	--
	Total	**1,942**	**1,942**
Undercrossing	2021	700	700
	2022	828	828
	2023	1,185	1,154
	2024	245	240
	Total	**2,958**	**2,922**

Notes:

1. Global warming potentials used in the calculation of CO_2e are 1, 25 and 298 for CO_2, CH_4 and N_2O, respectively, from IPCC Fourth Assessment Report.
2. Emissions sources include gasoline and diesel on-road vehicles, diesel off-road equipment, and water use.
3. GHG emissions are not affected by off-road equipment engine tier selection. Thus, these emissions represent both unmitigated and mitigated emissions.

Abbreviations:

CO_2e - Carbon Dioxide Equivalent
CO_2 - Carbon Dioxide
CH_4 - Methane
N_2O - Nitrogen Oxide
GHG - greenhouse gas
IPCC - Intergovernmental Panel on Climate Change
AR4 - Fourth Assessment Report

References:

IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. Available online at: https://www.ipcc.ch/report/ar4/wg1/

Table 142
Summary of Excess Lifetime Cancer Risks Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Impacts	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Brush Street[4]		Market Street[4]		Brush Street[4]		Market Street[4]	
	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]
Overpass Grade Separation Alternative[6]								
Project Construction + Operation	592	65	592	65	2.1	4.2	2.1	6.1
Overpass Construction	--	147	--	97	--	26	--	15
Total Project + Overpass	**592**	**211**	**592**	**162**	**2.1**	**30**	**2.1**	**21**
MEIR Location for Project + Overpass Grade Separation Alternative[7]								
UTMx (m)	562,820	563,080	562,820	563,080	562,940	563,100	562,940	563,080
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,660	4,183,440	4,183,700	4,183,440	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Scenario[8]	Scenario 3	Scenario 1	Scenario 3	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1
Underpass Grade Separation Alternative[6]								
Project Construction + Operation	592	65	592	65	2.1	4.2	2.1	6.1
Underpass Construction	--	147	--	97	0.021	32	0.020	19
Total Project + Underpass	**592**	**212**	**592**	**162**	**2.2**	**36**	**2.2**	**25**
MEIR Location for Project + Underpass Grade Separation Alternative[7]								
UTMx (m)	562,820	563,080	562,820	563,080	562,960	563,100	562,960	563,080
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,660	4,183,480	4,183,700	4,183,480	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Scenario[8]	Scenario 3	Scenario 1	Scenario 3	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1

Table 142
Summary of Excess Lifetime Cancer Risks Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project and Grade Separation Alternative emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project and Grade Separation Alternative construction and subsequent Project operations. On-site receptors are exposed to Phase 2 and Grade Separation Alternative construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   CF = Conversion Factor (mg/µg)

   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$

   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hours per year. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20 hours per year. For the Grade Separation Alternative construction, the Unmitigated scenario assumes default off-road equipment fleet and the Mitigated scenario assumes the use of all Tier 4 construction off-road equipment (except cranes which are Tier 3). The mitigated on-site MEIR result reflects health risk reductions from MERV filtration that may be included in the Project.
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. The Project sponsor has indicated that the Grade Separation Alternative could occur on either Brush Street or Market Street but not both.
5. MEIRs were identified as the sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the combined Project construction, Project operation, and Grade Separation Alternative construction.
6. The Project sponsor has indicated that the Grade Separation Alternative could occur as either an overpass or an underpass but not both.
7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table 142
Summary of Excess Lifetime Cancer Risks Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

[8.] For the Grade Separation Alternative, only two of the three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027, which is after the conclusion of the Grade Separation Alternative, and therefore not analyzed for this alternative.

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
µg - microgram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 143
Summary of Chronic Hazard Index Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Impacts	Chronic Hazard Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Brush Street[4]		Market Street[4]		Brush Street[4]		Market Street[4]	
	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]
Overpass Grade Separation Alternative[6]								
Project Construction + Operation	0.18	0.014	0.18	0.023	0.0017	0.0010	0.0017	0.0015
Overpass Construction	--	0.13	--	0.074	--	0.023	--	0.013
Total Project + Overpass	**0.18**	**0.14**	**0.18**	**0.10**	**0.0017**	**0.024**	**0.0017**	**0.0148**
MEIR Location for Project + Overpass Grade Separation Alternative[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,100	562,920	563,080
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,700	4,183,660	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2022	2027	2022	2027	2022
Underpass Grade Separation Alternative[6]								
Project Construction + Operation	0.18	0.014	0.18	0.034	0.0017	0.0010	0.0017	0.0015
Underpass Construction	--	0.10	--	0.052	--	0.030	--	0.017
Total Project + Underpass	**0.18**	**0.12**	**0.18**	**0.085**	**0.0017**	**0.031**	**0.0017**	**0.019**
MEIR Location for Project + Underpass Grade Separation Alternative[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,100	562,920	563,080
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,700	4,183,660	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2021	2027	2022	2027	2022

Table 143
Summary of Chronic Hazard Index Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hours per year. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20 hours per year. For the Grade Separation Alternative construction, the Unmitigated scenario assumes default off-road equipment fleet and the Mitigated scenario assumes the use of all Tier 4 construction off-road equipment (except cranes which are Tier 3). The mitigated on-site MEIR result reflects health risk reductions from MERV filtration that may be included in the Project.
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime chronic non-cancer risk for these scenarios.
4. The Project sponsor has indicated that the Grade Separation Alternative could occur on either Brush Street or Market Street but not both.
5. MEIRs were identified as the sensitive receptor location with the maximum total chronic HI attributed to the emissions associated with the combined Project construction, Project operation, and Grade Separation Alternative construction.
6. The Project sponsor has indicated that the Grade Separation Alternative could occur as either an overpass or an underpass but not both.
7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table 143
Summary of Chronic Hazard Index Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - reference exposure level
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table 144
Summary of PM2.5 Concentration Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Impacts	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Brush Street[4]		Market Street[4]		Brush Street[4]		Market Street[4]	
	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]
Overpass Grade Separation Alternative[6]								
Project Construction + Operation	0.89	0.067	0.89	0.11	0.016	0.19	0.016	0.19
Overpass Construction	--	0.60	--	0.35	--	--	--	--
Total Project + Overpass	**0.89**	**0.67**	**0.89**	**0.46**	**0.016**	**0.19**	**0.016**	**0.19**
MEIR Location for Project + Overpass Grade Separation Alternative[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,180	562,920	563,180
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,920	4,183,660	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2022	2027	2027	2027	2027
Underpass Grade Separation Alternative[6]								
Project Construction + Operation	0.89	0.067	0.89	0.16	0.016	0.19	0.016	0.19
Underpass Construction	--	0.49	--	0.24	--	--	--	--
Total Project + Underpass	**0.89**	**0.56**	**0.89**	**0.40**	**0.016**	**0.19**	**0.016**	**0.19**
MEIR Location for Project + Underpass Grade Separation Alternative[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,180	562,920	563,180
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,920	4,183,660	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2021	2027	2027	2027	2027

Table 144
Summary of PM2.5 Concentration Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project and Grade Separation Alternative construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 and Grade Separation Alternative construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emissions Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hours per year. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20 hours per year. For the Grade Separation Alternative construction, the Unmitigated scenario assumes default off-road equipment fleet and the Mitigated scenario assumes the use of all Tier 4 construction off-road equipment (except cranes which are Tier 3). The mitigated on-site MEIR result reflects health risk reductions from MERV filtration that may be included in the Project.
3. Values are shown as "--" to indicate that these sources do not contribute to the lifetime excess $PM_{2.5}$ concentration for these scenarios.
4. The Project sponsor has indicated that the Grade Separation Alternative could occur on either Brush Street or Market Street but not both.
5. MEIRs were identified as the sensitive receptor location with the maximum total $PM_{2.5}$ concentration attributed to the emissions associated with the combined Project construction, Project operation, and Grade Separation Alternative construction.
6. The Project sponsor has indicated that the Grade Separation Alternative could occur as either an overpass or an underpass but not both.
7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table 144
Summary of PM2.5 Concentration Associated with the Grade Separation Alternative
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

Table 145
Summary of Nearby Stationary Source Impacts at Project + Grade Separation Alternative MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	74	74	824	Diesel ICE	1.00	1.0	0.1	0.030	6.7E-04	0
16284	Verizon Wirelesss	0.019	4.2E-04	0	75	75	827	Diesel ICE	1.00	1.0	0.1	0.019	4.2E-04	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	291	291	520	Diesel ICE	0.28	0.28	0.12	0.012	4.3E-04	0
17073	T-Mobile	0.17	0.0038	0	329	329	852	Diesel ICE	0.22	0.22	0.06	0.037	8.4E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	400	400	943	Generic Decay	0.43	0.43	0.15	0.0019	1.3E-05	4.2E-05
19696	Safety-Kleen Systems, Inc.	0.27	2.1E-04	0	813	813	246	Generic Decay	0.19	0.19	0.58	0.051	4.0E-05	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	282	282	524	Diesel ICE	0.28	0.28	0.12	0.11	0.0022	0
5133	Mr. Espresso	0.28	0.0025	0.25	616	616	590	Generic Decay	0.28	0.28	0.30	0.079	7.1E-04	0.076
11887	Dynergy Oakland LLC	4.0	0.026	4.2	900	900	1,442	Generic Decay	0.16	0.16	0.00	0.64	0.0041	0
											Total:	**1.0**	**0.0095**	**0.076**

Onsite MEIR

Facility ID (Plant Number)[1]	Facility Name[1]	Unscaled Values[2]			Distance from MEIR			Decay Type[2]	Decay Factor[2]			Scaled Values[2]		
		Cancer Risk	Hazard Risk	$PM_{2.5}$	Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR		Cancer Risk MEIR	Hazard Risk MEIR	$PM_{2.5}$ MEIR	Cancer Risk	Hazard Risk	$PM_{2.5}$
		in a million	--	$\mu g/m^3$	feet				unitless			in a million	unitless	$\mu g/m^3$
16850	Sprint	0.030	6.7E-04	0	792	534	534	Diesel ICE	0.060	0.100	0.10	0.0018	6.7E-05	0
16284	Verizon Wirelesss	0.019	4.2E-04	0	789	534	534	Diesel ICE	0.060	0.100	0.10	0.0011	4.2E-05	0
13299	MetroPCS California/Florida Inc.	0.043	0.0015	0	1,142	866	866	Diesel ICE	0	0	0.050	0	7.6E-05	0
17073	T-Mobile	0.17	0.0038	0	965	893	893	Diesel ICE	0	0	0.05	0	1.9E-04	0
14551	Pacific Gas and Electric	0.0045	3.0E-05	2.9E-04	941	930	930	Generic Decay	0	0	0.15	6.5E-04	4.6E-06	4.4E-05
22778	Solstice Press[3]	--	--	--	1,131	567	567	Generic Decay	0	0	0.31	0	0	0
20586	Digital 720 2nd LLC	0.40	0.0079	0	1,133	855	855	Diesel ICE	0	0	0.050	0	3.9E-04	0
											Total:	**0.0035**	**7.8E-04**	**4.4E-05**

Notes:

1. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD.
2. Unscaled health risk values were estimated using facility emissions provided by BAAQMD and BAAQMD's Health Risk Calculator Tool. These values were scaled by distance using the diesel IC engines multiplier tool or the BAAQMD's generic distance decay curve, as indicated above. Results are presented for the Project + Brush Street Underpass MEIRs as they represent the highest health risks of the four possible construction locations for the Grade Separation Alternative.
3. No emissions or health impact values were provided for Solstice Press.

Abbreviations:

IC - internal combustion
ICE - internal combustion engine
MEIR - maximally exposed individual receptor
$\mu g/m^3$ - micrograms per cubic meters
$PM_{2.5}$ - particulate matter less than 2.5 micrometers in diameter

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Table 146
Summary of Nearby Roadway Impacts at Project + Grade Separation Alternative MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Offsite MEIR

Roadway	Reported ADT[1]	Section of Roadway measured	Centroid of Road Segment		Distance from Roadway for Cancer MEIR	Distance from Roadway for $PM_{2.5}$ MEIR	MEIR Direction from Street[2]	BAAQMD Roadway Screening Analysis Tables[2]	
			UTMx	UTMy				Lifetime Excess Cancer Risk	$PM_{2.5}$ Concentration
	(vehicles/day)		m	m	(ft)	(ft)		(in a million)	($\mu g/m^3$)
Brush Street	18,550	From 7th Street to 11th Street	563,267	4,184,130	1,513	745	East	0	0.039
5th Street	13,850	From Castro Street to MLK	563,189	4,183,969	930	164	South	0.85	0.057
7th Street	18,050	From Brush Street to Castro Street	563,396	4,184,074	1,564	869	South	0	0.014
							Total	**0.85**	**0.11**

Notes:

1. ADT for existing conditions of the surface streets were obtained from Fehr & Peers. Only roadways with traffic volumes between 10,000 and 30,000 ADT were included in this analysis. There were no roadways with traffic volumes between 10,000 and 30,000 ADT of the onsite MEIR.
2. Screening values for the surface streets were obtained from BAAQMD Roadway Screening Analysis Calculator (BAAQMD 2015). The risk and concentrations depends on the direction of the road from the MEIRs (e.g., due to wind patterns). Results are presented for the Project + Brush Street Underpass MEIRs as they represent the highest health risks of the four possible construction locations for the Grade Separation Alternative.

Abbreviations:

$\mu g/m^3$ - microgram per cubic meter
ADT - average daily traffic
BAAQMD - Bay Area Air Quality Management District
CEQA - California Environmental Quality Act
ft - feet
HI - hazard index
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter
MEIR - maximally exposed individual receptor

References:

BAAQMD. 2015. Roadway Screening Analysis Calculator. Available online at:
http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/screeningcalculator_4_16_15-xlsx.xlsx?la=en

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Table 147
Summary of Cumulative Impacts at Project + Grade Separation Alternative MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	1.0	0.0095	0.076	0.0035	7.8E-04	4.4E-05
Roadways[3]	0.85	--	0.11	0	--	0
Highways[4]	21	--	0.56	14	--	0.27
Major Streets[4,5]	4.6	--	0.060	3.3	--	0.029
Railways[4]	42	--	0.017	19	--	0.067
Project Construction + Operation	4.2	0.0010	0.19	2.1	0.0017	0.016
Underpass Construction[6]	32	0.030	--	0.021	--	--
Total[6]	**106**	**0.040**	**1.0**	**38**	**0.0025**	**0.38**

Notes:

1. Details for each source are shown in the preceeding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.
6. Results are presented for the Project + Brush Street Underpass MEIRs as they represent the highest health risks of the four possible construction locations for the Grade Separation Alternative.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

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Table 148
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Grade Separation Alternative MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Project	Project Construction + Operation	2.1	0.016	4.2	0.1856
	Overpass Construction	0.02	--	32.32	--
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.051	--	0.105
	Light Heavy Duty Trucks	0.56	0.005	0.759	0.009
	Heavy and Medium Duty Trucks	1.4	0.011	1.826	0.019
	Non-Truck Vehicles	1.1	0.115	1.638	0.244
Other	Ferries	17	0.017	11.319	0.011
	Schnitzer Ships	5.6	0.006	3.832	0.004
	Schnitzer Trucks	0.051	0.006	0.019	0.002
	Truck Related Business	2.8	0.001	1.208	0.001
Permitted	CASS	9.0E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	3.0E-06	0.023	0.000	0.031
	Dynegy	0.0034	0.000	0.012	0.001
	EBMUD	0.64	0.025	0.704	0.027
	Other Facilities	1.3	0.047	1.647	0.050
	Pinnacle	--	0.023	--	0.022
	Schnitzer Stationary Sources	37	0.450	19.674	0.157
	Sierra Pacific	--	0.011	--	0.011
Port	BNSF Railyard	2.9	0.004	2.812	0.003
	Bunkering Tugs and Pumps	4.8	0.005	3.232	0.003
	Cargo Handling	7.1	0.010	6.381	0.008
	Drayage Trucks	1.3	0.014	2.575	0.026
	Dredging	12	0.013	8.355	0.009
	Road Dust	--	0.019	--	0.015
	Harbor Craft	86	0.079	50.594	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	1.0	0.001	1.013	0.001
	OGV Berthing	23	0.060	21.126	0.052
	OGV Maneuvering	33	0.039	26.075	0.031
Rail	Rail Lines	27	0.084	62.248	0.026
	Railyard	30	0.038	26.251	0.029
Street	Road Dust	--	0.724	--	1.746
	Light Heavy Duty Trucks	0.52	0.004	0.960	0.010
	Heavy and Medium Duty Trucks	0.72	0.012	1.339	0.051
	Non-Truck Vehicles	1.2	0.087	1.973	0.186
	Total	**299**	**2.0**	**294**	**3.1**

Table 148
Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Grade Separation Alternative MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Health impact values are shown for the Project + Grade Separation Alternative MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.
2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment
MEIR - maximally exposed individual receptor
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
$\mu g/m^3$ - micrograms per cubic meter

Table 149

Summary of 2024 West Oakland Cumulative Impacts at Project + Grade Separation Alternative MEIR

Oakland Waterfront Ballpark District Project

Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project	2.2	0.02	36.5	0.19
Highway	3.1	0.18	4.2	0.38
Other	20	0.018	13	0.012
Permitted	1.9	0.14	2.4	0.15
Dynegy	0.0034	3.4E-04	0.012	8.2E-04
Schnitzer	42	0.46	24	0.16
Port	171	0.24	122	0.20
Rail	57	0.122	88	0.05
Street	2.4	0.83	4.3	2.0
Total	**299**	**2.0**	**294**	**3.1**

Notes:

1. Health impact values are shown for the Project + Grade Separation Alternative MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

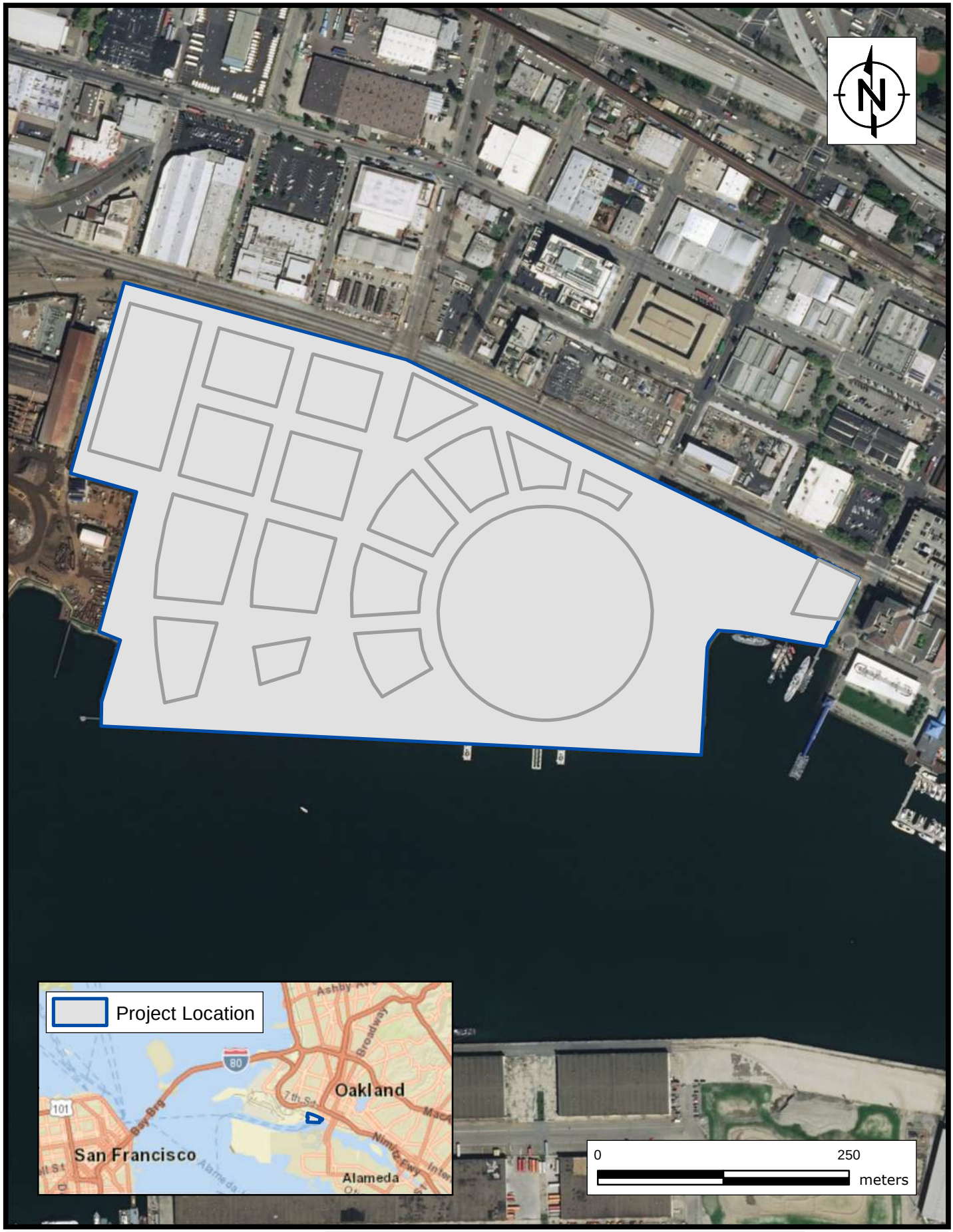
HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

FIGURES



RAMBOLL

Project Location
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
1

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RAMBOLL

Grading Phasing Plan
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
2A

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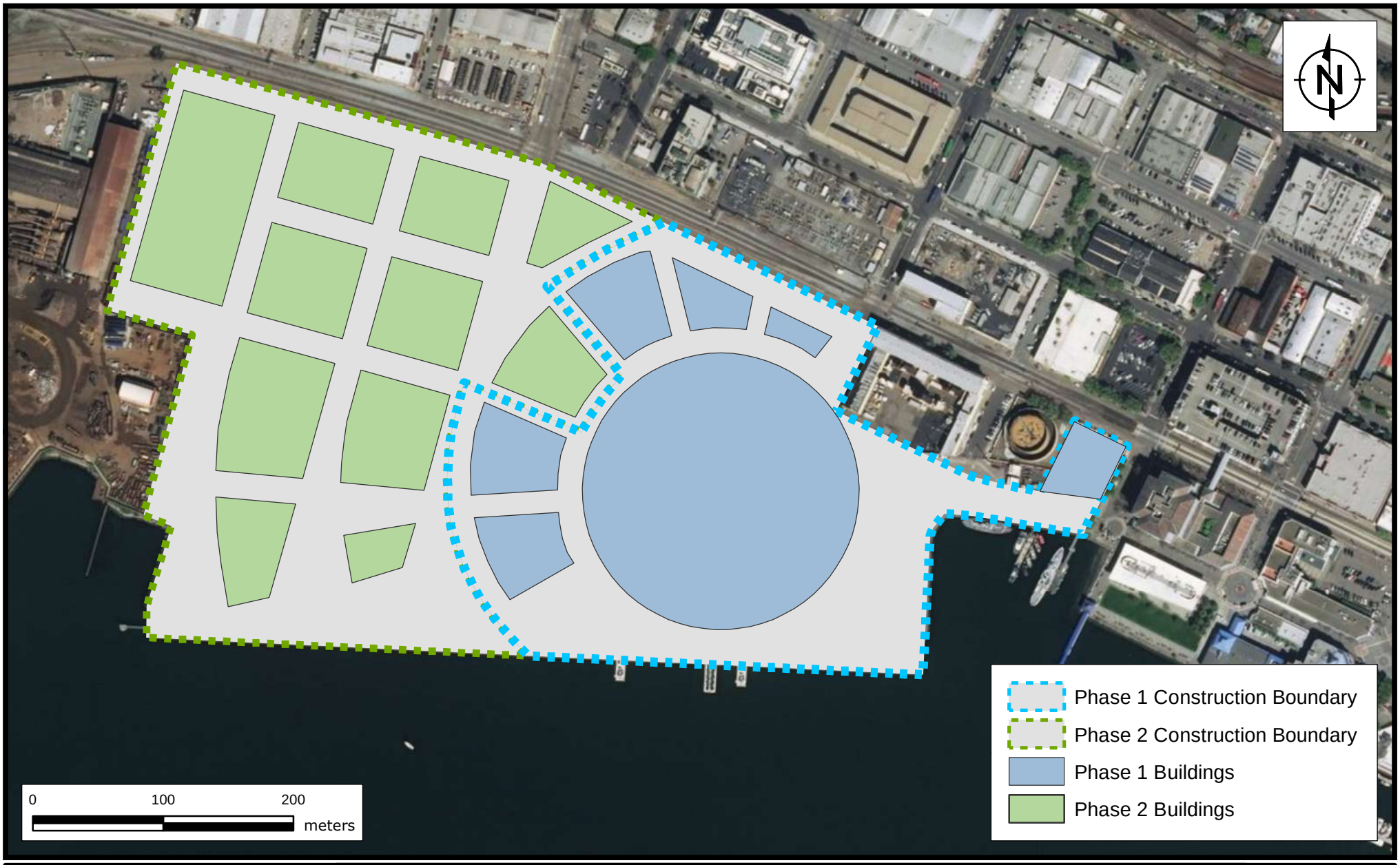
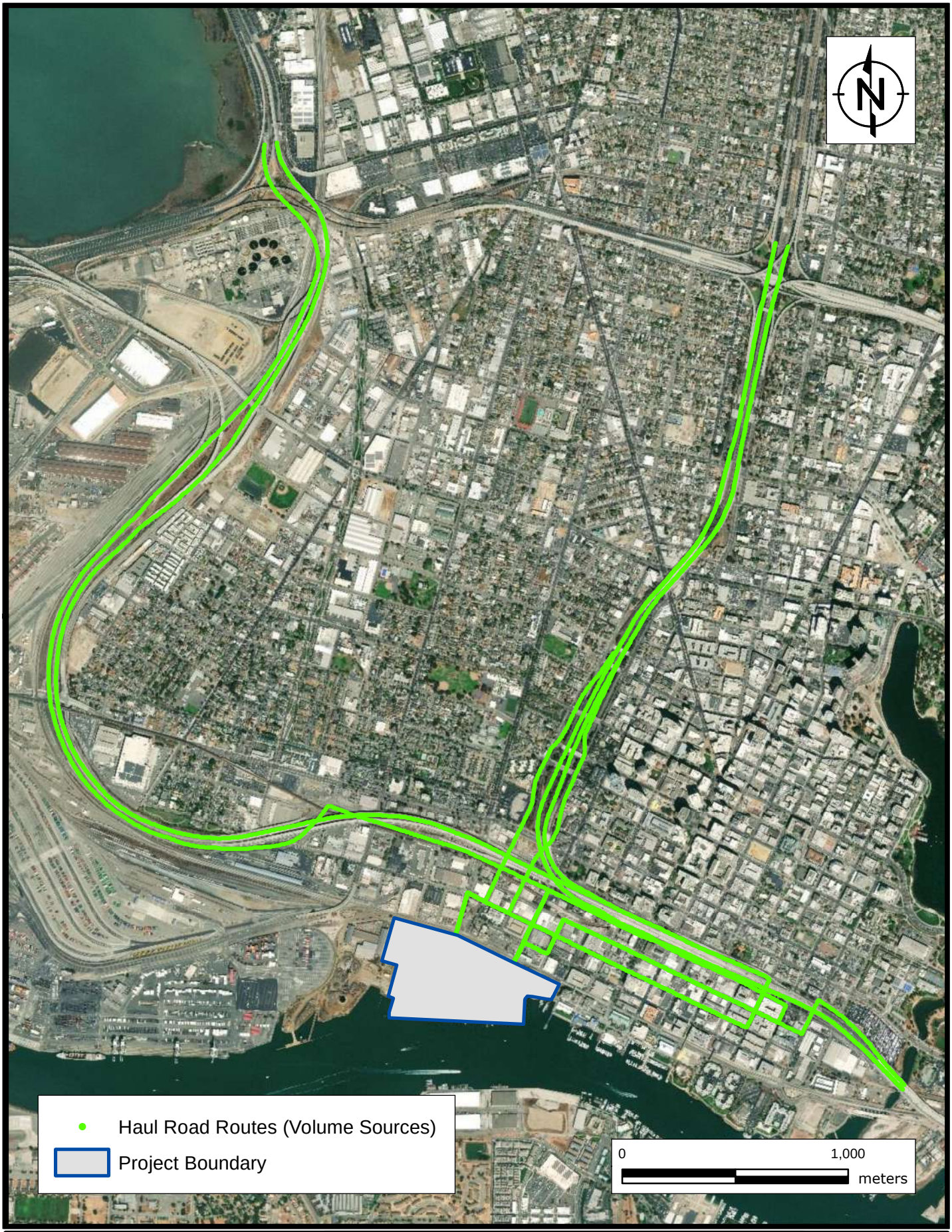


RAMBOLL

Construction Phasing Plan
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
2B

DRAFTED BY: DCW | DATE: 12/30/2019 | PROJECT: 1690010168



RAMBOLL

Modeled Construction Haul Road Routes
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
4

DRAFTED BY: DCW | DATE: 12/30/2019 | 1690010168

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Modeled Construction Area Sources
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
5

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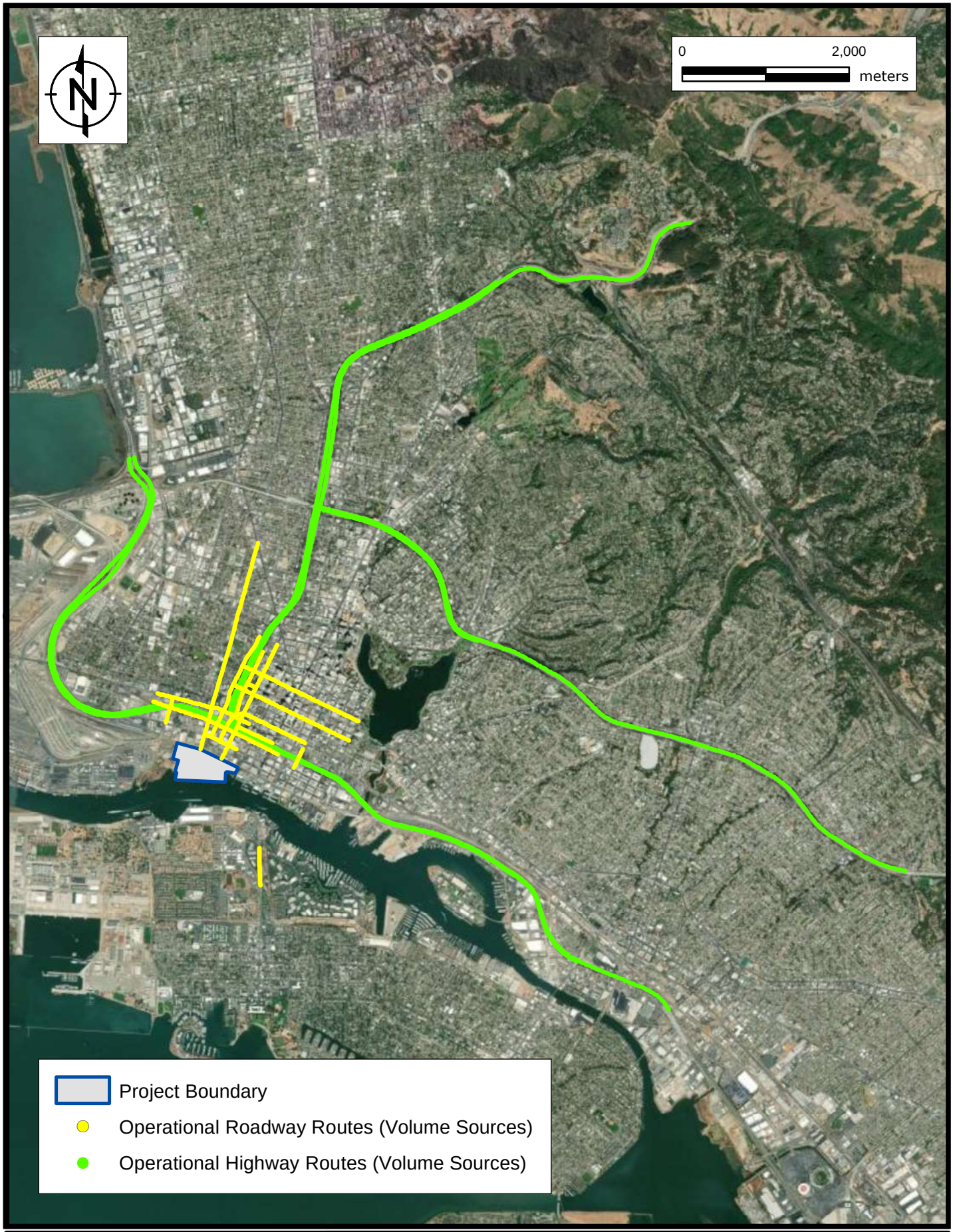
PROJECT: 1690010168



RAMBOLL

Modeled Operational Traffic Routes
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
6

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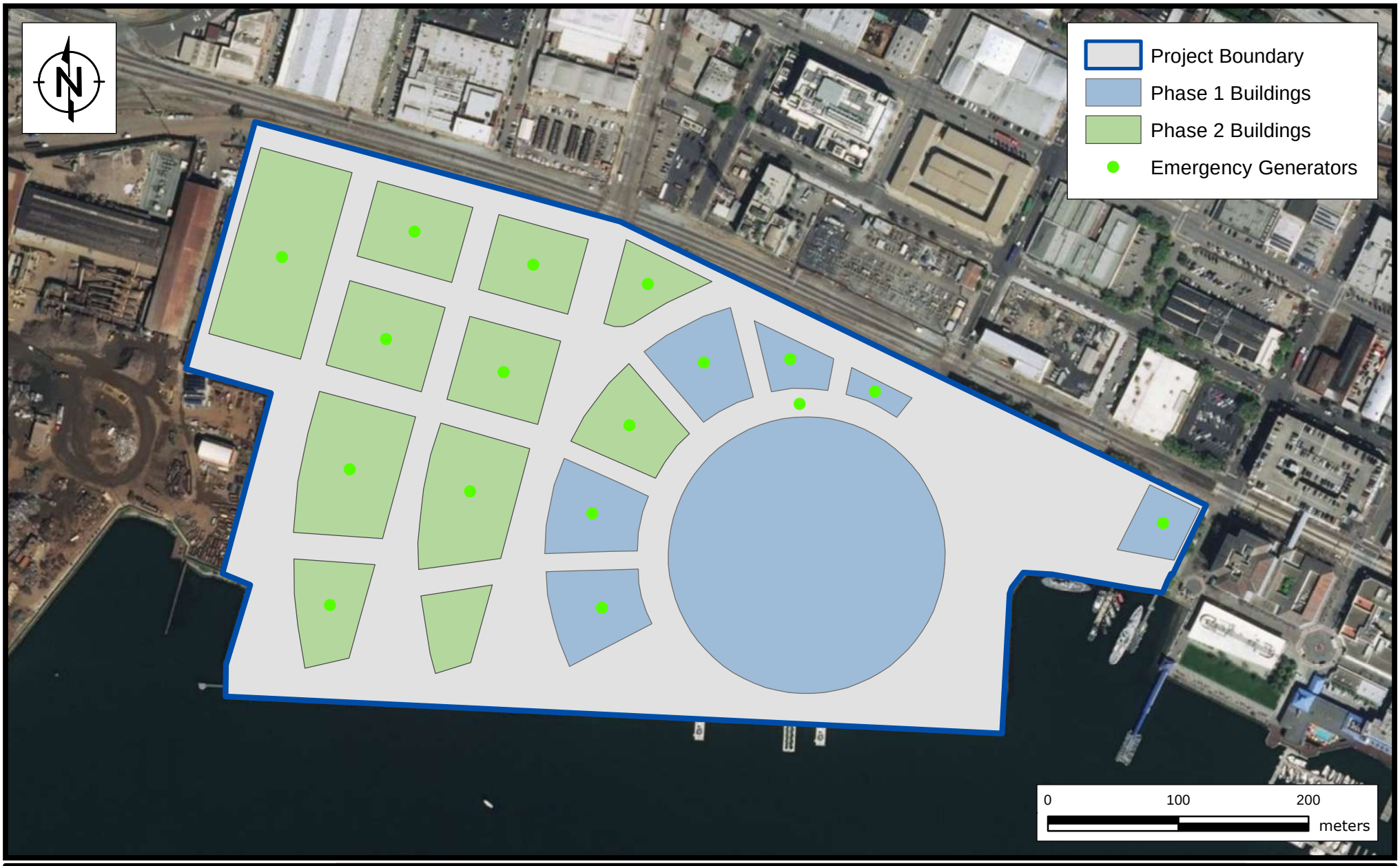

RAMBOLL

Modeled Emergency Generator Locations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
7

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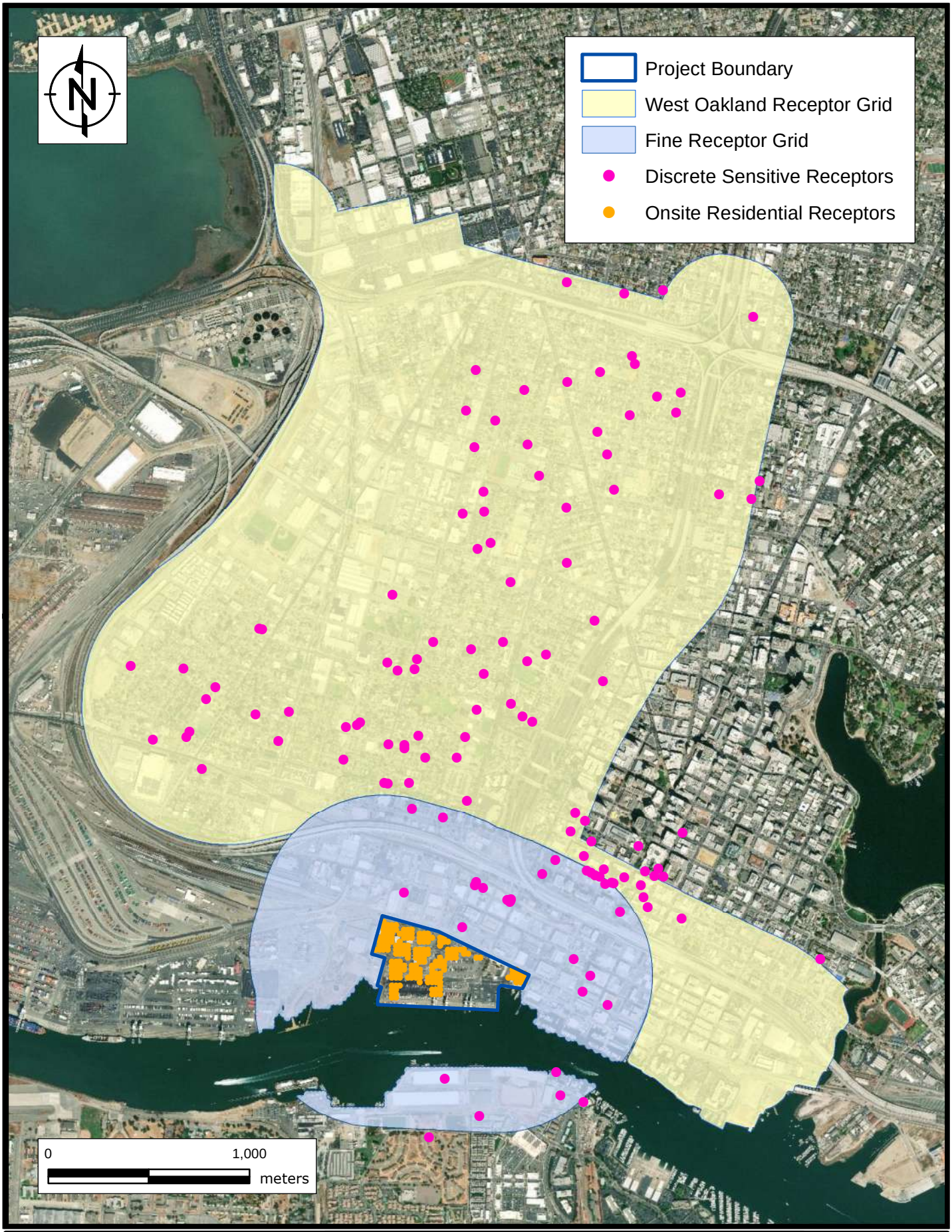
PROJECT: 1690010168



RAMBOLL

Modeled Sensitive Receptor Locations
Oakland Waterfront Ballpark District Project
Oakland California

FIGURE
8

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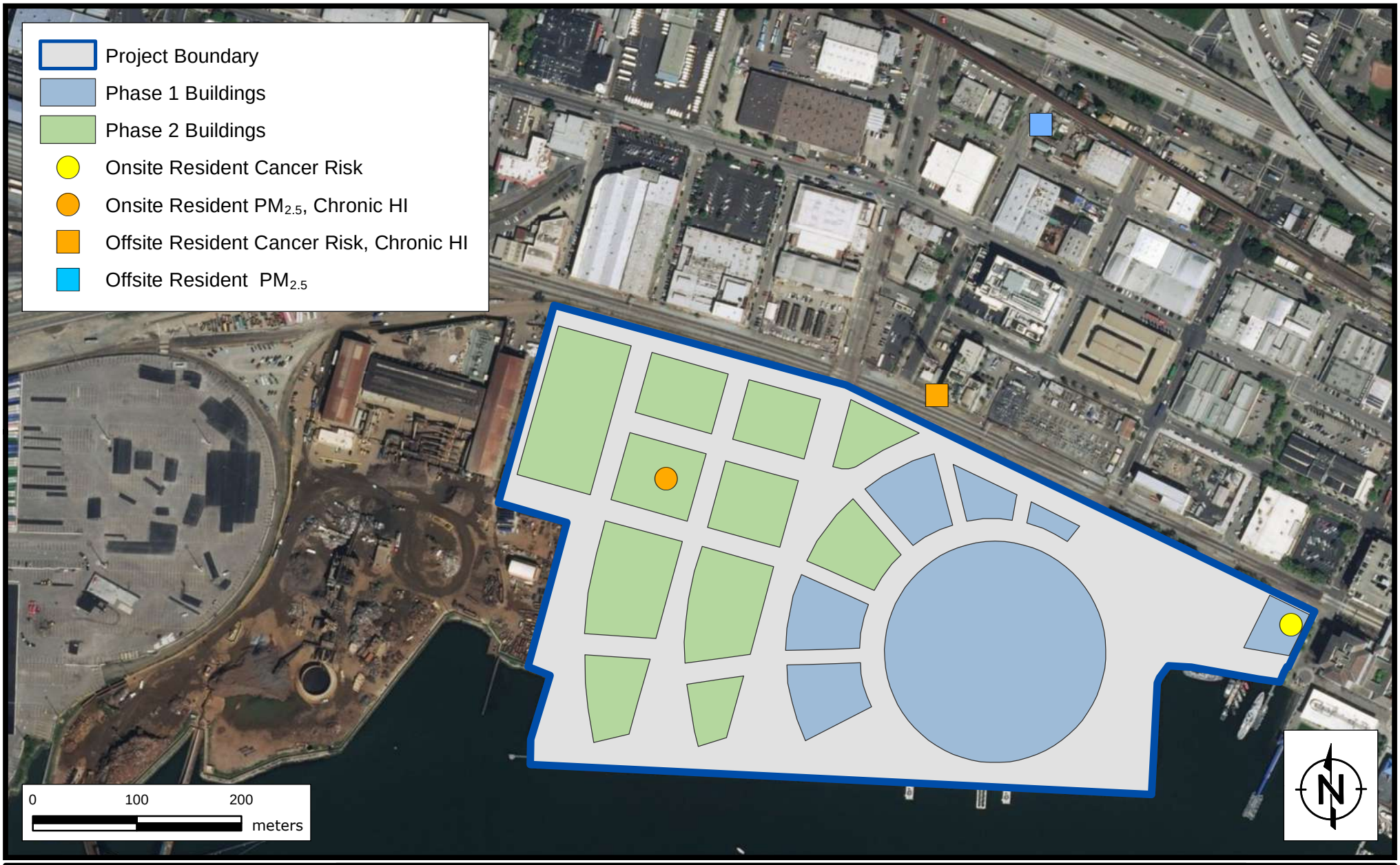
DATE: 12/30/2019

1690010168



RAMBOLL

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations:
Project Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
9A

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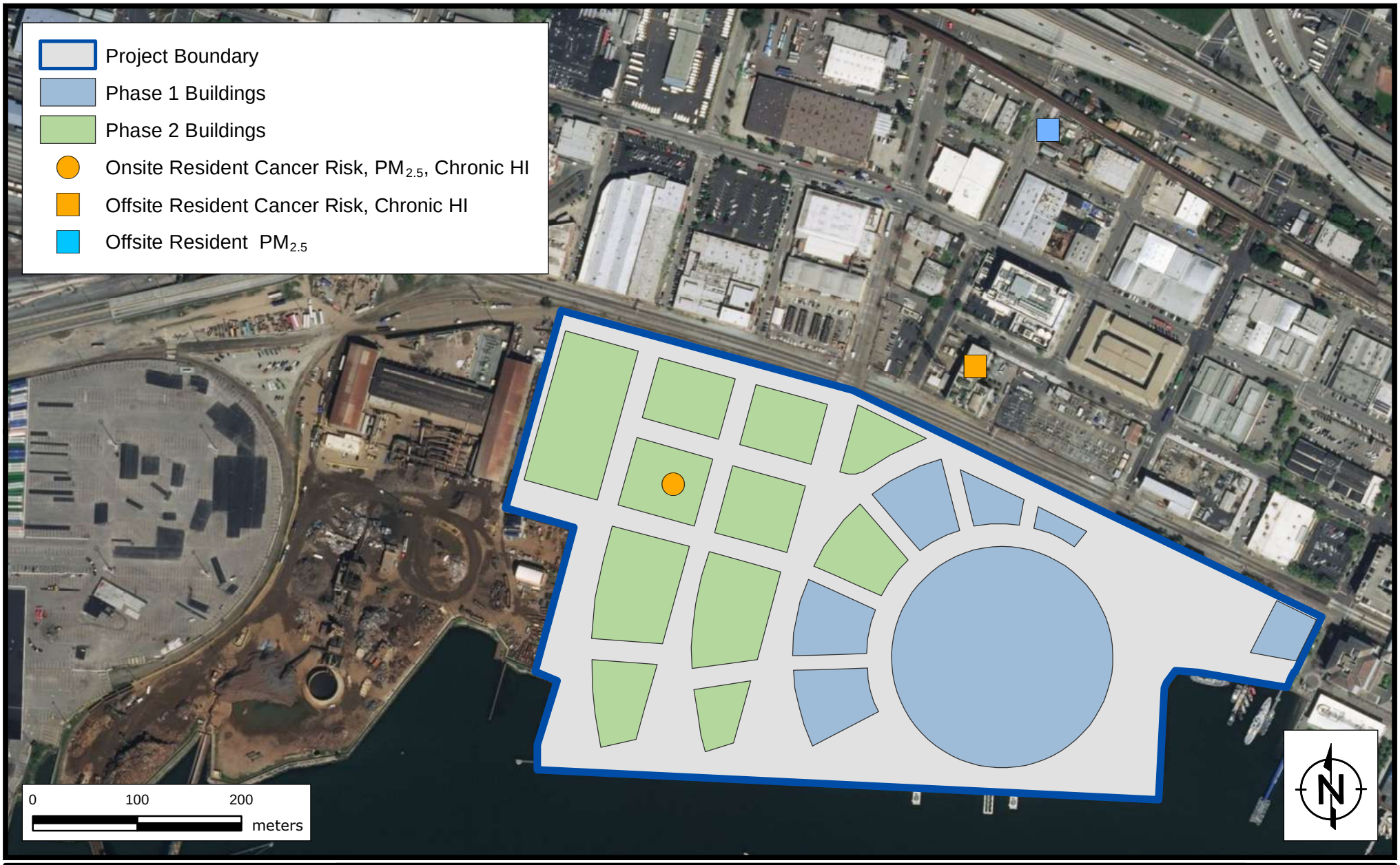

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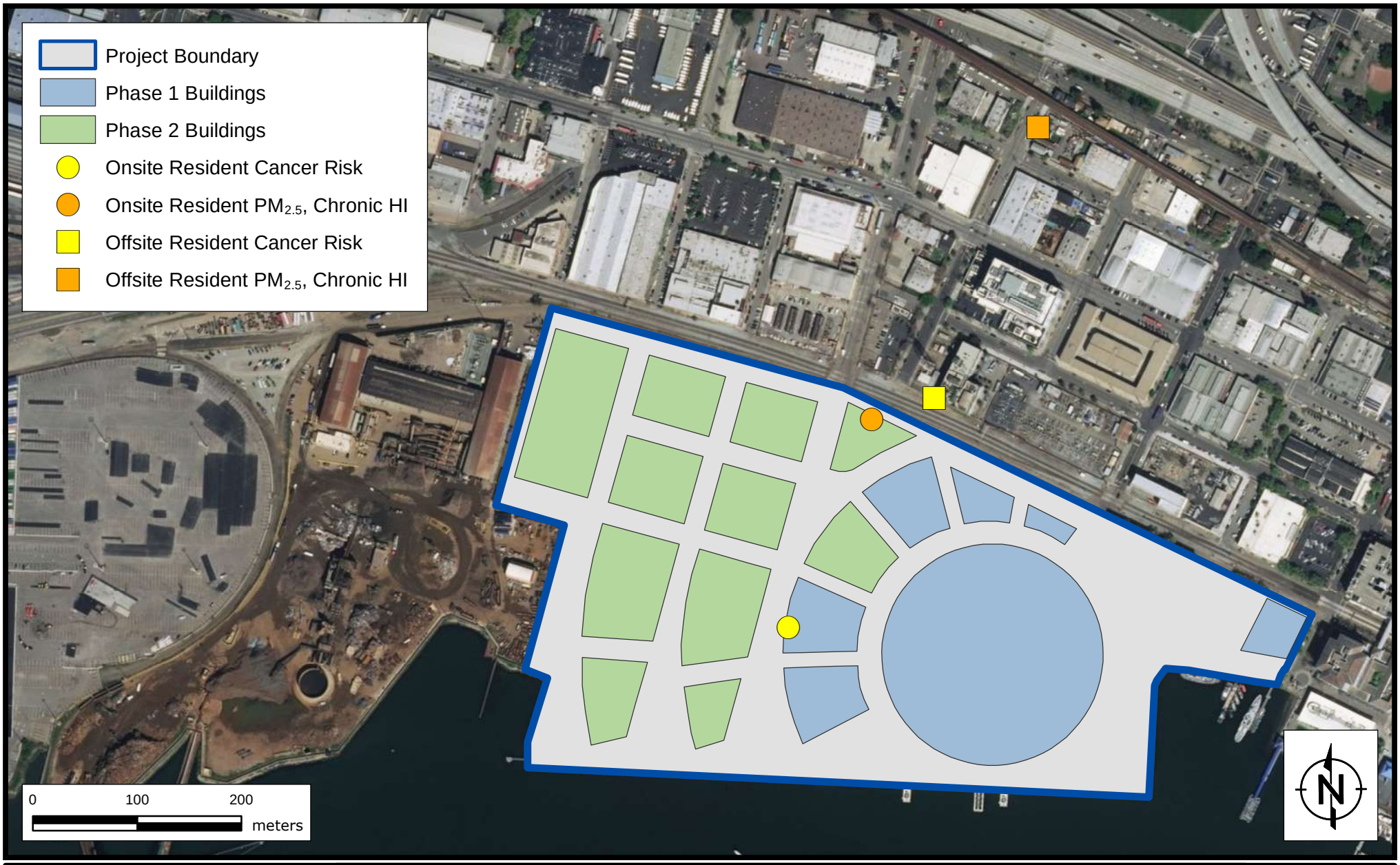
Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations:
Project Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
9B

PROJECT: 1690010168



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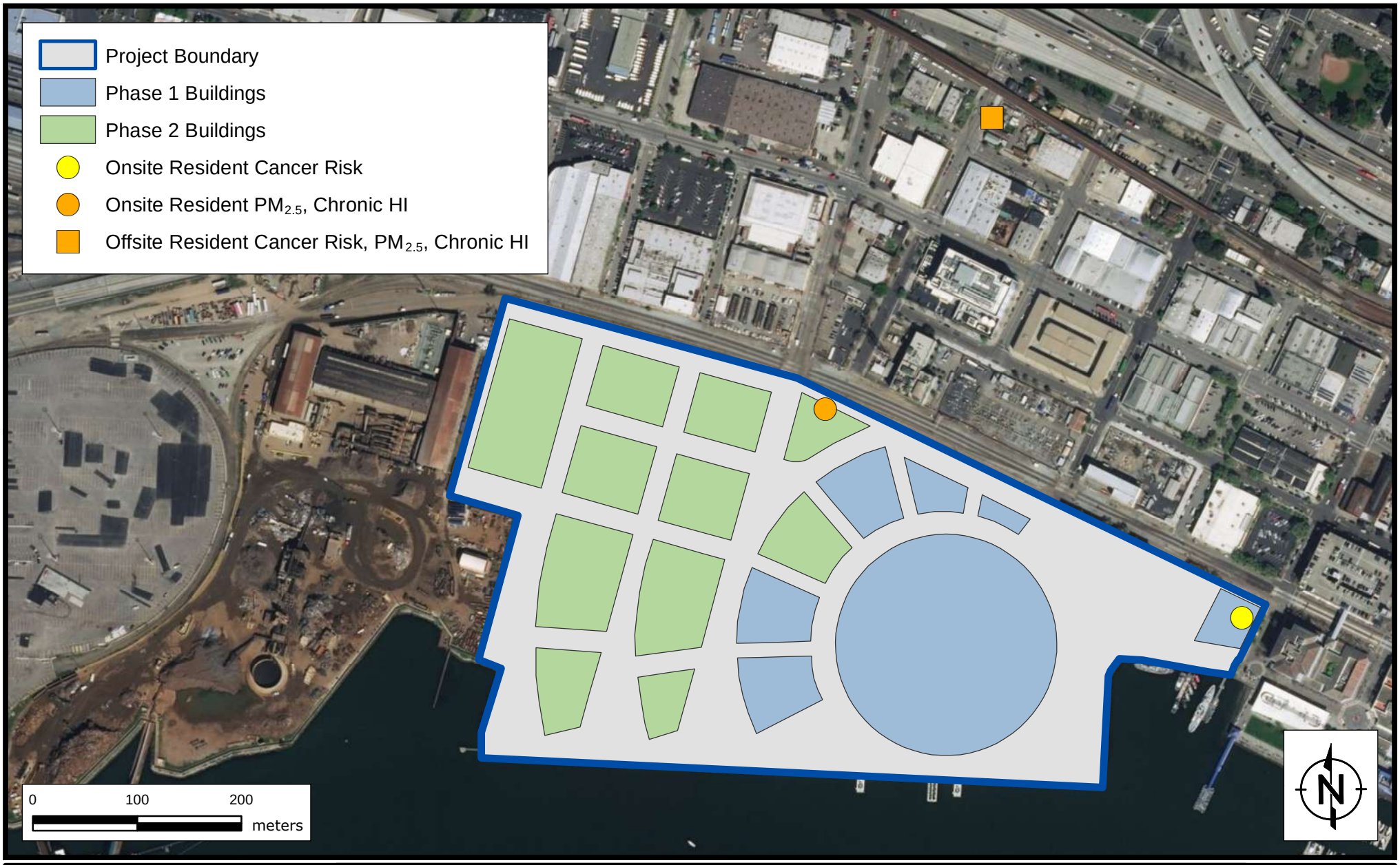
DRAFTED BY: DCW | DATE: 1/6/2020

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations:
Project Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
9C

PROJECT: 1690010168



RAMBOLL

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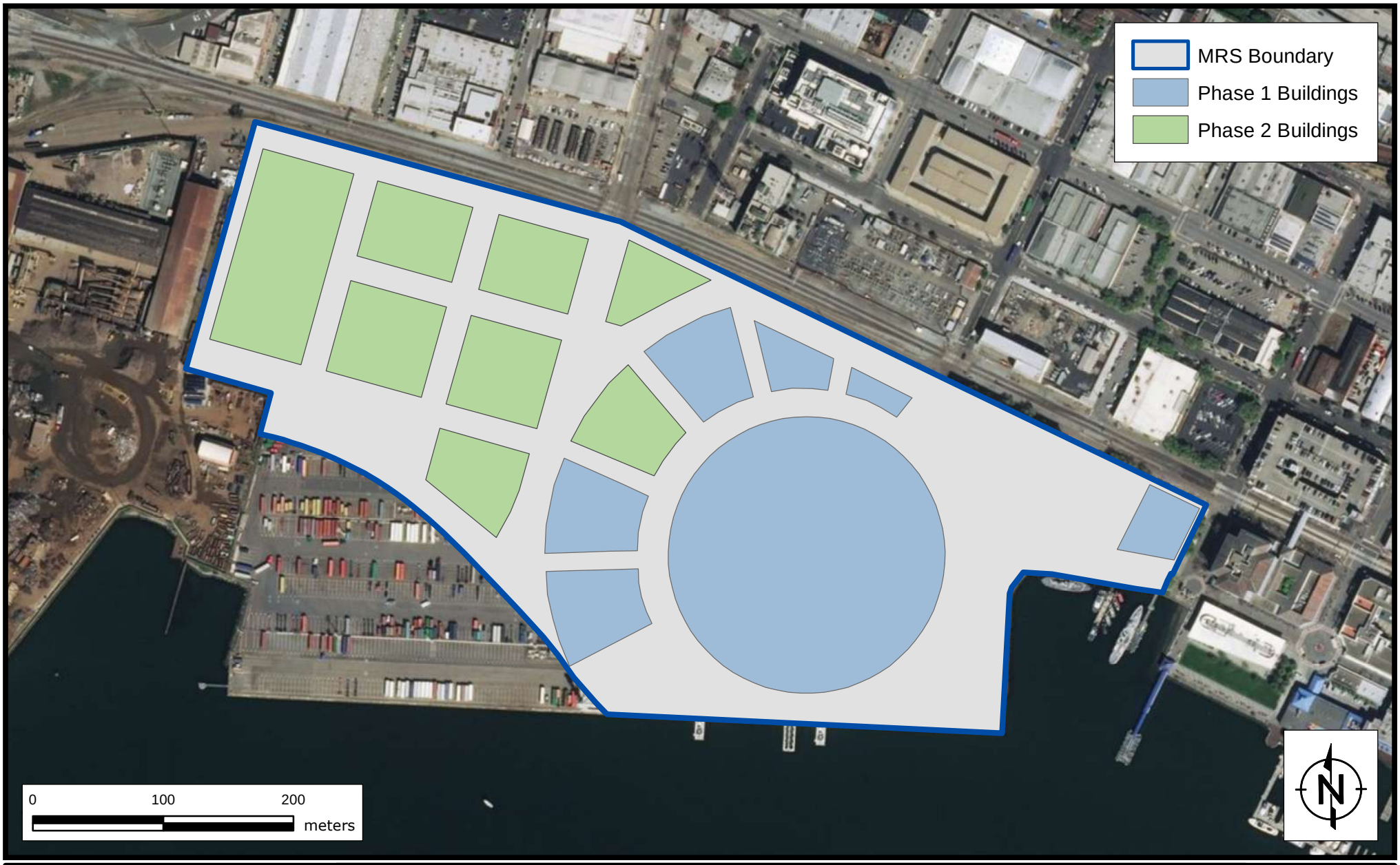
Mitigated Maximally Exposed Individual Receptor (MEIR) Locations: Project Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
9D

PROJECT: 1690010168



RAMBOLL

Maritime Reservation Scenario (MRS) Site Plan
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
10

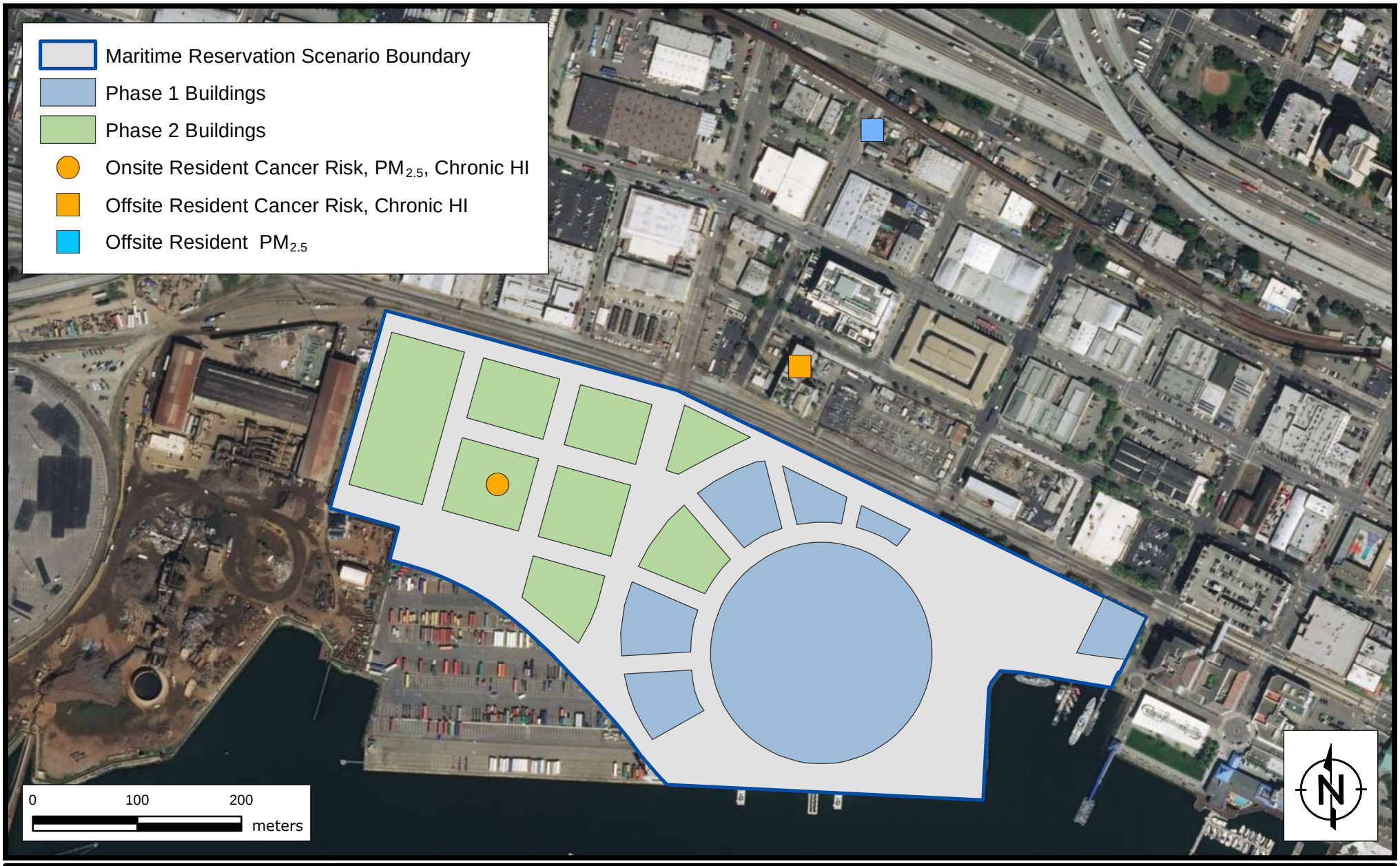
DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168

RAMBOLL

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations
Maritime Reservation Scenario: Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
11A

DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168

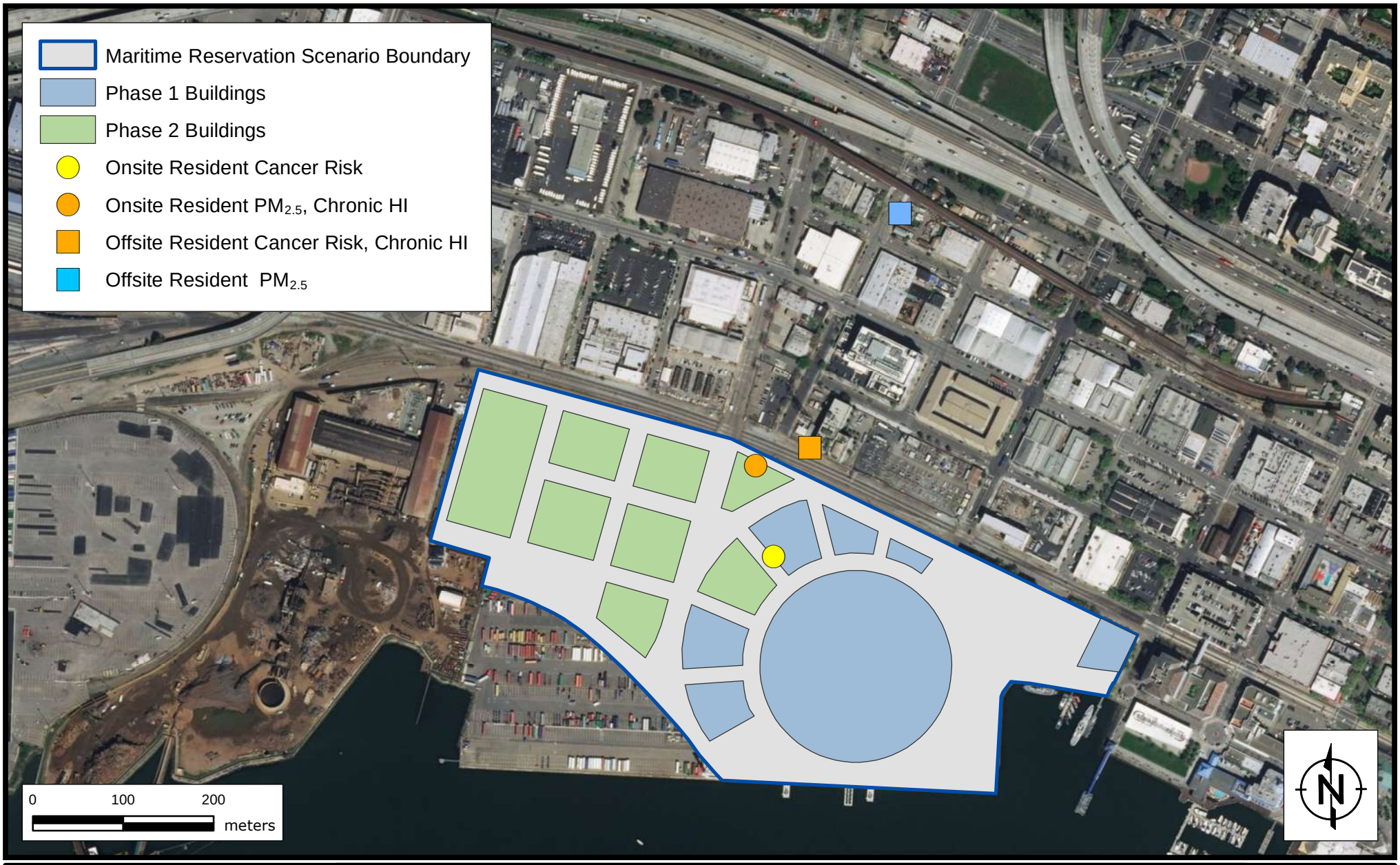


RAMBOLL

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations
Maritime Reservation Scenario: Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
11B

DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168



RAMBOLL

DRAFTED BY: DCW | DATE: 1/6/2020

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations
Maritime Reservation Scenario: Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
11C

PROJECT: 1690010168

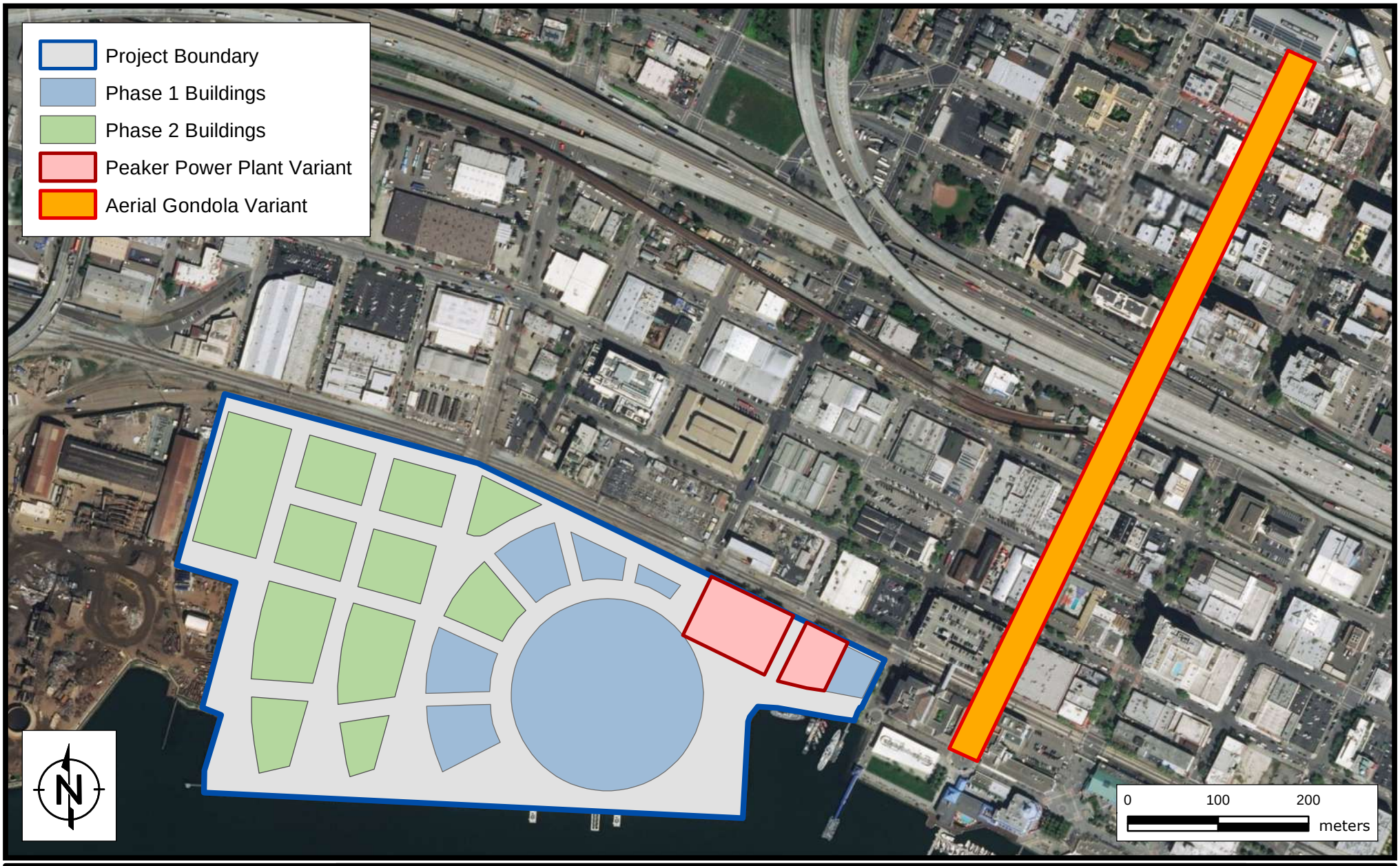
RAMBOLL

DRAFTED BY: DCW | DATE: 1/6/2020

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations
Maritime Reservation Scenario: Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
11D

PROJECT: 1690010168



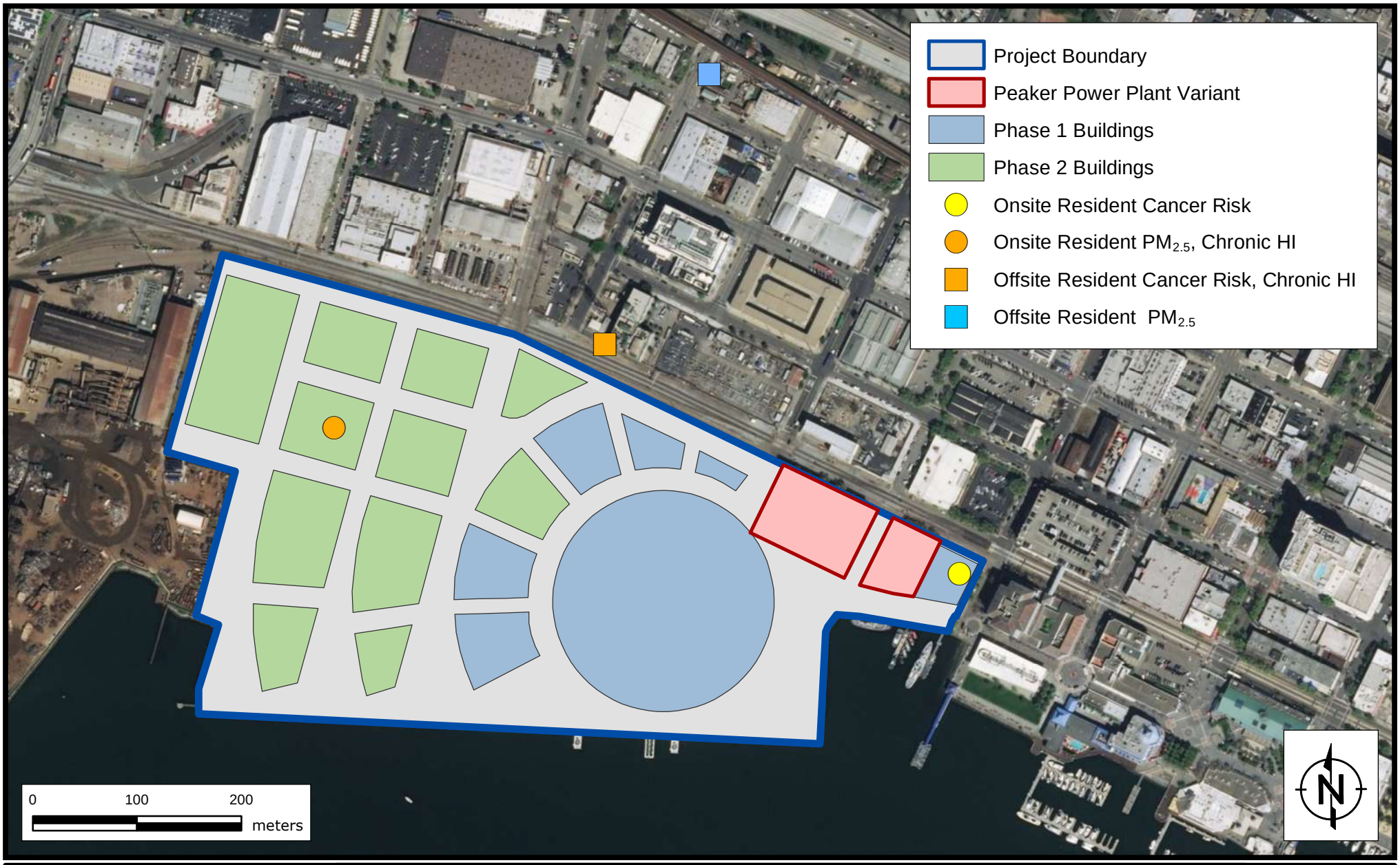
RAMBOLL

Modeled Project Variant Locations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
12

DRAFTED BY: DCW | DATE: 1/2/2020

PROJECT: 1690010168

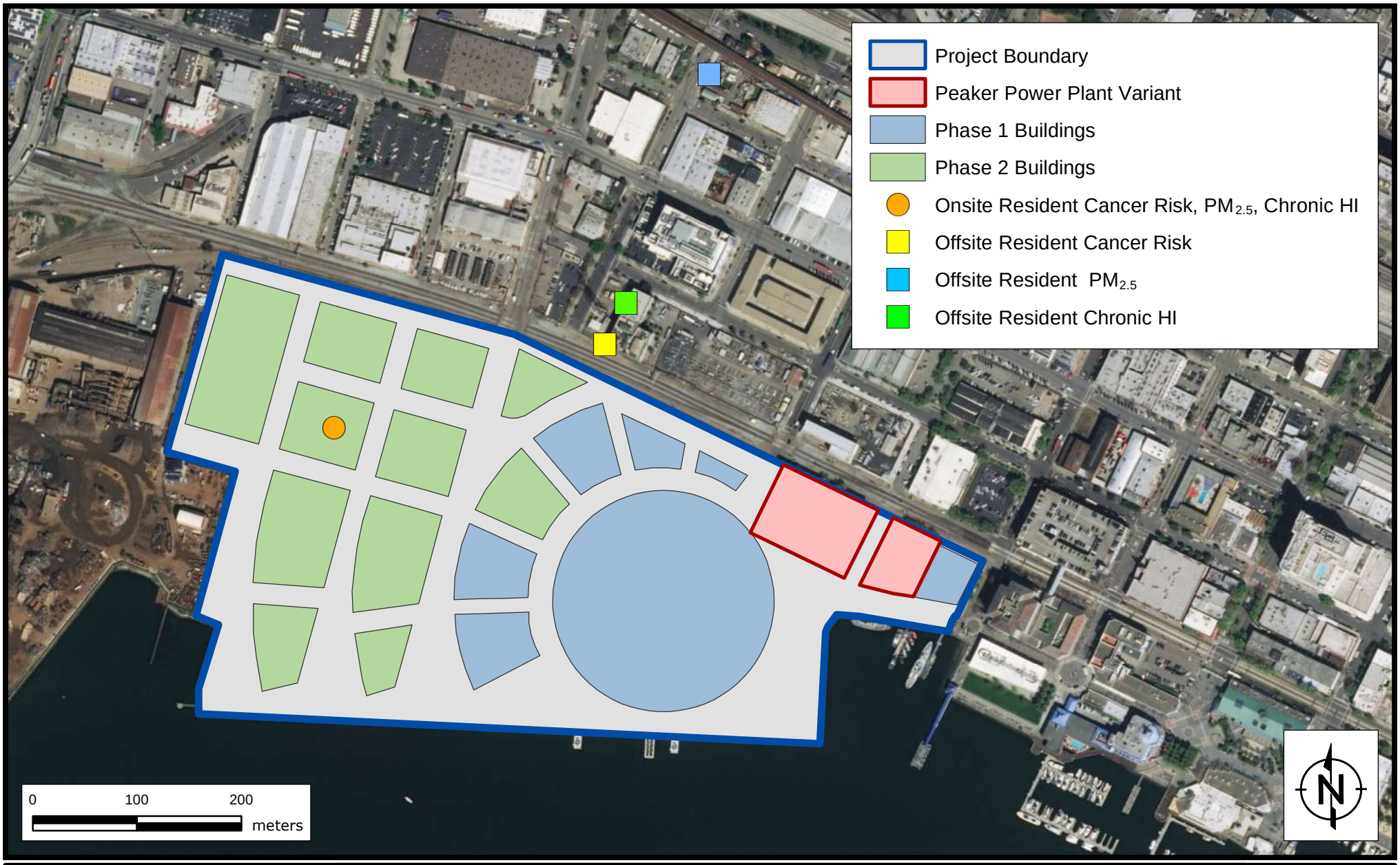


RAMBOLL

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations
Peaker Power Plant Variant: Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
13A

DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168



RAMBOLL

DRAFTED BY: DCW | DATE: 1/6/2020

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations
Peaker Power Plant Variant: Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
13B

PROJECT: 1690010168

RAMBOLL

DRAFTED BY: DCW | DATE: 1/6/2020

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations
Peaker Power Plant Variant: Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
13C

PROJECT: 1690010168

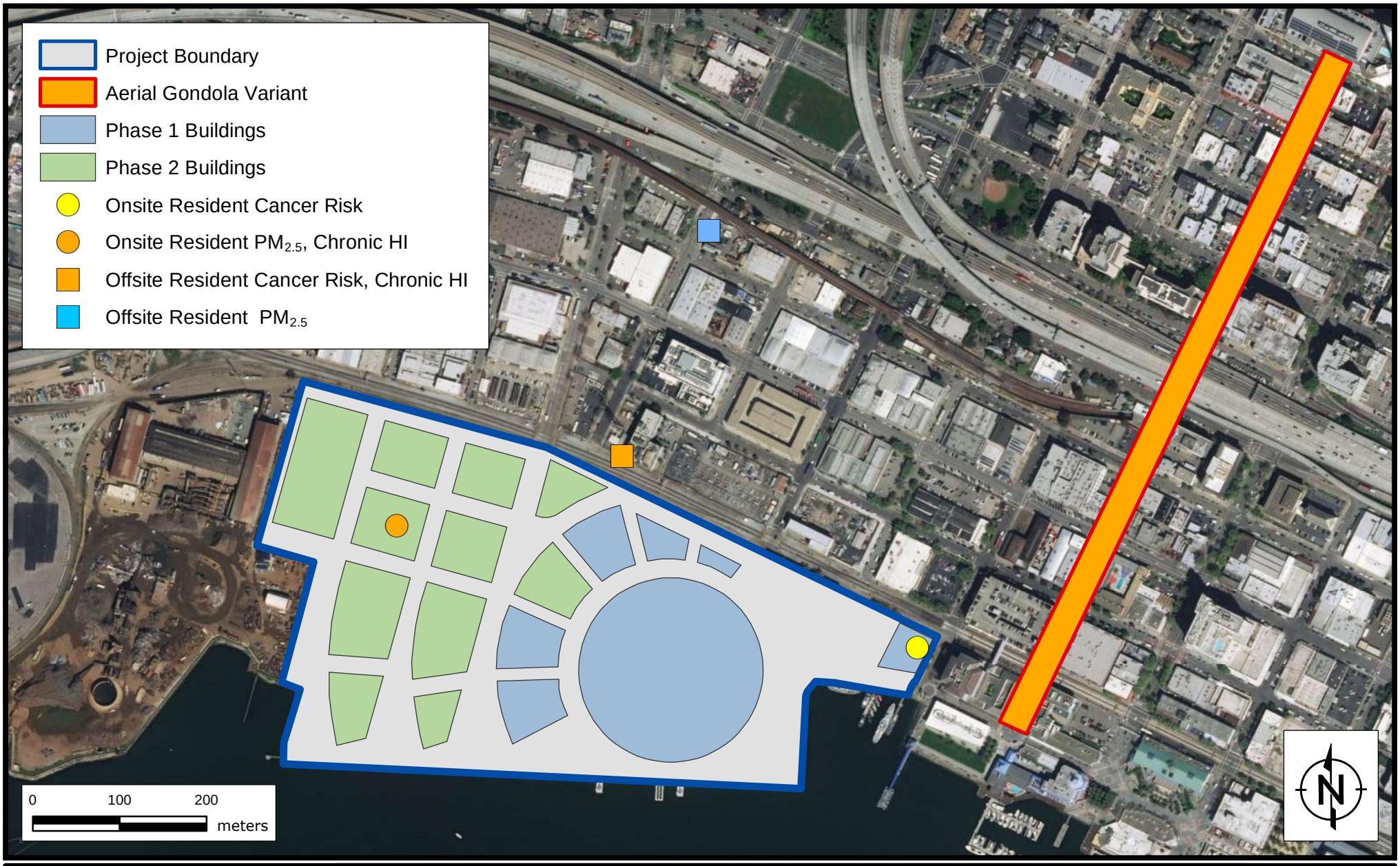
RAMBOLL

DRAFTED BY: DCW | DATE: 1/6/2020

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations
Peaker Power Plant Variant: Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
13D

PROJECT: 1690010168

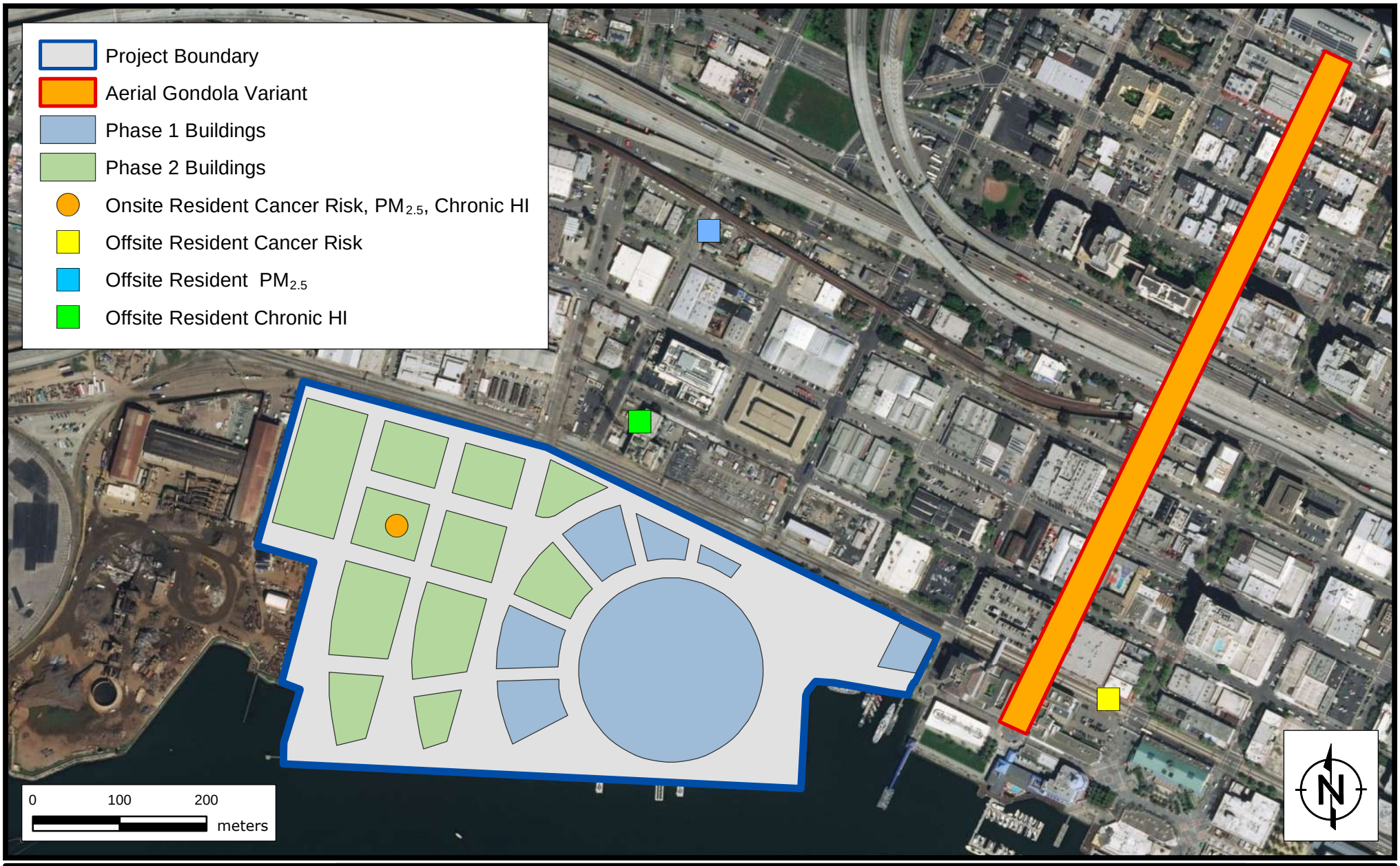


RAMBOLL

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations
Aerial Gondola Variant: Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
14A

DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168

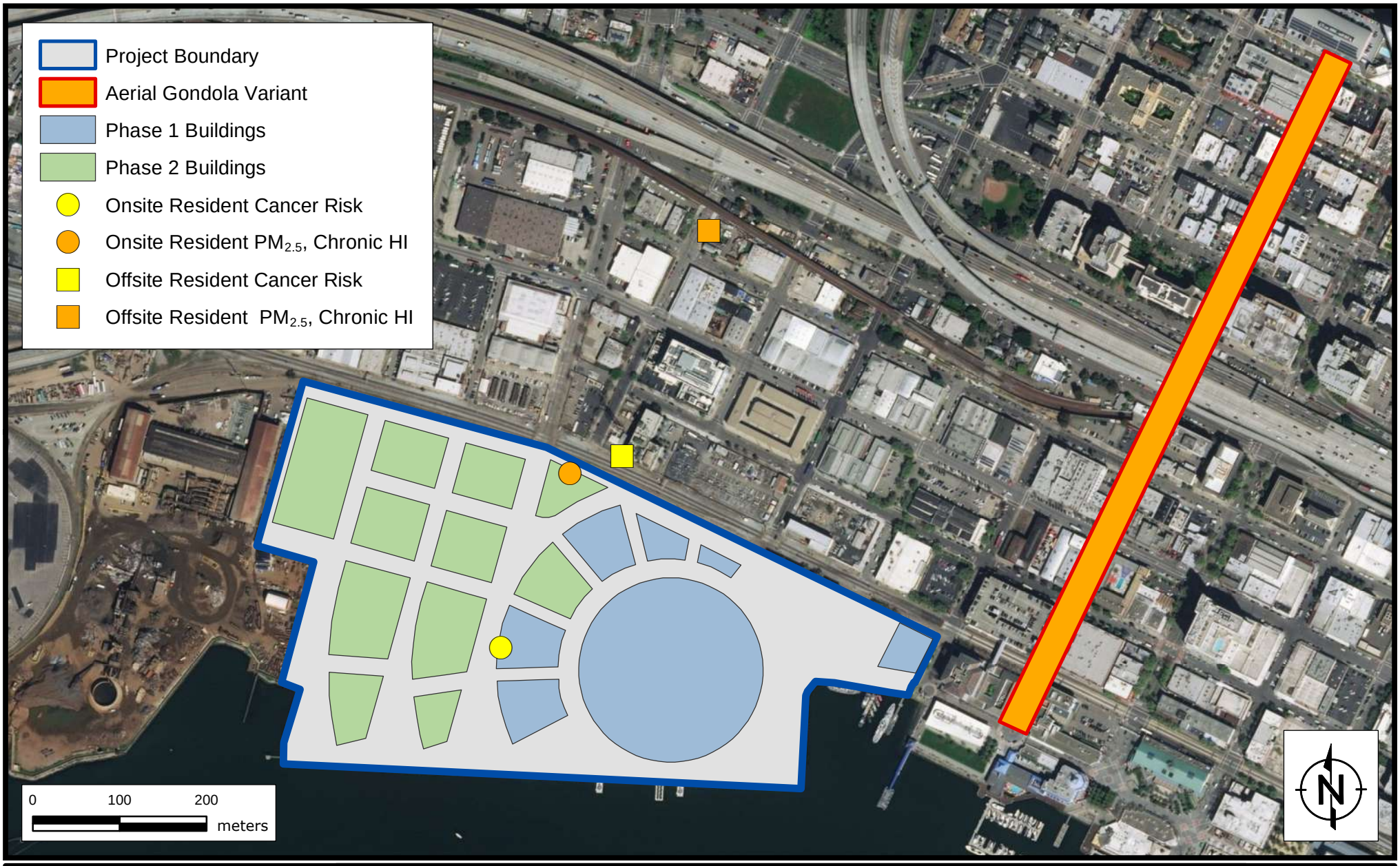


RAMBOLL

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations
Aerial Gondola Variant: Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
14B

DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168



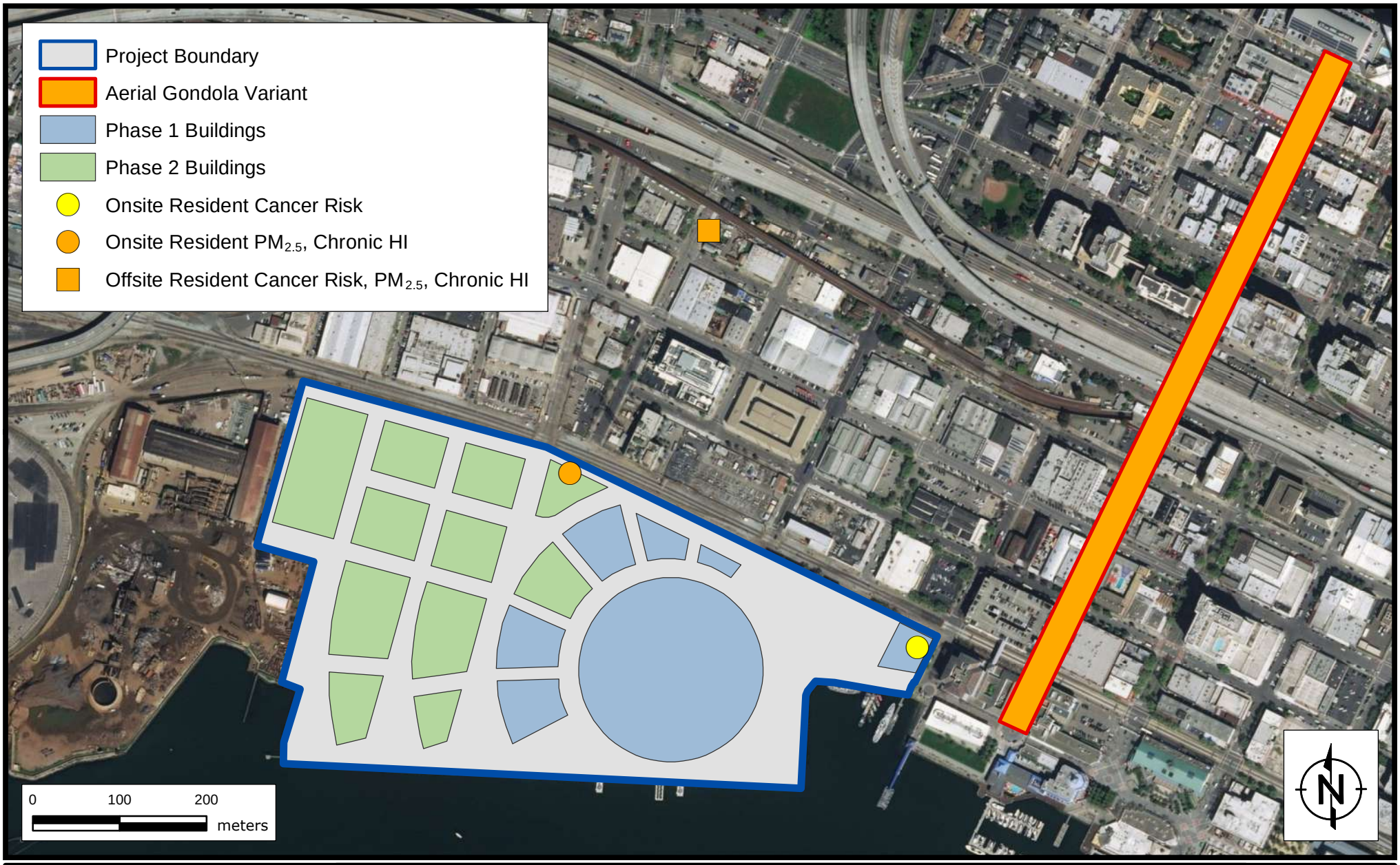
RAMBOLL

DRAFTED BY: DCW | DATE: 1/6/2020

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations
Aerial Gondola Variant: Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
14C

PROJECT: 1690010168



RAMBOLL

DRAFTED BY: DCW | DATE: 1/6/2020

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations
Aerial Gondola Variant: Operations Only
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
14D

PROJECT: 1690010168

RAMBOLL

DRAFTED BY: DCW

DATE: 1/6/2020

Modeled Grade Separation Alternative Location
Brush Street
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
15A

PROJECT: 1690010168

RAMBOLL

DRAFTED BY: DCW

DATE: 1/6/2020

Modeled Grade Separation Alternative Location
Market Street
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE

15B

PROJECT: 1690010168

RAMBOLL

Unmitigated Maximally Exposed Individual Receptor (MEIR) Locations
Grade Separation Alternative: Brush Street Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
16A

DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168

RAMBOLL

Mitigated Maximally Exposed Individual Receptor (MEIR) Locations
Grade Separation Alternative: Brush Street Construction and Operations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
16B

DRAFTED BY: DCW | DATE: 1/6/2020 | PROJECT: 1690010168

APPENDIX A
SUPPLEMENTAL DATA

OAKLAND A's ELECTRIC CONSUMPTION WORKSHEET

Account No. [redacted]

For March 2017

		USAGE	
Date		*Game*	*KwH Usage*
3/31/2017	*Day Prior to Game*		23,442.40

Total Usage for Oakland A's:	23,442.40
Total Usage Per PG&E Bill:	[redacted]
A's Share %:	

Summary:

Total Electric Charges per PG&E Statement	$ [redacted]
Oakland A's % Share	
TOTAL DUE:	$

OAKLAND A's ELECTRIC CONSUMPTION WORKSHEET

Account No. [redacted]

For April 2017

		USAGE
Date	*Game*	*KwH Usage*
3/31/2017	*Day Prior to Game*	
4/1/2017	vs. SF Giants (Exhibition Game)	31,821.48
4/2/2017	*Day Prior to Game*	24,614.64
4/3/2017	vs. Los Angeles Angels	40,612.68
4/4/2017	vs. Los Angeles Angels	38,942.64
4/5/2017	vs. Los Angeles Angels	38,773.44
4/6/2017	vs. Los Angeles Angels	34,111.08
4/13/2017	*Day Prior to Game*	20,566.44
4/14/2017	vs. Houston Astros	34,266.60
4/15/2017	vs. Houston Astros	31,209.12
4/16/2017	vs. Houston Astros (Postponed)	-
4/17/2017	vs. Texas Rangers	35,497.08
4/18/2017	vs. Texas Rangers	37,465.20
4/19/2017	vs. Texas Rangers	30,493.08
4/20/2017	vs. Seattle Mariners	37,788.12
4/21/2017	vs. Seattle Mariners	38,496.24
4/22/2017	vs. Seattle Mariners	31,263.84
4/23/2017	vs. Seattle Mariners	31,058.28

Total Usage for Oakland A's: 536,979.96

Total Usage Per PG&E Bill: [redacted]

A's Share %:

Summary:

Total Electric Charges per PG&E Statement $ [redacted]

Oakland A's % Share

TOTAL DUE: $ [redacted]

OAKLAND A's ELECTRIC CONSUMPTION WORKSHEET

Account No. [redacted]

For May 2017

USAGE

Date	*Game*	*KwH Usage*
5/4/2017	*Day Prior to Game*	22,542.84
5/5/2017	vs. Detroit Tigers	33,714.00
5/6/2017	vs. Detroit Tigers	39,383.28
5/7/2017	vs. Detroit Tigers	31,113.36
5/8/2017	vs. Los Angeles Angels	36,086.76
5/9/2017	vs. Los Angeles Angels	37,181.88
5/10/2017	vs. Los Angeles Angels	30,207.96
5/17/2017	*Day Prior to Game*	23,016.96
5/18/2017	vs. Boston Red Sox	33,997.68
5/19/2017	vs. Boston Red Sox	40,485.24
5/20/2017	vs. Boston Red Sox	34,389.36
5/21/2017	vs. Boston Red Sox	33,354.72
5/22/2017	*Day Prior to Game*	23,395.32
5/23/2017	vs. Florida Marlins	35,041.32
5/24/2017	vs. Florida Marlins	30,642.84

Total Usage for Oakland A's: 484,553.52

Total Usage Per PG&E Bill: [redacted]

A's Share %:

Summary:

Total Electric Charges per PG&E Statement $ [redacted]

Oakland A's % Share

TOTAL DUE: $

OAKLAND A's ELECTRIC CONSUMPTION WORKSHEET

Account No. [redacted]

For June 2017

USAGE

Date	*Game*	*KwH Usage*
6/1/2017	***Day Prior to Game***	*21,030.12*
6/2/2017	*A's vs.Washington Nationals*	*35,668.44*
6/3/2017	A's vs.Washington Nationals	33,158.88
6/4/2017	A's vs.Washington Nationals	32,146.20
6/5/2017	A's vs. Toronto Blue Jays	36,621.36
6/6/2017	A's vs. Toronto Blue Jays	37,680.84
6/7/2017	A's vs. Toronto Blue Jays	30,467.88
6/14/2017	***Day Prior to Game***	21,502.08
6/15/2017	A's vs. New York Yankees	37,593.00
6/16/2017	*A's vs. New York Yankees*	44,088.48
6/17/2017	A's vs. New York Yankees	36,420.48
6/18/2017	A's vs. New York Yankees	37,314.72
6/19/2017	A's vs. Houston Astros	38,732.76
6/20/2017	A's vs. Houston Astros	39,488.40
6/21/2017	*A's vs. Houston Astros*	38,119.68
6/22/2017	A's vs. Houston Astros	34,433.28
6/29/2017	***Day Prior to Game***	20,845.80
6/30/2017	A's vs. Atlanta Braves	34,816.32

Total Usage for Oakland A's: 610,128.72

Total Usage Per PG&E Bill: [redacted]

A's Share %:

Summary:

Total Electric Charges per PG&E Statement $ [redacted]

Oakland A's % Share

TOTAL DUE: $

OAKLAND A's ELECTRIC CONSUMPTION WORKSHEET

Account No. [redacted]

For July 2017

USAGE

Date	*Game*	*KwH Usage*
7/1/2017	A's vs.Atlanta Braves	*31,892.76*
7/2/2017	A's vs.Atlanta Braves	*31,550.76*
7/3/2017	A's vs.Chicago White Sox	41,329.08
7/4/2017	A's vs.Chicago White Sox	30,841.20
7/5/2017	A's vs.Chicago White Sox	30,194.28
7/13/2017	***Day Prior to Game***	27,595.80
7/14/2017	A's vs. Cleveland Indians	36,952.20
7/15/2017	A's vs. Cleveland Indians	41,954.76
7/16/2017	A's vs. Cleveland Indians	37,063.08
7/17/2017	A's vs. Tampa Bay Rays	38,046.60
7/18/2017	A's vs. Tampa Bay Rays	38,290.68
7/19/2017	A's vs. Tampa Bay Rays	32,329.08
7/27/2017	***Day Prior to Game***	21,382.92
7/28/2017	A's vs. Minnesotta Twins	35,894.88
7/29/2017	A's vs. Minnesotta Twins	42,212.88
7/30/2017	A's vs. Minnesotta Twins	32,258.88
7/31/2017	A's vs. San Francisco Giants	42,394.32

Total Usage for Oakland A's: 592,184.16

Total Usage Per PG&E Bill: [redacted]

A's Share %:

Summary:

Total Electric Charges per PG&E Statement 7/1/2017 - 7/31/2017 $ [redacted]

Oakland A's % Share

TOTAL DUE: $

OAKLAND A's ELECTRIC CONSUMPTION WORKSHEET

Account No. [redacted]

For August 2017

USAGE

Date	*Game*	*KwH Usage*
7/31/2017	***Day Prior to Game***	*42,394.32*
8/1/2017	A's vs.San Francisco Giants	*42,698.88*
8/7/2017	***Day Prior to Game***	*22,664.88*
8/8/2017	A's vs.Seattle Mariners	*34,152.84*
8/9/2017	A's vs.Seattle Mariners	30,789.72
8/10/2017	A's vs.Baltimore Orioles	36,851.40
8/11/2017	A's vs.Baltimore Orioles	39,000.60
8/12/2017	A's vs.Baltimore Orioles	41,004.36
8/13/2017	A's vs.Baltimore Orioles	32,071.32
8/14/2017	A's vs. Kansas City Royals	36,443.88
8/15/2017	A's vs. Kansas City Royals	38,606.76
8/16/2017	A's vs. Kansas City Royals	32,366.88
8/24/2017	***Day Prior to Game***	21,223.44
8/25/2017	A's vs. Texas Rangers	33,735.60
8/26/2017	A's vs. Texas Rangers	34,088.40
8/27/2017	A's vs. Texas Rangers	36,928.80

Total Usage for Oakland A's: 555,022.08

Total Usage Per PG&E Bill: [redacted]

A's Share %:

Summary:

Total Electric Charges per PG&E Statement 8/1/2017 - 8/31/2017 $ [redacted]

Oakland A's % Share

TOTAL DUE: $ [redacted]

OAKLAND A's ELECTRIC CONSUMPTION WORKSHEET

Account No. [redacted]

For September 2017

USAGE

Date	*Game*	*KwH Usage*
9/3/2017	***Day Prior to Game***	*23,020.92*
9/4/2017	A's vs. LA Angels	*31,701.60*
9/5/2017	A's vs. LA Angels	*43,027.20*
9/6/2017	A's vs. LA Angels	*40,827.60*
9/7/2017	***Day Prior to Game***	*26,328.96*
9/8/2017	A's vs. Houston Astros	*37,627.20*
9/9/2017	A's vs. Houston Astros	*45,173.16*
9/10/2017	A's vs. Houston Astros	*38,584.80*
9/21/2017	***Day Prior to Game***	*22,469.76*
9/22/2017	A's vs. Texas Rangers	*35,382.60*
9/23/2017	A's vs. Texas Rangers	*41,429.88*
9/24/2017	A's vs. Texas Rangers	*32,556.96*
9/25/2017	A's vs. Seattle Mariners	*37,378.44*
9/26/2017	A's vs. Seattle Mariners	*40,275.36*
9/27/2017	A's vs. Seattle Mariners	*33,261.48*

Total Usage for Oakland A's: 529,045.92

Total Usage Per PG&E Bill: [redacted]

A's Share %:

Summary:

Total Electric Charges per PG&E Statement 8/1/2017 - 8/31/2017 $ [redacted]

Oakland A's % Share

TOTAL DUE: **$** [redacted]

EAST BAY
MUNICIPAL UTILITY DISTRICT

1-866-403-2683

[redacted] [redacted]

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 4/4/17 5/3/17 ACCOUNT NO. [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 29599229						
	LD	558.00	385.00	173.00	8	
	SD	3,017.00	2,242.00	775.00	8	

Total Consumption	948.00	
TOTAL SERVICE CHARGE		[redacted]
EBMUD SEWAGE TREATMENT		[redacted]
CITY OF OAKLAND SEWER SERVICE		[redacted]
OTHER CHARGES		[redacted]
TOTAL BILLING		[redacted]

C-769 • 3/11 (88559)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT
1-866-403-2683

[redacted] [redacted]

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 4/4/17 5/3/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 19744270						
	LD	2,838.00	1,877.00	961.00	8	
	SD	4,352.00	3,245.00	1,107.00	8	

Total Consumption	2,068.00	
TOTAL SERVICE CHARGE		[redacted]
EBMUD SEWAGE TREATMENT		[redacted]
CITY OF OAKLAND SEWER SERVICE		[redacted]
OTHER CHARGES		[redacted]
TOTAL BILLING		[redacted]

C-139 • 3/11 969591

***SYMBOLS** L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT

1-866-403-2683

[redacted] [redacted]

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 5/3/17 6/1/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 29599229						
	LD	717.00	558.00	159.00	8	
	SD	3,890.00	3,017.00	873.00	8	

Total Consumption	1,032.00	
TOTAL SERVICE CHARGE		[redacted]
EBMUD SEWAGE TREATMENT		[redacted]
CITY OF OAKLAND SEWER SERVICE		[redacted]
OTHER CHARGES		[redacted]
TOTAL BILLING		[redacted]

C-159 • 2/11 (92909)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT

1-866-403-2683

[redacted] [redacted]

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 5/3/17 6/1/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 19744270						
	LD	4,092.00	2,838.00	1,254.00	8	
	SD	5,721.00	4,352.00	1,369.00	8	

Total Consumption	2,623.00	
TOTAL SERVICE CHARGE		[redacted]
EBMUD SEWAGE TREATMENT		
CITY OF OAKLAND SEWER SERVICE		
OTHER CHARGES		
TOTAL BILLING		

D-159 • 3/11 (61653)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT

1-866-403-2683

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 6/1/17 7/3/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 29599229						
	LD	987.00	717.00	270.00	8	
	SD	4,962.00	3,890.00	1,072.00	8	

Total Consumption	1,342.00	
TOTAL SERVICE CHARGE		[redacted]
EBMUD SEWAGE TREATMENT		
CITY OF OAKLAND SEWER SERVICE		
OTHER CHARGES		
TOTAL BILLING		

0-169 • 3/11 (02869)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT

1-866-403-2683

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 6/1/17 7/3/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 19744270						
	LD	5,872.00	4,092.00	1,780.00	8	
	SD	7,375.00	5,721.00	1,654.00	8	

Total Consumption	3,434.00	
TOTAL SERVICE CHARGE		[redacted]
EBMUD SEWAGE TREATMENT		
CITY OF OAKLAND SEWER SERVICE		
OTHER CHARGES		
TOTAL BILLING		

C–350 • 3/11 (92959)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY
MUNICIPAL UTILITY DISTRICT
1-866-403-2683

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 7/3/17 8/1/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 29599229						
	LD	1,225.00	987.00	238.00	8	
	SD	5,926.00	4,962.00	964.00	8	

Total Consumption	1,202.00	[redacted]
TOTAL SERVICE CHARGE		
WATER FLOW CHARGE		
EBMUD SEWAGE TREATMENT		
CITY OF OAKLAND SEWER SERVICE		
OTHER CHARGES		
TOTAL BILLING		

C-169 r3/11 (82669)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.
BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT

1-866-403-2683

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 6/30/17 8/1/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 19744270						
	LD	7,463.00	5,872.00	1,591.00	8	
	SD	8,880.00	7,375.00	1,505.00	8	

Total Consumption	3,096.00	
TOTAL SERVICE CHARGE		[redacted]
WATER FLOW CHARGE		
EBMUD SEWAGE TREATMENT		
CITY OF OAKLAND SEWER SERVICE		
OTHER CHARGES		
TOTAL BILLING		

D-158 • 3/11 (0295)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT

1-866-403-2683

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 8/1/17 9/1/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	CU. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 19744270						
	LD	9,088.00	7,463.00	1,625.00	8	
	SD	10,487.00	8,880.00	1,607.00	8	
Total Consumption				3,232.00		
TOTAL SERVICE CHARGE						
EBMUD SEWAGE TREATMENT						
CITY OF OAKLAND SEWER SERVICE						
OTHER CHARGES						
TOTAL BILLING						[redacted]

I-159 • 8/11 (32859)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY MUNICIPAL UTILITY DISTRICT

1-866-403-2683

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 9/1/17 9/28/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 29599229						
	LD	1,675.00	1,485.00	190.00	8	
	SD	7,912.00	6,976.00	936.00	8	

Total Consumption	1,126.00	
TOTAL SERVICE CHARGE		[redacted]
EBMUD SEWAGE TREATMENT		
CITY OF OAKLAND SEWER SERVICE		
OTHER CHARGES		
TOTAL BILLING		

C-159 • 2/11 (02000)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

EAST BAY
MUNICIPAL UTILITY DISTRICT

1-866-403-2683

Oakland Alameda County Coliseum
PO BOX 182244
COLUMBUS, OH 43218-2244

695 Hegenberger Rd, Oakland, CA 94621 8/30/17 9/29/17 ACCOUNT NO.: [redacted] 7900

METER NOS.	SYMBOLS*	METER READINGS Current	Previous	C. CUBIC FT. USED	METER SIZE	AMOUNT
Meter 19744270						
	LD	10,162.00	9,088.00	1,094.00	8	
	SD	11,899.00	10,487.00	1,412.00	8	

Total Consumption	2,506.00	
TOTAL SERVICE CHARGE		
EBMUD SEWAGE TREATMENT		
CITY OF OAKLAND SEWER SERVICE		
OTHER CHARGES		
TOTAL BILLING		[redacted]

G-150 • 3/11 (62953)

*SYMBOLS L.D. & S.D.: Separate dials measuring respectively, large and small flows through a compound meter. Water used is the sum of quantities measured by both dials.

BTY.: Indicates two (or more) meters in a battery on one service line. Billed at service charge for single meter of equivalent capacity.

MLB

2017 - Stadium Waste Management & Recycling Report

LOCATION	2016 Diversion Rate Goal	2015 Diversion Rate YTD
OAKLAND A's	40.0%	**44%**

	Category	Units	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	YTD
RECYCLABLES	*Paper / Cardboard*	Tons				43.62	19.36	20.11	14.09	17.94	8.52				123.64
	Compost & Yard Waste	Tons				28.09	20.59	6.12	10.69	10.26	24.50				100.25
	CRV - (Glass / Plastic / Aluminum)	Tons				12.70	11.84	15.26	7.00	12.70	4.92				64.42
	Total Recyclables	Tons	0.00	0.00	0.00	49.50	85.50	74.25	81.00	67.25	72.55	0.00	0.00	0.00	430.05
	Trash Disposed to Landfill *(MSW)*	Tons				107.40	74.50	102.35	67.82	92.50	76.25				520.82
	Total Waste	Tons	0.00	0.00	0.00	156.90	160.00	176.60	148.82	181.15	149.21	0.00	0.00	0.00	972.68
	Diversion Rate	%	####	####	####	32%	53%	42%	54%	37%	49%	####	####	####	44%

APPENDIX B
FEHR & PEERS REPORT

FEHR PEERS

MEMORANDUM

Date: January 27, 2020

To: Pete Vollmann, City of Oakland
Nicole Ferrara, City of Oakland

From: Lee Reis and Rob Rees, Fehr & Peers

Subject: Howard Terminal – Air, Noise, and Greenhouse Gas Forecast Inputs

OK16-0125.06

Road segment and Vehicle Miles Travelled (VMT) forecasts are required for the air, noise, and greenhouse gas assessments for the Howard Terminal project. Trips generated by the ballpark and non-ballpark development are assigned to the roadway network to determine volumes on both freeway and local roadway segments in 2020 and 2040. The forecasted 2040 segment volumes consider the Howard Terminal development in addition to development described in the Downtown Oakland Specific Plan (DOSP) and other major projects. Aligned with SB 743 guidance, the VMT analysis considers VMT due to the project's various land uses including residential, office, restaurant, retail, the ballpark, and the performance venue. This memorandum summarizes the process for developing the road segment and VMT forecasts.

1. Volume Forecasting

Volume forecasting consists of adding project vehicle volumes to existing and 2040 roadway segment volumes. These forecasts also consider the effects of known major projects as described in the City of Oakland's Major Projects list and the Downtown Oakland Specific Plan (DOSP).

The Alameda CTC Countywide Travel Demand Model released in May 2018 was used to forecast baseline vehicle volumes growth due to anticipated development in Oakland. The travel demand model reflects updated roadway network and land use projections as described in Plan Bay Area 2040. Validated to 2010 conditions, the model predicts traffic volumes for the 2020 and 2040 scenario years.

Volumes were observed at 150 downtown Oakland roadway segments in 2018 to inform the 2018 base year model. These roadway segment counts were compared to counts collected between 2010 and 2015 to form a more robust set of base year counts. We found the volumes to have remained largely constant between 2010-2015 and 2018, decreasing around two percent on average; therefore, the 2010-2015 data supplemented the base year model for the segments that were not collected in 2018. All new 2018 roadway segment counts were used in the base year model. **Table 1** compares the 2018 counts to those collected between 2010 and 2015.

Table 1: Dates of Data Collection

Project	Count Year	# Overlapping Counts		% Diff to DOSP Counts (2010-2015)		# New Counts	
		AM	PM	AM	PM	AM	PM
Howard Terminal Full Buildout	2019	80	80	-4%	-3%	38	38
Kaiser Center	2018	4	4	15%	18%	6	6
Howard Terminal Microsimulation	2018	0	24	0%	-18%	0	0
412 Madison	2018	5	5	-4%	-4%	1	1
1750 Broadway	2017	8	8	-3%	0%	2	2
1431 Jefferson	2017	0	0	0%	0%	3	3
1721 Webster	2016	5	5	3%	-1%	0	0
2015 Telegraph	2016	1	1	-16%	-3%	7	7
1314 Franklin	2016	6	6	6%	-6%	8	8
2201 Valley	2016	4	4	-9%	-8%	1	1
2 Kaiser Plaza	2016	8	8	3%	6%	10	10
2100 Telegraph	2016	5	5	5%	7%	6	6
Total		**126**	**150**	**-2%**	**-2%**	**82**	**82**

Source: Fehr & Peers, 2019.

A growth rate of approximately five percent is assumed between 2018 and 2020 to account for near-term planned developments that are under construction. The 2020 model scenario was then used as a pivot, forecasting future background growth. When comparing the 2040 No Project scenario—which assumes no additional development in downtown Oakland aside from those

outlined in the Lake Merritt Specific Plan—to the 2020 model scenario, the background growth rate is approximately 30 percent and reflects the anticipated land use changes from Plan Bay Area 2040 outside downtown Oakland.

The City of Oakland Major Project[1] land uses from April 2018 were then incorporated into the 2040 No Project model; the estimated automobile trip generation for the Major Projects equal approximately 37 percent of the DOSP auto trips. The land uses described in the DOSP were then added, corresponding to a growth rate of approximately 25 percent. We assumed the same trip assignment for DOSP and Major Project trips. To obtain the 2040 Plus Project scenario, Howard Terminal volumes were added to the 2040 model including the Major Project and DOSP land uses. The Howard Terminal volumes were distributed according to the base year Alameda CTC Travel Demand Model and assigned to the roadway network following standard routes of travel.

To forecast roadway segment volumes, two scenarios are considered. The first scenario is full buildout of the ballpark and non-ballpark development without the implementation of the TMP for the ballpark nor the TDM for the non-ballpark development; the 20 percent Vehicle Trip Reduction (VTR) is not achieved in this case. The second scenario considers full buildout with both the TDM and TMP implemented, reaching the 20 percent VTR. For further information regarding the TDM and TMP, consult the memorandum titled *Howard Terminal – Transportation and Parking Demand* (January 2020).

Table 2 shows the daily automobile trip generation for the non-ballpark development both with and without the TDM reaching the 20 percent VTR. **Table 3** shows the daily trip generation for the ballpark with and without the TMP. Automobile trips are listed for weekday evening, weekday day, and weekend games as well as concerts; as the greatest number of non-ballpark trips occur during the weekday PM peak period, analyzing roadway segment forecasts for the weekday evening scenario presents the most conservative estimate of vehicle volumes.

The following tables list the segment volumes; the road segment evaluation informs the air, noise, and greenhouse gas assessments and is provided for informational purposes only. **Appendix A** lists the daily freeway volumes with the 20 percent VTR after implementation of the TMP and TDM. **Appendix B** lists the local roadway segment volumes with both the TMP and TDM implemented for the ballpark and non-ballpark development, respectively.

[1] The City of Oakland Major Project List may be retrieved at: https://www.oaklandca.gov/resources/download-the-city-of-oakland-major-development-projects-list

Table 2: Automobile Trip Generation – Non-Ballpark Development

Land Use, ITE Code [1]	Units [2]	Daily Volume
Residential, 222 [3]	3,000 du	12,040
Office, 710 [4]	1,564 ksf	15,290
Retail, 820 [5]	180 ksf	8,970
Restaurant, 932 [6]	90 ksf	10,100
Hotel, 310 [7]	400 rooms	4,090
ITE Trip Generation Subtotal		50,490
Non-Auto Reduction (-36.7%) [8]		-18,530
Total Vehicle Trips without TDM		31,960
TDM Vehicle Trip Reduction (-20%)		-6,390
Total Vehicle Trips with TDM		25,570

Notes:

1. The performance venue was not included in this trip generation because it is expected to have about 50 events per year, many of which would occur on weekends. Additionally, it would be expected to generate negligible weekday AM peak hour trips and few PM peak hour trips due to the likely event schedules.
2. DU = Dwelling Units, KSF = 1,000 square feet.
3. ITE Trip Generation (10th Edition) land use category 222 (High Rise Housing):
   Daily: T = 3.94 * X + 211.81
   AM Peak Hour: T = 0.28 * X + 12.86 (24% in, 76% out)
   PM Peak Hour: T = 0.34 * X + 8.56 (61% in, 39% out)
4. ITE Trip Generation (10th Edition) land use category 710 (General Office)
   Daily: Ln(T) = 0.97 * ln(X) + 2.5
   AM Peak Hour: T = 0.94 * X + 26.49 (86% in, 14% out)
   PM Peak Hour: Ln(T) = 0.95 * ln(X) +0.36 (60% in, 40% out)
5. ITE Trip Generation (10th Edition) land use category 820 (Shopping Center)
   Daily: Ln(T) = 0.68 * ln(X) + 5.57
   AM Peak Hour: T = 0.5 * X + 151.78 (62% in, 38% out)
   PM Peak Hour: Ln(T) = 0.74 * ln(X) + 2.89 (48% in, 52% out)
6. ITE Trip Generation (10th Edition) land use category 820 (High-Turnover Sit-Down Restaurant)
   Daily: T = 112.18 * X
   AM Peak Hour: T = 9.94 * X (55% in, 45% out)
   PM Peak Hour: Ln(T) = 9.77 * X (62% in, 38% out)
7. ITE Trip Generation (10th Edition) land use category 310 (Hotel)
   Daily: T = 11.29 * X - 426.97
   AM Peak Hour: T = 0.5 * X - 5.34 (59% in, 41% out)
   PM Peak Hour: T = 0.75 * X - 26.02 (51% in, 49% out)
8. The 36.7% reduction is based on data from the April 2017 TIRG for development in an urban environment between 0.5 and 1.0 mile of a BART Station, Ferry or Rail Terminal, or major transit corridor.

Source: Fehr & Peers, 2019.

Table 3: Automobile Trip Generation – Ballpark

	Weekday Evening [1]		Weekday Day [1]		Weekend [1]		Concert [2]	
	Attendee Mode Share	Total Vehicle Trips [3]	Attendee Mode Share	Total Vehicle Trips [3]	Attendee Mode Share	Total Vehicle Trips [3]	Attendee Mode Share	Total Vehicle Trips [3]
Drive	57%	20,590	57%	20,360	62%	22,230	58%	20,610
Ride-sourcing [4]	18%	11,850	19%	12,600	18%	11,590	19%	12,840
Total Auto Trips w/out TMP		32,440		32,960		33,820		33,450
TMP Vehicle Trip Reduction (-20%)		-6,490		-6,590		-6,760		-6,690
Total Auto Trips with TMP		25,950		26,370		26,060		26,760

Notes:
1. Assume a 35,000-attendee game with 1,320 employees. DU = Dwelling Units, KSF = 1,000 square feet.
2. Assume a 35,000-attendee event with 1,200 employees.
3. Auto occupancy of 2.12 attendees per vehicle used for both drive and ride-sourcing trips without the TMP. Per TIRG, 63.3% of employees estimated to drive, with single occupant vehicles assumed for calculation purposes.
4. Ride sourcing involves two vehicle trips for each leg—one to pick up the passenger and one to drive to the passenger's destination.

Source: Fehr & Peers, 2019.

2. Intersection Operations Analysis

This section documents intersection operations results which were used to estimate truck idling on non-gamedays and gamedays as part of the air, noise, and greenhouse gas analysis. Intersection operations were analyzed for seven intersections near the project site using a microsimulation model that includes pedestrians to provide recommendations for pedestrian and automobile infrastructure. For further details of this analysis, reference the *Howard Terminal – Operations Analysis* (January 2020) memorandum. The existing AM truck volumes at each intersection are summarized in **Table 4** and the PM truck volumes are in **Table 5**; these volumes informed the truck idling analysis.

Table 4: Existing AM Truck Volumes for Truck Idling Analysis

Intersection	7-8 AM	8-9 AM	9-10 AM	10-11 AM	11-12 AM
Adeline Street and 3rd Street	262	448	494	512	581
Adeline Street and 5th Street	282	307	399	422	451
Market Street and 3rd Street	193	219	Vehicle volumes at these times are not available		
Market Street and 5th Street	83	104			
Martin Luther King Jr. Way and 3rd Street	105	100			
Martin Luther King Jr. Way and 5th Street	57	65			
Broadway and 5th Street	123	143			

Source: Fehr & Peers, 2019.

Table 5: Existing PM Truck Volumes for Truck Idling Analysis

Intersection	3-4 PM	4-5 PM	5-6 PM	6-7 PM	7-8 PM
Adeline Street and 3rd Street	361	472	241	171	201
Adeline Street and 5th Street	226	267	161	141	137
Market Street and 3rd Street	260	319	171	102	100
Market Street and 5th Street	93	133	97	56	41
Martin Luther King Jr. Way and 3rd Street	124	166	97	59	65
Martin Luther King Jr. Way and 5th Street	52	92	63	35	25
Broadway and 5th Street	112	140	117	79	57

Source: Fehr & Peers, 2019.

The Levels of Service (LOS) of each intersection for hours throughout the day were obtained from the microsimulation model. LOS is a qualitative description of traffic operating conditions from the vehicle driver perspective and is determined by the delay experienced by the driver at the intersection. It ranges from LOS A, with no congestion and little delay, to LOS F, with excessive congestion and delays. Reference **Appendix C** for the LOS results for each intersection.

3. VMT Analysis

3.1. Non-Ballpark Development VMT Estimate Approach

This analysis estimates VMT using travel demand models to capture the length of trips on the transportation network as well as the changes in driving behavior that may occur with the introduction of the project. This analysis uses two travel demand models to analyze the VMT impacts of the project. The VMT analysis for the residential and commercial components of the project use the MTC Travel Model while the VMT analysis for the retail component uses the Alameda CTC Countywide Travel Demand Model. The following describes how the two models estimate VMT.

3.1.1. MTC Travel Model

Neighborhoods within Oakland are expressed geographically in transportation analysis zones, or TAZs. The MTC Travel Model includes approximately 120 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower density areas in the hills. TAZs are used in transportation planning models for transportation analysis and other planning purposes.

Based on the MTC Travel Model, the regional average daily VMT per capita is 15.0 under 2020 conditions and 13.8 under 2040 conditions, and the regional average daily VMT per worker is 21.8 under 2020 conditions and 20.3 under 2040 conditions. MTC has calculated these same metrics for every TAZ in the nine-county Bay Area.

3.1.2. Alameda CTC Travel Model

The MTC model does not calculate retail-based service population VMT where service population is defined as workers plus residential population, so the Alameda CTC travel model was used to estimate VMT for the retail component of the project. Like the MTC Model, neighborhoods within Oakland are expressed geographically in TAZs. The Alameda CTC Travel Model includes approximately 370 TAZs within Oakland that vary in size. Generally, Oakland TAZs in the Alameda CTC model are smaller than those in the MTC model. The Alameda CTC Model was used for the VMT analysis to capture city-level scale VMT impacts for the retail component of the project using service population, while still maintaining consistency with the MTC Model and regional planning.

3.2. Non-Ballpark VMT Analysis

3.2.1. Residential and Commercial VMT Analysis Screening

Table 6 describes the 2020 and 2040 residential and commercial VMT for the TAZs that make up the project site as well as applicable VMT thresholds of 15 percent below the regional average. As shown in Table 6, the 2020 and 2040 average daily VMT per capita and VMT per worker in the project TAZs are more than 15 percent below the regional averages. The project would generate less VMT than 15 percent below the regional averages and its impact would be less than significant for the residential and commercial portions of the project. Accordingly, the project would not result in a significant transportation impact with respect to the VMT criteria for residential and commercial development.

Table 6: Daily Vehicle Miles Travelled per Capita

Land Use	2020		2040		Weighted Average TAZ 966 and 967 [3]	
	Regional Average	Regional Average Minus 15%	Regional Average	Regional Average Minus 15%	2020	2040
Residential (VMT per capita) [1]	15.0	12.8	13.8	11.7	6.4	6.6
Commercial (VMT per worker) [2]	21.8	18.5	20.3	17.3	16.5	14.2

Notes:
1. MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerCapita and accessed in December 2018.
2. MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerWorker and accessed in December 2018.
3. VMT per resident weighted by TAZ population; VMT per worker weighted by TAZ employment.

Source: Fehr & Peers, 2019.

3.2.2. Regional Retail VMT Analysis Screening

The project proposes 270,000 square feet of retail uses which are considered regional-serving retail because it is over 80,000 square feet. A full VMT analysis is recommended for regional serving retail because larger retail projects typically reroute travel from other destinations potentially increasing total VMT in the area under consideration.

To assess the VMT generated by the retail component of the project, the total accounting method was used to understand the development's influence on overall city-wide travel behavior. As

opposed to analyzing only project trips, analyzing the project's retail VMT impacts requires understanding how the proposed development would interact with the outside world, as adding housing to a jobs-rich area could reduce average vehicle trip length on a per capita basis, while adding jobs to an area with limited residential population could increase average trip length. This is consistent with OPR guidance that recommends that "agencies should analyze the effects of a retail project by assessing the change in total VMT, because retail projects typically re-route travel from other destinations." This analysis was completed using the Alameda CTC travel demand model.

The base 2020- and 2040-year Alameda CTC Models were run for the project. Results are shown in **Table 7** for the Total Accounting Method[2] (or Origin-Destination Method) for the retail component of the project. The city of Oakland VMT per service population (defined as total number of residents plus workers within the city) is approximately 17.3 miles in 2020 and 17.1 miles in 2040 with or without the retail component of the project. While the VMT per service population would experience a slight reduction, the project would result in a marginal (i.e., less than 1 percent) overall increase in total VMT.

Table 7: City of Oakland VMT per Service Population – Full Accounting

	2020			2040		
	No Project	Plus Project	Difference	No Project	Plus Project	Difference
Population	487,700	487,700	0	678,400	678,400	0
Employment	243,600	244,140	540	335,630	336,170	540
Service Population	731,300	731,840	540	1,014,030	1,014,570	540
VMT [1]	12,643,000	12,659,000	16,000	17,369,000	17,394,000	25,000
VMT/Service Population	17.3	17.3	0.0	17.1	17.1	0.0

Notes:
Citywide VMT generated by City of Oakland as estimated by the Alameda CTC Model
Source: Alameda CTC Model and Fehr & Peers, 2019.

[2] The total account method, also known as origin-destination method, tracks all vehicle trips generated by the city of Oakland (including the proposed Project) across the entire regional network. These trips are then multiplied by the distance traveled to determine the total VMT, and this total is then divided by the total residential and employment populations to establish the VMT per service population.

3.2.3. Performance Venue VMT Analysis Screening

Due to its relatively unique use, VMT per attendee for the 3,500-seat performance venue component of the project cannot be assessed using the screening criteria or the regional travel demand models used for the other components of the project. The threshold this study uses for assessing substantial additional VMT is if the VMT per attendee at the performance venue exceeds the existing VMT per attendee at similar events, as represented by concerts at Oakland Arena, minus 15 percent.

Data from Oakland Arena was used to estimate the travel mode characteristics for the project's performance venue. **Table 8** presents the Oakland Arena travel characteristics which differs from the baseball games at the Oakland-Alameda Coliseum. The geographic distribution of the arena attendees also differs from baseball game attendees. Concert attendees use the San Francisco BART stations and drive from San Francisco in greater numbers than the baseball attendees while there are fewer arena attendees using BART or driving from the Castro Valley and Dublin/Pleasanton areas.

Table 8: Existing Oakland-Alameda Coliseum Ballpark Mode of Access

Mode	Weekday Evening [1]	Weekday Day [1]	Weekend [1]	Oakland Arena Event [2]
Drive	70%	72%	75%	74%
TNC [3]	6%	6%	6%	6%
BART	24%	22%	19%	20%
Walk/Bike/Other Transit [4]	*	*	*	*

Notes:
1. Reflects average mode of travel during 2017 baseball season. The most recent set of data prior to the Notice of Preparation.
2. Based on BART and Billboard data for the following high demand concerts at Oakland Arena in 2017:
    - Red Hot Chili Peppers (3/12)
    - Panic! At the Disco (3/25)
    - Roger Waters (6/10)
    - Arcade Fire (10/21)
    - Enrique Iglesias and Pitbull (10/28)
    - Jay-Z (12/16)
3. Based on driveway count data.
4. Negligible use of other modes observed during field visits.

Source: BART and Fehr & Peers, 2019.

Average trip lengths for the studied events were calculated using shortest network distance between trip origin/destination locations and Oakland Arena established from location-based

services cell phone data. Estimated trip lengths for the performance venue were calculated using shortest network distance between these trip origin/destination locations and the project site for the studied events, with the trip distribution modified to account for a changed geographic composition of attendees and a shifted travel mode for attendees near the project site. **Table 9** presents the existing travel characteristics and VMT of concerts at Oakland Arena and the estimated travel characteristics and VMT of events at the project's performance venue.

Table 9: Travel Characteristics of Oakland Arena and the Performance Venue

Mode	Travel Mode			Average Trip Length (mi)	VMT per Attendee
	Drive	TNC	Other Modes		
Concerts at Oakland Arena (existing) [1]	74%	6%	20%	12	10.5
Events at Project Performance Venue (estimated)	58%	19%	23%	11	9.0
				VMT per Attendee Reduction	**-14%**

Notes:
1. Represented by high-demand concerts at Oakland Arena in 2017: Red Hot Chili Peppers (3/12), Panic! At the Disco (3/25), Roger Waters (6/10), Arcade Fire (10/21), Enrique Iglesias and Pitbull (10/28), and Jay-Z (12/16).

Source: Fehr & Peers, 2019.

Although attendees to events at the performance center are expected to have lower average VMT than attendees at concerts at Oakland Arena, the estimated VMT per attendee reduction does not meet the threshold used in this analysis which is to reduce VMT to a level of 15 percent below similar existing uses. Implementation of the TDM plan discussed previously would substantially reduce VMT for the entire development, of which the performance venue is one component. **Table 10** presents the total daily VMT of the at-capacity performance venue on event days and calculates the percentage reduction in VMT.

Table 10: TDM Plan VMT Reduction for Performance Venue Event Days

Event Type	Daily Trips	Average Trip Length (mi)	Total VMT
Without TDM Plan			
Performance Venue	2,860	11.4	32,700
With TDM Plan			
Performance Venue	2,290	11.8	27,000
		TDM Plan VMT Reduction (mi)	**-5,700**
		TDM Plan VMT Reduction (%)	**-17%**

Source: Fehr & Peers, 2019.

3.2.4. VMT Reduction with TDM Plan for Non-Ballpark Development

Per AB 734, the project would be required to incorporate a TDM Plan that would reduce vehicle trip generation by at least 20 percent. By reducing vehicle trips, the VMT would also be reduced by approximately the same amount because the average trip length for the non-ballpark development trips is assumed to not change when reducing vehicle trips. This means that reducing vehicle trips would reduce VMT to a level of at least 15 percent below similar existing uses. As stated previously, the TDM Plan incorporates a wide variety of measures to reduce vehicle demand and other transportation-related impacts of the non-ballpark development. The TDM programs illustrate a mix of strategies that could be employed with a TDM Plan that would reduce vehicle trips and the associated VMT to below the VMT screening criteria threshold.

Table 11 presents the total daily VMT of the non-ballpark development during Phase 1, which does not include the performance venue. The table lists VMT both with and without the TDM. **Table 12** shows the daily VMT for each of the project's land uses at Full Buildout of the non-ballpark development, both with and without the TDM. The TDM Plan was assumed to reduce vehicle trips by 20 percent consistent with requirements of AB 734. Total VMT for the development on both weekdays and weekends would be reduced by 20 percent compared to without the TDM Plan. The VMT reduction from the TDM Plan is in addition to the VMT reductions attributable to the project's location.

Table 11: Non-Ballpark Development Phase 1 Daily VMT

Land Use	Without TDM				With TDM			
	Weekday		Weekend		Weekday		Weekend	
	Trips	VMT	Trips	VMT	Trips	VMT	Trips	VMT
Residential	1,500	18,000	1,400	16,800	1,200	14,400	1,100	13,200
Office	2,100	25,200	300	3,600	1,700	20,400	300	3,600
Retail	1,300	15,600	1,600	19,200	1,100	13,200	1,300	15,600
Restaurant	800	9,600	900	10,800	600	7,200	700	8,400
Hotel	2,600	31,200	2,100	25,200	2,100	25,200	1700	20,400
Performance Venue	-	-	-	-	-	-	-	-
Total with Venue	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Without Venue	**8,300**	**99,600**	**6,300**	**75,600**	**6,700**	**80,400**	**5,100**	**61,200**

Source: Fehr & Peers, 2019.

Table 12: Non-Ballpark Development Full Buildout Daily VMT

Land Use	Without TDM				With TDM			
	Weekday		Weekend		Weekday		Weekend	
	Trips	VMT	Trips	VMT	Trips	VMT	Trips	VMT
Residential	7,700	92,500	7,100	85,300	6,100	73,300	5,700	68,500
Office	9,700	116,600	1,500	18,000	7,800	93,700	1,200	14,400
Retail	5,700	68,500	6,000	72,100	4,600	55,300	4,800	57,700
Restaurant	6,400	76,900	7,500	90,100	5,200	62,500	6,000	72,100
Hotel	2,600	31,200	2,100	25,200	2,100	25,200	1,700	20,400
Performance Venue	2,900	34,200	2,900	34,200	2,400	28,300	2,400	28,300
Total with Venue	**35,000**	**419,900**	**27,100**	**324,900**	**28,200**	**338,300**	**21,800**	**261,400**
Total Without Venue	**32,100**	**385,700**	**24,200**	**290,700**	**25,800**	**310,000**	**19,400**	**233,100**

Source: Fehr & Peers, 2019.

3.3. Ballpark VMT Analysis

Due to its unique use and size, VMT per attendee for the 35,000-attendee capacity ballpark component of the project cannot be assessed using the screening criteria or the regional travel demand models used for the other components of the project.

The project would replace the existing 47,100-attendee[3] capacity ballpark at the Oakland-Alameda Coliseum as the home field of the Oakland A's. For Oakland A's home games, trips that previously would have begun or ended at the Oakland-Alameda Coliseum would instead be replaced with trips to or from the project site, to the extent that the ballpark's smaller seating capacity would be able to accommodate them. The project's ballpark would also compete with Oakland Arena for some special events. As such, the threshold this study uses for assessing substantial additional VMT is if the VMT per attendee at the project's ballpark exceeds the existing VMT per attendee at similar events at the Oakland-Alameda Coliseum or Oakland Arena minus 15 percent.

Average trip lengths for the Oakland-Alameda Coliseum were calculated using shortest network distance between each trip origin/destination and the Oakland-Alameda Coliseum for baseball games in 2017. The estimated trip lengths from these origins and destinations were then recalculated for the project site using the shortest network distance for the same games, with the trip distribution modified to account for a changed geographic composition of attendees and a shifted travel mode for attendees near the project site. Similar methods were used for Oakland Arena.

Table 13 presents the existing travel characteristics of attendees of baseball games at the Oakland-Alameda Coliseum and concerts at Oakland Arena; it also presents NFL games, Monster Jam, and moto-cross at the Oakland-Alameda Coliseum. Table 13 also lists the total vehicle trips and VMT based on maximum attendance at the proposed Howard Terminal Ballpark. **Table 14** presents these estimates for the project's ballpark without a TDM Plan, along with a comparison of the VMT per attendee to the equivalent existing conditions at the Oakland-Alameda Coliseum or Oakland Arena. Baseball games at the project site are expected to have a lower VMT per attendee than games at the Oakland-Alameda Coliseum, and concerts at the ballpark are expected to have a lower VMT per attendee than similar events at Oakland Arena.

[3] Capacity can expand to 63,000 for Raider games and other larger events – generally 10 events per year.

Table 13: Existing Travel Characteristics at the Oakland-Alameda Coliseum and Oakland Arena (Howard Terminal Ballpark Capacity Attendance)

Event Type	Travel Mode			Attendees [1]	Total Vehicle Trips[2,3]	Average Trip Length (mi)[4]	Vehicle-Miles Traveled
	Drive	TNC	Other Modes				
Baseball Games							
Weekday Evening	70%	6%	24%	35,000	28,900	13.3	359,000
Weekday Day	71%	6%	23%	35,000	29,300	13.8	377,000
Weekend	75%	6%	19%	35,000	30,600	14.2	405,000
Large Concerts [5]	74%	6%	20%	35,000	30,000	12.1	339,000
NFL Games	69%	6%	25%	54,664	33,000	16.6	495,000
Monster Jam	78%	7%	15%	47,500	32,200	18.5	546,000
Moto-Cross [6]	78%	7%	15%	47,500	32,200	18.5	546,000

Notes:
1. Ballpark attendance equivalent to maximum attendance at Howard Terminal. NFL, Monster Jam, and Moto-Cross attendance based on average attendance for 2017.
2. Average vehicle occupancy of 2.12. Attendee use of a TNC results in two vehicle trips—one one-mile trip to pick up attendee and one at the average trip length to take them to their destination.
3. Vehicle trips include trips by event staff of 760 for ballgames and 1,200 for large concerts, with an assumed mode share of 53.1% driving in single-occupancy vehicles, per the TIRG.
4. Does not include TNC trips to pick up attendees.
5. Represented by high-demand concerts at Oakland Arena in 2017: Red Hot Chili Peppers (3/12), Panic! At the Disco (3/25), Roger Waters (6/10), Arcade Fire (10/21), Enrique Iglesias and Pitbull (10/28), and Jay-Z (12/16).
6. Moto-Cross travel characteristics based on Monster Jam travel characteristics because moto-cross travel characteristics were not available.

Source: Fehr & Peers, 2019.

Table 14: Project Ballpark Travel Characteristics – Without TMP

Event Type	Travel Mode			Attendees (Capacity)[1]	Total Vehicle Trips[2, 3]	Average Trip Length (mi)[4]	Vehicle-Miles Traveled	VMT per Attendee	VMT per Attendee Reduction [5]
	Drive	TNC	Other Modes						
Baseball Games									
Weekday Evening	57%	18%	25%	35,000	32,400	13.3	358,000	10.2	-3%
Weekday Day	57%	19%	24%	35,000	33,000	13.3	360,000	10.3	-10%
Weekend	62%	18%	20%	35,000	33,800	14.1	400,000	11.4	-1%
Large Concerts [6]	58%	19%	23%	35,000	33,500	11.4	315,000	9.0	-14%
Other Events [7, 8]	58%	19%	23%	7,500	7,500	11.4	71,000	9.4	*
Corporate/ Community Events	58%	19%	23%	2,000	1,900	11.4	17,000	8.7	*
Plaza Events [7, 8]	58%	19%	23%	4,000	3,700	11.4	34,000	8.6	*

Notes:
1. At-capacity crowd at Howard Terminal was assumed for ballgames and concerts for purposes of these calculations.
2. Average vehicle occupancy of 2.12. Attendee use of a TNC results in two vehicle trips—one one-mile trip to pick up attendee and one at the average trip length to take them to their destination.
3. Vehicle trips include trips by event staff of 1,320 for ballgames, 1,200 for large concerts, 480 for other events, and 25 for corporate/community events and plaza events, with an assumed mode share of 63.3% driving in single-occupancy vehicles, per the TIRG.
4. Does not include TNC trips to pick up attendees.
5. Compared to existing conditions at the Oakland-Alameda Coliseum and Oakland Arena.
6. There are about 9 concerts per year each with 1,200 staff
7. There are 35 other events per year (480 staff), 100 corporate / community events per year (25 staff), and 16 plaza events (25 staff) per year.
8. Large concert travel characteristics used for the smaller events proposed for the ballpark.

Source: Fehr & Peers, 2019

3.3.1. VMT Reduction with Ballpark and a Transportation Management Plan (TMP)

Per AB 734, the project would be required to incorporate a TMP that would reduce vehicle trip generation by at least 20 percent. See the *Howard Terminal Draft Transportation Management Plan (February 2020)* document for additional detail regarding strategies for reducing ballpark-generated vehicle trips. Reducing vehicle trips leads to reduced VMT per attendee.

To achieve VMT per attendee levels less than the existing uses minus 15 percent, the project would need to incorporate a TMP that would reduce VMT per attendee compared to similar existing uses. The TMP would incorporate a wide variety of measures to reduce vehicle demand and other transportation-related impacts. These measures would change travel behavior and trip generation

and eventually VMT through incentives such as bus-only lanes, high capacity transportation hub, and transit fare reductions and disincentives like reduced parking supply and parking pricing.

Table 15 presents the estimated travel characteristics and VMT per attendee for the ballpark with implementation of the strategies described in this chapter. With these TMP strategies, at full buildout, the project's ballpark would reduce the estimated VMT per attendee for all baseball game types and concerts to levels more than 15 percent below similar existing uses. The VMT per attendee reductions shown in Table 15 are applicable with both Phase 1 when 3,500 parking spaces are provided on-site for the ballpark and buildout when 2,000 parking spaces are provided because the ballpark is required to meet at least a 20 percent vehicle trip reduction.

Table 15: Project Ballpark Travel Characteristics – With TMP

Event Type	Travel Mode			Attendees (Capacity)[1]	Total Vehicle Trips[2, 3]	Average Trip Length (mi)[4]	Vehicle-Miles Traveled	VMT per Attendee	VMT per Attendee Reduction [5]
	Drive	TNC	Other Modes						
Baseball Games									
Weekday Evening	50%	16%	34%	35,000	25,900	13.7	290,000	8.3	-22%
Weekday Day	49%	16%	35%	35,000	26,400	13.7	291,000	8.3	-27%
Weekend	54%	15%	31%	35,000	27,100	14.5	323,000	9.2	-20%
Large Concerts [6]	50%	17%	33%	35,000	26,800	11.8	254,000	7.3	-31%
Other Events [7, 8]	50%	17%	33%	7,500	6,000	11.8	58,000	7.7	*
Corporate/ Community Events	50%	17%	33%	2,000	1,500	11.8	14,000	7.0	*
Plaza Events [7, 8]	50%	17%	33%	4,000	2,900	11.8	27,000	6.9	*

Notes:
1. At-capacity crowd at Howard Terminal was assumed for ballgames and concerts for purposes of these calculations.
2. Average vehicle occupancy of 2.3. Attendee use of a TNC results in two vehicle trips—one one-mile trip to pick up attendee and one at the average trip length to take them to their destination.
3. Vehicle trips include trips by event staff of 1,320 for ballgames, 1,200 for large concerts, 480 for other events, and 25 for corporate/community events and plaza events, with an assumed mode share of 63.3% driving in single-occupancy vehicles, per the TIRG.
4. Does not include TNC trips to pick up attendees.
5. Compared to existing conditions at the Oakland-Alameda Coliseum and Oakland Arena.
6. There are about 9 concerts per year each with 1,200 staff
7. There are 35 other events per year (480 staff), 100 corporate / community events per year (25 staff), and 16 plaza events (25 staff) per year.
8. Large concert travel characteristics used for the smaller events proposed for the ballpark.

Source: Fehr & Peers, 2019

The ballpark is expected to host up to nine concerts per year, compared to a minimum of 81 baseball games, all of which would have VMT per attendee reductions greater than the threshold level. **Table 16** presents the annualized VMT per attendee at the ballpark with the implementation of TMP strategies for all baseball games and concerts. The annual VMT per attendee with TMP strategies would also be reduced to a level more than 15 percent below similar existing uses.

Table 16: Project Ballpark – Annual VMT per Attendee

Event Type	Events per Year at Howard Terminal	VMT per Attendee	
		Existing at Coliseum/ Oakland Arena	Howard Terminal with TMP
Baseball Games			
Weekday Evening	41	10.6	8.3
Weekday Day	13	11.4	8.3
Weekend	27	11.6	9.2
Concerts	9	10.5	7.3
Annualized VMT per Attendee [1]		**11.0**	**8.4**
Annualized VMT per Attendee Reduction		**-23%**	

Note:
1. Annualized number based on equal attendance at the number of events presented in this table.
Source: Fehr & Peers, 2019.

3.3.2. VMT Reductions due to the Gondola

The A's are considering a gondola between the 12th Street Oakland City Center BART station and the Howard Terminal to improve access between the Ballpark and the BART station, which, if implemented, will reduce the need for shuttle service to the 12th Street station. A gondola would overcome the existing infrastructure barriers that separate Downtown Oakland and the Ballpark and Jack London District, including railroad tracks, BART tracks, and the I-880 elevated freeway. Trip and VMT reductions with the gondola are summarized in **Table 17**.

Table 17: VTR and VMT Impact of Gondola at Howard Terminal Ballpark

Event Type	VTR [1]	VMT [2]
Ballpark Events – Compared to Scenario with BART Shuttles		
Weekday Evening	3%	-8,700
Weekday Day	3%	-7,300
Weekend	2%	-4,800
Large Concerts [3]	3%	-5,900
Ballpark Events – Compared to Scenario without BART Shuttles		
Weekday Evening	4%	-12,300
Weekday Day	6%	-14,300
Weekend	3%	-7,300
Large Concerts [3]	3%	-8,800
Non-Ballpark Development [4]– Phase 1		
Weekday	13%	-10,400
Weekend	13%	-7,900
Non-Ballpark Development [4]– Full Buildout		
Weekday	13%	-40,000
Weekend	13%	-30,000

Note:
1. VTR is vehicle trip reduction and represents additional trip reduction when measure is added to current project with a TDM Plan for the non-ballpark development and a TMP for the ballpark.
2. VMT is vehicle miles traveled and represents change in total VMT when measure is added to current project with a TDM Plan for the non-ballpark development and a TMP for the ballpark.
3. For other events, scale the estimates for large concerts.
4. VTR percentage for non-ballpark development does not include performance venue.

Source: Fehr & Peers, 2019.

3.3.3. Ballpark VMT Analysis Conclusions

Projects that reduce VMT to a level 15 percent below similar existing uses are considered to have a less-than-significant impact on VMT. The combination of a TMP as well as the project sponsor's decision to incorporate parking maximums for ballpark parking (up to 3,500 spaces with Phase 1 and 2,000 spaces at buildout) would result in VMT reductions for ballpark attendees that would result in a less-than-significant impact on VMT.

3.4. VMT Analysis Conclusions

Overall, the project would have a less-than-significant impact on VMT because:

- VMT per capita generated by the project would be more than 15 percent below the regional averages and would thus be less than significant for the residential and commercial components of the project.
- Citywide VMT per service population would remain the same without and with the retail component of the project which would be less than significant for the regional retail component of the project.
- VMT generated by the project for the performance venue would be more than 15 percent below existing similar uses with a comprehensive TDM Plan encompassing the entirety of the non-ballpark development including the parking maximums described in Chapter 3, *Project Description,* of the EIR.
- VMT generated by the ballpark component of the project would be more than 15 percent below existing similar uses with a comprehensive TMP for full buildout of the project including a 2,000-parking space maximum and for Phase 1 assuming a 3,500-space maximum.

Attachments:

Appendix A - Daily Freeway Volumes - Ballpark with TMP and Non-Ballpark with TDM

Appendix B - Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

Appendix C – Microsimulation Vehicle Delay and LOS at Select Intersections

Appendix A – Daily Freeway Volumes – Ballpark with TMP and Non-Ballpark with TDM

Appendix A: Daily Freeway Volumes - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020		Year 2040			Ballpark	
Link Location	Segment Limits		HT Non-Ballpark Trips	No Project Volumes	No Project + HT Volumes	No Project Volume	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures
I-580 Eastbound										
Between	I-80/I-580	MacArthur Blvd	400	90,900	91,300	103,000	108,000	108,400	280	21
Between	MacArthur Blvd	I-980/SR 24	400	86,600	87,000	91,700	96,700	97,100	280	21
Between	I-980/SR 24	Oakland Avenue	1,000	78,400	79,400	90,000	96,000	97,000	730	54
Between	Oakland Avenue	Grand Avenue	700	84,700	85,400	96,700	101,200	101,900	511	38
Between	Grand Avenue	Lakeshore Avenue	900	73,900	74,800	89,800	95,300	96,200	669	50
Between	Lakeshore Avenue	Park Blvd	700	87,200	87,900	105,600	111,600	112,300	511	38
Between	Park Blvd	Fruitvale Avenue	700	83,100	83,800	109,600	115,600	116,300	511	38
Between	Fruitvale Avenue	35th Avenue	600	74,400	75,000	100,900	105,400	106,000	438	33
Between	35th Avenue	High Street	500	67,000	67,500	86,500	91,000	91,500	365	28
Between	High Street	MacArthur Blvd	400	60,700	61,100	78,900	82,400	82,800	292	22
Between	MacArthur Blvd	SR 13	300	57,200	57,500	71,000	74,000	74,300	365	28
I-580 Westbound										
Between	SR 13	MacArthur Blvd	600	41,200	41,800	57,200	61,200	61,800	822	63
Between	MacArthur Blvd	High Street	800	42,900	43,700	60,800	64,800	65,600	881	67
Between	High Street	35th Avenue	1,000	45,500	46,500	63,700	68,700	69,700	940	71
Between	35th Avenue	Fruitvale Avenue	1,100	51,000	52,100	69,400	74,400	75,500	999	75
Between	Fruitvale Avenue	Park Blvd	1,200	59,500	60,700	78,300	83,300	84,500	1,058	79
Between	Park Blvd	Lakeshore Avenue	1,200	61,200	62,400	80,800	85,800	87,000	1,058	79
Between	Lakeshore Avenue	Grand Avenue	1,200	57,600	58,800	72,800	76,800	78,000	1,058	79
Between	Grand Avenue	Oakland Avenue	1,250	64,700	65,950	81,000	86,000	87,250	1,117	83
Between	Oakland Avenue	I-980/SR 24	1,300	62,000	63,300	73,100	80,100	81,400	1,270	94
Between	I-980/SR 24	I-580/I-880	800	41,100	41,900	47,200	59,200	60,000	740	55
I-980 Eastbound										
Between	I-880	12th Street	0	27,200	27,200	32,000	38,500	38,500	374	50
Between	12th Street	27th Street	4,000	37,500	41,500	41,800	63,300	67,300	2,811	209
Between	27th Street	I-580	4,000	49,900	53,900	62,500	84,000	88,000	2,811	209
I-980 Westbound										
Between	I-580	27th Street	3,100	30,900	34,000	35,500	50,500	53,600	2,965	221
Between	27th Street	12th Street	3,100	22,400	25,500	33,100	45,100	48,200	1,755	177
Between	12th Street	I-880	0	26,500	26,500	38,300	42,300	42,300	1,115	52

Appendix A: Daily Freeway Volumes - Ballpark with TMP and Non-Ballpark with TDM

					Year 2020			Year 2040			Ballpark	
Link Location	Segment Limits			HT Non-Ballpark Trips	No Project Volumes	No Project + HT Volumes		No Project Volume	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures
I-880 Northbound												
Between	42nd Avenue	29th Avenue		1,850	70,100	71,950		80,100	91,100	92,950	3,609	271
Between	29th Avenue	23rd Avenue		1,850	64,500	66,350		70,400	81,400	83,250	3,609	271
Between	23rd Avenue	Embarcadero		1,850	70,200	72,050		78,800	89,800	91,650	3,609	271
Between	Embarcadero	Oak Street		1,850	68,500	70,350		75,400	86,400	88,250	3,609	271
Between	Oak Street	Broadway		1,850	63,200	65,050		70,700	77,700	79,550	3,081	179
Between	Broadway	I-980		1,300	61,900	63,200		70,700	81,700	83,000	1,851	71
Between	I-980	Market Street		1,300	48,900	50,200		53,400	61,400	62,700	1,477	21
Between	Market Street	Union Street		0	46,200	46,200		48,700	54,700	54,700	77	21
Between	Union Street	7th Street		2,150	47,500	49,650		52,900	61,900	64,050	1,443	107
Between	7th Street	I-80		2,200	42,000	44,200		40,800	51,800	54,000	1,443	107
I-880 Southbound												
Between	I-80	7th Street		1,650	42,600	44,250		50,600	59,100	60,750	1,066	74
Between	7th Street	Union Street		1,650	46,300	47,950		56,800	65,300	66,950	1,066	74
Between	Union Street	Market Street		0	39,400	39,400		56,300	61,300	61,300	0	0
Between	Market Street	I-980		950	41,500	42,450		47,800	52,800	53,750	0	0
Between	I-980	Broadway		1,700	26,500	28,200		38,300	46,800	48,500	1,115	52
Between	Broadway	Oak Street		2,400	62,700	65,100		75,000	86,000	88,400	2,985	197
Between	Oak Street	Embarcadero		2,400	73,700	76,100		88,600	104,600	107,000	3,538	263
Between	Embarcadero	23rd Avenue		2,400	74,300	76,700		82,500	100,500	102,900	3,538	263
Between	23rd Avenue	42nd Avenue		2,400	73,200	75,600		89,600	107,600	110,000	3,538	263
SR 24 Eastbound												
Between	I-580	MLK Jr. Way		2,200	46,300	48,500		69,800	80,800	83,000	1,340	100
Between	MLK Jr. Way	Claremont Avenue		2,200	65,300	67,500		84,800	95,800	98,000	1,340	100
Between	Claremont Avenue	Broadway		1,700	73,100	74,800		93,000	104,000	105,700	1,035	77
Between	Broadway	SR 13		1,400	78,000	79,400		98,700	108,450	109,850	852	63
Between	SR 13	Tunnel Lane		1,200	87,400	88,600		113,300	121,800	123,000	730	54
Between	Tunnel Lane	Caldecott Tunnel		1,200	90,700	91,900		120,800	129,300	130,500	730	54
SR 24 Westbound												
Between	Caldecott Tunnel	Tunnel Lane		700	58,600	59,300		69,900	78,400	79,100	659	49
Between	Tunnel Lane	SR 13		700	58,400	59,100		64,700	73,200	73,900	659	49
Between	SR 13	Broadway		700	40,500	41,200		47,800	55,300	56,000	659	49
Between	Broadway	Telegraph Avenue		1,000	38,100	39,100		46,100	53,600	54,600	941	70
Between	Telegraph Avenue	I-580		1,400	43,900	45,300		52,700	60,200	61,600	1,412	105

Source: Alameda CTC Travel Demand Model for No Project Volumes, Fehr & Peers, 2019.

Appendix B – Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

Appendix B: Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020			Year 2040			Ballpark				
Street	From	To	HT Non-Ballpark Trips with Rerouting	No Project Volumes	No Project + HT Volumes	No Project Volumes	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures	5-6 PM Attendee Arrivals	6-7 PM Attendee Arrivals	10-11 PM Attendee Departures
Brush Street	3rd Street	5th Street	1,015	2,070	3,050	3,100	4,100	4,750	0	0	0	0	0
Brush Street	5th Street	6th Street	1,195	5,780	6,950	8,850	10,050	11,950	1,149	0	165	330	228
Brush Street	6th Street	7th Street	1,275	5,820	7,100	8,750	10,050	11,900	959	0	133	265	203
Brush Street	7th Street	11th Street	3,535	13,980	17,500	21,200	24,750	29,300	1,202	0	264	529	0
Brush Street	11th Street	12th Street	3,635	21,170	24,800	32,050	35,700	42,600	2,031	229	405	810	108
Brush Street	12th Street	14th Street	1,315	5,690	7,000	8,600	9,950	11,750	826	0	182	363	0
Brush Street	14th Street	17th Street	1,255	10,160	11,400	15,300	16,550	19,850	985	44	217	433	0
Brush Street	17th Street	19th Street	1,255	21,560	22,800	32,700	33,950	41,000	962	44	212	423	0
Brush Street	19th Street	20th Street	0	0	0	0	0	0					
Brush Street	20th Street	21st Street	0	0	0	0	0	0					
Brush Street	21st Street	Grand Avenue	0	0	0	0	0	0					
Castro Street	3rd Street	5th Street	760	1,560	2,350	2,350	3,100	3,550	0	0	0	0	0
Castro Street	5th Street	6th Street	885	1,720	2,600	2,700	3,600	4,150	798	0	81	162	245
Castro Street	6th Street	7th Street	885	2,770	3,650	4,200	5,100	5,950	1,266	0	72	144	535
Castro Street	7th Street	8th Street	1,260	5,240	6,500	7,950	9,250	10,850	1,719	44	85	171	759
Castro Street	8th Street	11th Street	1,135	8,800	9,950	13,300	14,450	17,150	2,005	99	78	157	940
Castro Street	11th Street	12th Street	1,645	10,610	12,300	16,050	17,700	21,000	2,352	91	49	98	1,214
Castro Street	12th Street	14th Street	260	2,610	2,900	3,950	4,200	5,000	950	92	49	98	414
Castro Street	14th Street	17th Street	810	7,170	8,000	10,800	11,600	13,850	637	62	0	0	363
Castro Street	17th Street	19th Street	680	12,640	13,350	19,000	19,700	23,650	681	62	0	0	388
Castro Street	19th Street	20th Street	545	0	0	0	0	0					
Castro Street	20th Street	San Pablo Avenue	545	0	0	0	0	0					
MLK	Embarcadero	3rd Street	4,830	1,630	6,450	2,450	7,300	7,800	3,200	0	352	704	912
MLK	3rd Street	5th Street	5,110	2,420	7,550	3,650	8,750	9,500	3,214	0	355	710	912
MLK	5th Street	6th Street	3,725	2,230	5,950	3,500	7,200	7,950	3,388	39	360	719	999
MLK	6th Street	7th Street	3,275	1,730	5,000	2,700	5,950	6,500	3,648	66	441	882	937
MLK	7th Street	8th Street	3,175	2,080	5,250	3,150	6,350	7,000	3,384	83	370	740	971
MLK	8th Street	11th Street	2,820	2,060	4,900	3,200	6,000	6,700	3,403	146	393	786	921
MLK	11th Street	12th Street	2,200	2,980	5,150	4,500	6,700	7,650	3,267	185	372	744	898
MLK	12th Street	14th Street	1,660	3,200	4,850	4,900	6,600	7,600	2,141	90	367	733	270
MLK	14th Street	17th Street	1,235	3,340	4,600	5,000	6,250	7,300	644	0	66	133	195
MLK	17th Street	19th Street	995	2,390	3,350	3,600	4,600	5,350	626	0	66	133	185
MLK	19th Street	20th Street	0	0	0	0	0	0	626	0	66	133	185
MLK	20th Street	San Pablo Avenue	0	0	0	0	0	0	626		66	133	185
Jefferson Street	Embarcadero	3rd Street	380	460	850	750	1,100	1,250	0	0	0	0	0
Jefferson Street	5th Street	6th Street	0	1,730	1,700	2,600	2,600	3,150	562	66	75	150	126
Jefferson Street	6th Street	7th Street	0	1,730	1,700	2,600	2,600	3,150	562	66	75	150	126
Jefferson Street	7th Street	8th Street	0	1,740	1,750	2,650	2,650	3,200	339	68	31	62	112
Jefferson Street	8th Street	11th Street	0	1,810	1,800	2,750	2,750	3,350	284	68	31	62	81
Jefferson Street	11th Street	12th Street	0	0	0	0	0	0	142	34	16	31	40
Jefferson Street	12th Street	14th Street	0	2,850	2,850	4,350	4,350	5,250	107	26	12	23	30
Jefferson Street	14th Street	17th Street	0	3,200	3,200	4,900	4,900	5,950	107	26	12	23	30
Jefferson Street	17th Street	San Pablo Avenue	0	1,510	1,500	2,300	2,300	2,800					
Clay Street	Embarcadero	3rd Street	0	2,240	2,250	3,500	3,500	4,200	0	0	0	0	0
Clay Street	7th Street	8th Street	0	1,340	1,350	2,050	2,050	2,500	327	40	48	97	61
Clay Street	8th Street	11th Street	0	1,900	1,900	2,850	2,850	3,450	836	132	84	168	259
Clay Street	11th Street	12th Street	0	4,030	4,050	6,100	6,100	7,350	752	119	75	151	233
Clay Street	12th Street	14th Street	0	3,470	3,450	5,200	5,200	6,300	376	59	38	75	117
Clay Street	14th Street	17th Street	0	4,110	4,100	6,300	6,300	7,650	376	59	38	75	117
San Pablo Avenue	17th Street	19th Street	0	4,430	4,450	6,650	6,650	8,000					
San Pablo Avenue	19th Street	20th Street	0	6,180	6,200	9,400	9,400	11,350					

Appendix B: Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020		Year 2040			Ballpark				
Street	From	To	HT Non-Ballpark Trips with Rerouting	No Project Volumes	No Project + HT Volumes	No Project Volumes	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures	5-6 PM Attendee Arrivals	6-7 PM Attendee Arrivals	10-11 PM Attendee Departures
San Pablo Avenue	20th Street	21st Street	0	9,470	9,500	14,350	14,350	17,400					
San Pablo Avenue	21st Street	Grand Avenue	0	8,950	8,950	13,550	13,550	16,350	125	0	13	27	37
Washington Street	Embarcadero	3rd Street	0	1,330	1,350	2,100	2,100	2,500	1,353	0	149	297	386
Washington Street	3rd Street	5th Street	0	2,520	2,500	3,850	3,850	4,650	1,355	0	143	286	402
Washington Street	5th Street	6th Street	0	2,450	2,450	3,700	3,700	4,450	816	0	93	187	223
Washington Street	6th Street	7th Street	0	2,320	2,350	3,550	3,550	4,300	297	0	65	131	0
Washington Street	7th Street	8th Street	0	1,740	1,750	2,650	2,650	3,200	297	0	65	131	0
Washington Street	8th Street	10th Street	0	1,340	1,350	2,100	2,100	2,500	10	0	2	4	0
Telegraph Avenue	15th Street	17th Street	0	4,170	4,150	6,300	6,300	7,600					
Telegraph Avenue	17th Street	19th Street	0	3,870	3,850	5,900	5,900	7,150					
Telegraph Avenue	19th Street	20th Street	0	5,100	5,100	7,650	7,650	9,250					
Telegraph Avenue	20th Street	21st Street	0	8,570	8,600	13,000	13,000	15,750					
Telegraph Avenue	21st Street	Grand Avenue	0	9,270	9,250	13,950	13,950	16,900					
Telegraph Avenue	Grand Avenue	27th Street	0	8,770	8,750	13,300	13,300	16,100					
Telegraph Avenue	27th Street	29th Street	0	11,340	11,350	17,200	17,200	20,800					
Telegraph Avenue	29th Street	34th Street	0	0	0	0	0	0					
Broadway	Embarcadero	3rd Street	0	2,810	2,800	4,300	4,300	5,200	249	0	5	11	128
Broadway	3rd Street	5th Street	345	7,380	7,700	11,050	11,400	13,700	1,712	0	182	364	504
Broadway	5th Street	6th Street	0	8,130	8,150	12,300	12,300	14,850	1,638	66	159	318	522
Broadway	6th Street	7th Street	0	10,960	10,950	16,550	16,550	20,050	1,580	120	167	334	468
Broadway	7th Street	8th Street	0	9,510	9,550	14,450	14,450	17,500	1,886	120	255	510	414
Broadway	8th Street	11th Street	0	9,860	9,850	14,900	14,900	18,000	2,481	144	252	504	762
Broadway	11th Street	12th Street	0	11,220	11,250	16,950	16,950	20,500					
Broadway	12th Street	14th Street	0	10,710	10,700	16,200	16,200	19,600					
Broadway	14th Street	17th Street	0	8,250	8,300	12,450	12,450	15,050					
Broadway	17th Street	19th Street	0	8,910	8,900	13,500	13,500	16,350					
Broadway	19th Street	20th Street	0	9,550	9,600	14,400	14,400	17,450					
Broadway	20th Street	21st Street	0	9,540	9,550	14,400	14,400	17,450					
Broadway	21st Street	Grand Avenue	0	9,980	10,000	15,100	15,100	18,250					
Broadway	Grand Avenue	27th Street	0	11,250	11,250	16,950	16,950	20,500					
Broadway	27th Street	29th Street	0	16,600	16,600	25,100	25,100	30,350					
Broadway	29th Street	34th Street	0	0	0	0	0	0					
Franklin Street	Embarcadero	3rd Street	0	0	0	0	0	0	497	0	109	219	0
Franklin Street	3rd Street	5th Street	0	0	0	0	0	0	840	0	123	247	159
Franklin Street	6th Street	7th Street	0	740	700	1,200	1,200	1,450	0	0	0	0	0
Franklin Street	7th Street	8th Street	0	1,770	1,750	2,650	2,650	3,200	0	0	0	0	0
Franklin Street	8th Street	11th Street	0	3,000	3,000	4,500	4,500	5,450	121	34	27	53	0
Franklin Street	11th Street	12th Street	0	2,980	3,000	4,450	4,450	5,400	121	34	27	53	0
Franklin Street	12th Street	14th Street	0	3,560	3,600	5,400	5,400	6,550	121	34	27	53	0
Franklin Street	14th Street	17th Street	0	2,530	2,550	3,800	3,800	4,600	121	34	27	53	0
Franklin Street	17th Street	19th Street	0	5,980	6,000	9,050	9,050	10,950	121	34	27	53	0
Franklin Street	19th Street	20th Street	0	5,430	5,400	8,150	8,150	9,850	121	34	27	53	0
Franklin Street	20th Street	21st Street	0	3,530	3,500	5,350	5,350	6,450	121	34	27	53	0
Franklin Street	21st Street	Broadway	0	4,190	4,150	6,350	6,350	7,650	121	34	27	53	0
Webster Street	Embarcadero	3rd Street	0	0	0	0	0	0	38	0	0	0	22
Webster Street	3rd Street	5th Street	0	0	0	0	0	0	34	0	0	0	19
Webster Street	5th Street	6th Street	0	0	0	0	0	0	34	0	0	0	19
Webster Street	6th Street	7th Street	535	13,960	14,500	21,150	21,700	26,100	333	17	0	0	190
Webster Street	7th Street	8th Street	35	9,110	9,150	13,800	13,850	16,750	95	17	0	0	54
Webster Street	8th Street	11th Street	0	7,430	7,400	11,250	11,250	13,600	302	10	7	15	153
Webster Street	11th Street	12th Street	0	5,980	6,000	9,100	9,100	11,000	302	10	7	15	153

Appendix B: Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020		Year 2040			Ballpark				
Street	From	To	HT Non-Ballpark Trips with Rerouting	No Project Volumes	No Project + HT Volumes	No Project Volumes	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures	5-6 PM Attendee Arrivals	6-7 PM Attendee Arrivals	10-11 PM Attendee Departures
Webster Street	12th Street	14th Street	0	4,940	4,950	7,450	7,450	9,000	302	10	7	15	153
Webster Street	14th Street	17th Street	0	6,890	6,900	10,450	10,450	12,650	302	10	7	15	153
Webster Street	17th Street	19th Street	0	5,270	5,300	7,950	7,950	9,600	302	10	7	15	153
Webster Street	19th Street	20th Street	0	6,070	6,050	9,200	9,200	11,100	302	10	7	15	153
Webster Street	20th Street	21st Street	0	4,490	4,500	6,750	6,750	8,150	302	10	7	15	153
Webster Street	21st Street	Grand Avenue	0	5,410	5,400	8,200	8,200	9,950	302	10	7	15	153
Webster Street	Grand Avenue	Broadway	0	3,850	3,850	5,850	5,850	7,100					
Lakeside Drive	14th Street	17th Street	0	0	0	0	0	0					
Lakeside Drive	17th Street	19th Street	0	7,380	7,400	11,200	11,200	13,550					
Lakeside Drive	19th Street	20th Street	0	8,890	8,900	13,450	13,450	16,250					
Harrison Street	2nd Street	3rd Street	0	0	0	0	0	0	15	0	3	7	0
Harrison Street	3rd Street	5th Street	0	0	0	0	0	0	15	0	3	7	0
Harrison Street	6th Street	7th Street	700	7,530	8,200	11,450	12,150	14,600	647	47	142	285	0
Harrison Street	7th Street	8th Street	700	9,920	10,600	15,050	15,750	18,950	740	45	142	283	55
Harrison Street	8th Street	10th Street	0	8,640	8,650	13,050	13,050	15,850	223	34	28	56	55
Harrison Street	10th Street	11th Street	0	7,930	7,950	12,000	12,000	14,550	223	34	28	56	55
Harrison Street	11th Street	12th Street	0	6,850	6,850	10,400	10,400	12,600	223	34	28	56	55
Harrison Street	12th Street	14th Street	0	6,360	6,350	9,600	9,600	11,600	223	34	28	56	55
Harrison Street	14th Street	17th Street	0	7,870	7,850	11,950	11,950	14,500	223	34	28	56	55
Harrison Street	17th Street	19th Street	0	0	0	0	0	0	223	34	28	56	55
Harrison Street	19th Street	20th Street	0	8,480	8,500	12,800	12,800	15,500	223	34	28	56	55
Harrison Street	20th Street	21st Street	0	21,910	21,950	33,250	33,250	40,250	223	34	28	56	55
Harrison Street	21st Street	Grand Avenue	0	19,300	19,300	29,150	29,150	35,250	223	34	28	56	55
Harrison Street	Grand Avenue	27th Street	0	13,570	13,600	20,600	20,600	24,950	223	34	28	56	55
Alice Street	2nd Street	5th Street	0	0	0	0	0	0	0	0	0	0	0
Alice Street	6th Street	7th Street	0	0	0	0	0	0	0	0	0	0	0
Alice Street	7th Street	8th Street	0	0	0	0	0	0	24	0	5	11	0
Alice Street	8th Street	10th Street	0	0	0	0	0	0	24	0	5	11	0
Alice Street	11th Street	12th Street	0	0	0	0	0	0					
Alice Street	12th Street	14th Street	0	0	0	0	0	0					
Alice Street	14th Street	17th Street	0	0	0	0	0	0					
Alice Street	17th Street	19th Street	0	0	0	0	0	0					
Jackson Street	2nd Street	3rd Street	0	0	0	0	0	0	304	0	0	0	173
Jackson Street	3rd Street	5th Street	0	8,080	8,100	12,150	12,150	14,700	363	0	0	0	207
Jackson Street	5th Street	6th Street	0	7,450	7,450	11,250	11,250	13,600	363	0	0	0	207
Jackson Street	6th Street	7th Street	0	4,570	4,600	6,950	6,950	8,450	850	108	66	131	315
Jackson Street	7th Street	8th Street	0	5,530	5,550	8,400	8,400	10,200	839	108	46	92	359
Jackson Street	8th Street	11th Street	0	5,290	5,300	8,050	8,050	9,750	827	142	55	109	330
Jackson Street	11th Street	12th Street	0	0	0	0	0	0					
Jackson Street	12th Street	14th Street	0	0	0	0	0	0					
Jackson Street	14th Street	17th Street	0	0	0	0	0	0					
Jackson Street	17th Street	19th Street	0	0	0	0	0	0					
Jackson Street	19th Street	Lakeside Drive	0	0	0	0	0	0					
Madison Street	2nd Street	3rd Street	0	0	0	0	0	0	0	0	0	0	0
Madison Street	3rd Street	5th Street	0	1,350	1,350	2,000	2,000	2,400	0	0	0	0	0
Madison Street	5th Street	6th Street	0	6,600	6,600	10,000	10,000	12,100					
Madison Street	6th Street	7th Street	0	9,310	9,300	14,050	14,050	17,000	0	0	0	0	0
Madison Street	7th Street	8th Street	0	8,600	8,600	12,900	12,900	15,600	0	0	0	0	0
Madison Street	8th Street	11th Street	0	7,810	7,800	11,750	11,750	14,200	35	10	0	0	20
Madison Street	11th Street	12th Street	0	6,710	6,700	10,200	10,200	12,350					
Madison Street	12th Street	14th Street	0	5,490	5,500	8,350	8,350	10,100					

Appendix B: Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020		Year 2040			Ballpark				
Street	From	To	HT Non-Ballpark Trips with Rerouting	No Project Volumes	No Project + HT Volumes	No Project Volumes	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures	5-6 PM Attendee Arrivals	6-7 PM Attendee Arrivals	10-11 PM Attendee Departures
Madison Street	14th Street	17th Street	0	5,330	5,300	8,050	8,050	9,750					
Madison Street	17th Street	19th Street	0	4,820	4,800	7,350	7,350	8,900					
Oak Street	Embarcadero	3rd Street	0	0	0	0	0	0	0	0	0	0	0
Oak Street	3rd Street	5th Street	0	6,230	6,200	9,450	9,450	11,450	24	0	0	0	14
Oak Street	5th Street	6th Street	0	7,010	7,050	10,600	10,600	12,800	24	0	0	0	14
Oak Street	6th Street	7th Street	0	10,930	10,900	16,550	16,550	20,050	906	134	194	388	14
Oak Street	7th Street	8th Street	0	8,890	8,850	13,350	13,350	16,150	898	138	198	395	0
Oak Street	8th Street	11th Street	0	8,710	8,750	13,250	13,250	16,050	137	38	30	60	0
Oak Street	11th Street	12th Street	0	8,240	8,200	12,500	12,500	15,150					
Oak Street	12th Street	14th Street	0	5,920	5,900	8,950	8,950	10,850					
Embarcadero	Market Street	MLK	-445	430	0	0	0	0	0	0	0	0	0
Embarcadero	MLK	Clay Street	-805	1,030	0	0	0	0	0	0	0	0	0
Embarcadero	Clay Street	Washington Street	0	1,860	0	0	0	0	0	0	0	0	0
Embarcadero	Washington Street	Broadway	0	2,120	0	0	0	0	0	0	0	0	0
Embarcadero	Broadway	Franklin Street	0	2,680	2,650	4,050	4,050	4,900	15	0	3	7	0
Embarcadero	Franklin Street	Webster Street	0	0	0	0	0	0	15	0	3	7	0
Embarcadero	Webster Street	Oak Street	0	0	0	0	0	0	15	0	3	7	0
3rd Street	Brush Street	Castro Street	455	5,040	5,850	7,650	8,450	10,000	0	0	0	0	0
3rd Street	Castro Street	MLK	375	4,780	5,450	7,250	7,950	9,450	0	0	0	0	0
3rd Street	MLK	Jefferson Street	860	4,220	5,250	6,400	7,400	8,700	14	0	3	6	0
3rd Street	Jefferson Street	Clay Street	475	4,070	4,700	6,250	6,900	8,200	14	0	3	6	0
3rd Street	Clay Street	Washington Street	475	3,700	4,350	5,600	6,250	7,400	90	0	7	14	33
3rd Street	Washington Street	Broadway	475	3,410	4,050	5,150	5,800	6,850	398	0	58	116	76
3rd Street	Broadway	Franklin Street	135	3,120	3,300	4,750	5,000	6,000	901	0	111	222	226
3rd Street	Franklin Street	Webster Street	135	0	0	0	0	0	293	0	39	77	67
3rd Street	Webster Street	Harrison	135	0	0	0	0	0	258	0	39	77	47
3rd Street	Harrison	Alice Street	95	0	0	0	0	0	258	0	39	77	47
3rd Street	Alice Street	Jackson Street	95	0	0	0	0	0	258	0	39	77	47
3rd Street	Jackson Street	Madison Street	95	0	0	0	0	0	24	0	0	0	14
3rd Street	Madison Street	Oak Street	95	0	0	0	0	0	24	0	0	0	14
5th Street	Brush Street	Castro Street	1,490	11,110	13,000	16,850	18,750	22,300	2,751	0	279	558	845
5th Street	Castro Street	MLK	1,365	10,510	12,200	15,900	17,600	20,950	1,953	0	198	396	600
5th Street	MLK	Jefferson Street	1,315	9,580	11,250	14,450	16,150	19,200	2,425	39	144	289	1,008
5th Street	Jefferson Street	Clay Street	1,315	9,800	11,500	14,800	16,500	19,600	2,567	79	144	289	1,089
5th Street	Clay Street	Washington Street	1,315	9,800	11,500	14,800	16,500	19,600	2,567	79	144	289	1,089
5th Street	Washington Street	Broadway	1,315	10,360	12,050	15,700	17,400	20,700	2,669	79	98	195	1,268
5th Street	Broadway	Franklin Street	1,575	4,050	6,050	6,150	8,150	9,450	2,196	145	0	0	1,252
5th Street	Franklin Street	Webster Street	0	0	0	0	0	0					
5th Street	Webster Street	Harrison	0	0	0	0	0	0					
5th Street	Harrison	Alice Street	0	0	0	0	0	0					
5th Street	Alice Street	Jackson Street	0	12,530	12,550	19,000	19,000	23,050					
5th Street	Jackson Street	Madison Street	0	6,730	6,750	10,250	10,250	12,400					
5th Street	Madison Street	Oak Street	0	11,970	12,000	18,100	18,100	21,900	553	66	0	0	315
6th Street	Brush Street	Castro Street	230	320	600	550	900	1,000	845	0	48	96	357
6th Street	Castro Street	MLK	230	1,370	1,650	2,050	2,400	2,800	1,313	0	39	79	646
6th Street	MLK	Jefferson Street	455	1,120	1,750	1,700	2,300	2,650	2,007	27	230	459	549
6th Street	Jefferson Street	Washington Street	455	1,680	2,300	2,450	3,050	3,550	1,928	54	230	459	504
6th Street	Washington Street	Broadway	455	2,120	2,750	3,200	3,800	4,450	1,516	54	225	451	280
6th Street	Broadway	Jackson Street	0	0	0	0	0	0					
6th Street	Jackson Street	Madison Street	0	4,010	4,000	6,050	6,050	7,300					
6th Street	Madison Street	Oak Street	0	7,050	7,050	10,600	10,600	12,850					

Appendix B: Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020			Year 2040			Ballpark				
Street	From	To	HT Non-Ballpark Trips with Rerouting	No Project Volumes	No Project + HT Volumes	No Project Volumes	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures	5-6 PM Attendee Arrivals	6-7 PM Attendee Arrivals	10-11 PM Attendee Departures
7th Street	Brush Street	Castro Street	1,105	13,730	15,150	20,850	22,250	26,550	3,529	186	351	702	1,102
7th Street	Castro Street	MLK	460	9,440	10,050	14,200	14,800	17,700	1,171	46	191	381	174
7th Street	MLK	Jefferson Street	535	10,270	10,950	15,500	16,150	19,350	1,595	55	228	456	319
7th Street	Jefferson Street	Clay Street	535	10,850	11,500	16,450	17,100	20,450	1,189	53	164	329	252
7th Street	Clay Street	Washington Street	535	10,850	11,500	16,450	17,100	20,450	1,189	53	164	329	252
7th Street	Washington Street	Broadway	535	10,050	10,750	15,200	15,850	18,950	1,076	72	116	232	313
7th Street	Broadway	Franklin Street	535	13,560	14,250	20,600	21,250	25,500	580	19	28	55	259
7th Street	Franklin Street	Webster Street	535	12,350	13,050	18,700	19,350	23,150	580	19	28	55	259
7th Street	Webster Street	Harrison	215	6,730	7,000	10,200	10,450	12,550	342	2	28	55	123
7th Street	Harrison	Alice Street	215	19,470	19,750	29,550	29,800	36,000	249	4	28	57	68
7th Street	Alice Street	Jackson Street	215	10,380	10,650	15,650	15,900	19,150	225	4	23	46	68
7th Street	Jackson Street	Madison Street	215	11,290	11,550	17,100	17,350	20,900	58	4	4	7	24
7th Street	Madison Street	Oak Street	215	10,580	10,800	16,000	16,250	19,550	58	4	4	7	24
8th Street	Castro Street	MLK	60	2,570	2,650	3,850	3,950	4,750	767	84	28	55	366
8th Street	MLK	Jefferson Street	615	3,820	4,600	5,850	6,650	7,900	2,060	113	154	308	776
8th Street	Jefferson Street	Clay Street	855	3,890	4,900	5,900	6,900	8,150	2,022	113	154	308	754
8th Street	Clay Street	Washington Street	855	3,890	4,900	5,900	6,900	8,150	2,022	113	154	308	754
8th Street	Washington Street	Broadway	615	4,260	5,000	6,450	7,250	8,600	2,063	93	239	478	556
8th Street	Broadway	Franklin Street	615	5,090	5,900	7,700	8,500	10,150	1,393	47	226	452	209
8th Street	Franklin Street	Webster Street	615	6,370	7,150	9,550	10,350	12,350	1,514	82	253	505	209
8th Street	Webster Street	Harrison	700	8,050	8,950	12,150	13,050	15,650	1,306	88	245	491	109
8th Street	Harrison	Alice Street	0	6,770	6,750	10,200	10,200	12,350	790	77	132	263	109
8th Street	Alice Street	Jackson Street	0	5,980	5,950	9,000	9,000	10,900	791	77	132	264	109
8th Street	Jackson Street	Madison Street	0	5,370	5,400	8,150	8,150	9,850	837	111	176	353	20
8th Street	Madison Street	Oak Street	0	6,620	6,650	10,000	10,000	12,100	803	101	177	353	0
11th Street	Brush Street	Castro Street	760	8,080	9,000	12,150	13,100	15,700	1,141	177	141	282	286
11th Street	Castro Street	MLK	250	7,840	8,150	11,850	12,200	14,700	891	211	191	383	12
11th Street	MLK	Jefferson Street	630	7,390	8,200	11,100	11,900	14,250	1,012	171	213	425	26
11th Street	Jefferson Street	Clay Street	630	0	0	0	0	0	1,012	171	213	425	26
11th Street	Clay Street	Broadway	630	6,510	7,300	9,800	10,600	12,650	1,012	171	213	425	26
11th Street	Broadway	Franklin Street	630	6,150	6,950	9,300	10,100	12,050	1,012	171	213	425	26
11th Street	Franklin Street	Webster Street	630	7,170	7,950	10,900	11,700	13,950	1,012	171	213	425	26
11th Street	Webster Street	Harrison	630	7,280	8,050	11,050	11,850	14,150	1,012	171	213	425	26
11th Street	Harrison	Alice Street	630	8,750	9,550	13,200	14,000	16,750	1,012	171	213	425	26
11th Street	Alice Street	Jackson Street	630	0	0	0	0	0	1,012	171	213	425	26
11th Street	Jackson Street	Madison Street	630	5,580	6,350	8,450	9,250	11,000	1,012	171	213	425	26
11th Street	Madison Street	Oak Street	630	4,770	5,550	7,300	8,100	9,600	1,012	171	213	425	26
12th Street	Brush Street	Castro Street	120	1,930	2,100	2,850	3,000	3,600	265	57	0	0	151
12th Street	Castro Street	MLK	780	5,780	6,800	8,800	9,850	11,650	716	181	0	0	408
12th Street	MLK	Jefferson Street	0	6,020	6,000	9,050	9,050	10,900	1,842	277	5	11	1,036
12th Street	Jefferson Street	Clay Street	0	6,160	6,150	9,400	9,400	11,350	1,842	277	5	11	1,036
12th Street	Clay Street	Broadway	0	6,550	6,550	9,950	9,950	12,050	1,842	277	5	11	1,036
12th Street	Broadway	Franklin Street	0	7,160	7,150	10,800	10,800	13,100	1,842	277	5	11	1,036
12th Street	Franklin Street	Webster Street	0	6,710	6,700	10,050	10,050	12,150	1,842	277	5	11	1,036
12th Street	Webster Street	Harrison	0	7,730	7,700	11,700	11,700	14,200	1,842	277	5	11	1,036
12th Street	Harrison	Alice Street	0	7,210	7,250	10,850	10,850	13,150	1,842	277	5	11	1,036
12th Street	Alice Street	Jackson Street	0	0	0	0	0	0	1,842	277	5	11	1,036
12th Street	Jackson Street	Madison Street	0	7,020	7,000	10,700	10,700	13,000	1,842	277	5	11	1,036
12th Street	Madison Street	Oak Street	0	8,260	8,250	12,500	12,500	15,150	1,842	277	5	11	1,036
14th Street	Brush Street	Castro Street	740	11,450	12,350	17,350	18,300	21,950	430	53	71	141	62
14th Street	Castro Street	MLK	190	11,230	11,500	16,950	17,200	20,750	743	83	120	239	113

Appendix B: Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020		Year 2040			Ballpark				
Street	From	To	HT Non-Ballpark Trips with Rerouting	No Project Volumes	No Project + HT Volumes	No Project Volumes	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures	5-6 PM Attendee Arrivals	6-7 PM Attendee Arrivals	10-11 PM Attendee Departures
14th Street	MLK	Jefferson Street	615	10,730	11,500	16,200	16,950	20,400	2,276	173	420	840	209
14th Street	Jefferson Street	Clay Street	615	10,440	11,250	15,850	16,600	19,950	2,276	173	420	840	209
14th Street	Clay Street	Broadway	615	0	0	0	0	0	2,276	173	420	840	209
14th Street	Broadway	Franklin Street	615	9,050	9,850	13,650	14,400	17,250	2,276	173	420	840	209
14th Street	Franklin Street	Webster Street	615	8,950	9,750	13,550	14,300	17,150	2,276	173	420	840	209
14th Street	Webster Street	Harrison	615	9,060	9,800	13,650	14,400	17,250	2,276	173	420	840	209
14th Street	Harrison	Alice Street	615	9,040	9,800	13,650	14,400	17,300	2,276	173	420	840	209
14th Street	Alice Street	Jackson Street	615	0	0	0	0	0	2,276	173	420	840	209
14th Street	Jackson Street	Madison Street	615	6,070	6,850	9,150	9,900	11,800	2,276	173	420	840	209
14th Street	Madison Street	Oak Street	615	6,380	7,150	9,550	10,300	12,300	2,276	173	420	840	209
17th Street	Brush Street	Castro Street	0	9,680	9,650	14,700	14,700	17,900	62	0	0	0	35
17th Street	Castro Street	MLK	130	8,800	8,950	13,250	13,400	16,250	18	0	0	0	10
17th Street	MLK	Jefferson Street	130	7,640	7,800	11,600	11,750	14,250	0	0	0	0	0
17th Street	Jefferson Street	San Pablo Avenue	130	7,450	7,600	11,250	11,400	13,850	0	0	0	0	0
17th Street	San Pablo Avenue	Telegraph Avenue	130	5,930	6,100	8,950	9,100	11,000	0	0	0	0	0
17th Street	Telegraph Avenue	Broadway	130	5,090	5,250	7,750	7,900	9,550	0	0	0	0	0
17th Street	Broadway	Franklin Street	130	5,620	5,800	8,500	8,650	10,450	0	0	0	0	0
17th Street	Franklin Street	Webster Street	130	5,040	5,200	7,600	7,750	9,350	0	0	0	0	0
17th Street	Webster Street	Harrison Street	130	3,420	3,600	5,150	5,300	6,400	0	0	0	0	0
17th Street	Harrison Street	Alice Street	130	0	0	0	0	0	0	0	0	0	0
17th Street	Alice Street	Jackson Street	130	0	0	0	0	0	0	0	0	0	0
17th Street	Jackson Street	Madison Street	130	1,160	1,300	1,800	1,950	2,300	0	0	0	0	0
17th Street	Madison Street	Lakeside Drive	130	710	850	1,150	1,300	1,550	0	0	0	0	0
19th Street	Castro Street	MLK	0	0	0	0	0	0	0	0	0	0	0
19th Street	San Pablo Avenue	Telegraph Avenue	0	4,110	4,150	6,150	6,150	7,450					
19th Street	Telegraph Avenue	Broadway	0	4,080	4,050	6,300	6,300	7,600					
19th Street	Broadway	Franklin Street	0	5,020	5,000	7,700	7,700	9,300					
19th Street	Franklin Street	Webster Street	0	5,650	5,650	8,550	8,550	10,350					
19th Street	Webster Street	Harrison Street	0	3,320	3,300	5,050	5,050	6,100					
19th Street	Harrison Street	Alice Street	0	0	0	0	0	0					
19th Street	Alice Street	Jackson Street	0	0	0	0	0	0					
19th Street	Jackson Street	Madison Street	0	0	0	0	0	0					
20th Street	Castro Street	San Pablo Avenue	0	1,310	1,300	2,050	2,050	2,500					
20th Street	San Pablo Avenue	Telegraph Avenue	0	4,280	4,250	6,500	6,500	7,850					
20th Street	Telegraph Avenue	Broadway	0	5,800	5,800	8,800	8,800	10,650					
20th Street	Broadway	Franklin Street	0	5,430	5,450	8,300	8,300	10,050					
20th Street	Franklin Street	Webster Street	0	6,800	6,800	10,250	10,250	12,400					
20th Street	Webster Street	Harrison Street	0	6,240	6,250	9,500	9,500	11,500					
21st Street	San Pablo Avenue	Telegraph Avenue	0	1,050	1,050	1,600	1,600	1,950					
21st Street	Telegraph Avenue	Broadway	0	1,090	1,100	1,750	1,750	2,150					
21st Street	Broadway	Franklin Street	0	2,320	2,350	3,500	3,500	4,200					
21st Street	Franklin Street	Webster Street	0	3,500	3,500	5,250	5,250	6,350					
21st Street	Webster Street	Harrison Street	0	5,080	5,100	7,650	7,650	9,250					
Grand Avenue	Brush Street	San Pablo Avenue	0	12,250	12,250	18,500	18,500	22,400	0	0	0	0	0
Grand Avenue	San Pablo Avenue	MLK	0	13,120	13,100	19,850	19,850	24,000					
Grand Avenue	MLK	Telegraph Avenue	0	17,660	17,650	26,700	26,700	32,350					
Grand Avenue	Telegraph Avenue	Broadway	0	13,750	13,750	20,750	20,750	25,100					
Grand Avenue	Broadway	Webster Street	0	13,090	13,050	19,750	19,750	23,900					
Grand Avenue	Webster Street	Harrison/Lakeside	0	11,820	11,800	17,900	17,900	21,650					
27th Street	MLK	Telegraph Avenue	0	13,020	13,050	19,700	19,700	23,850					
27th Street	Telegraph Avenue	Broadway	0	9,870	9,900	14,950	14,950	18,100					

Appendix B: Two-Way Road Segment Traffic Volume Forecasts - Ballpark with TMP and Non-Ballpark with TDM

				Year 2020			Year 2040			Ballpark				
Street	From	To	HT Non-Ballpark Trips with Rerouting	No Project Volumes	No Project + HT Volumes	No Project Volumes	No Project + HT Volumes	No Project + DOSP + HT Volumes	Ballpark Attendee Trips Arrivals + Departures	Ballpark Employee Trips Arrivals + Departures	5-6 PM Attendee Arrivals	6-7 PM Attendee Arrivals	10-11 PM Attendee Departures
27th Street	Broadway	Harrison/Lakeside	0	8,870	8,850	13,400	13,400	16,200					
29th Street	MLK	Telegraph Avenue	0	0	0	0	0	0					
29th Street	Telegraph Avenue	Broadway	0	0	0	0	0	0					
34th Street	MLK	Telegraph Avenue	0	0	0	0	0	0					
34th Street	Telegraph Avenue	Broadway	0	0	0	0	0	0					
International Boulevard	1st Avenue	5th Avenue	0	8,130	8,150	12,250	12,250	14,850					
E. 12th Street	1st Avenue	5th Avenue	0	0	0	0	0	0					
Lake Merritt Boulevard	Oak Street	12th Street	0	8,780	8,800	13,350	13,350	16,150					
1st Avenue	E. 12th Street	International Boulevard	0	19,170	19,200	28,950	28,950	35,050					
7th Street	Fallon Street	5th Avenue	0	13,420	13,450	20,350	20,350	24,600					
E. 8th Street	5th Avenue	E. 12th Street	0	10,880	10,900	16,400	16,400	19,850					
Posey Tube NB	Willie Stargell Avenue	6th Street	700	24,440	25,300	36,950	37,850	45,750	647	47	142	285	0
Posey Tube SB	6th Street	Willie Stargell Avenue	535	26,350	27,000	39,800	40,450	48,750	496	17	0	0	283
Webster Street	Atlantic Avenue	Willie Stargell Avenue	535	18,660	19,350	28,300	28,950	34,900					
Constitution Way	Atlantic Avenue	Marina Village Parkway	700	15,560	16,450	23,500	24,400	29,300					
3rd Street	Adeline Street	Market Street	-795	6,770	6,050	10,250	9,550	11,700	5	0	1	2	0
3rd Street	Market Street	Brush Street	720	5,940	7,050	9,000	10,150	12,000	0	0	0	0	0
7th Street	Union Street	Adeline Street	640	14,510	15,250	22,000	22,750	27,350	968	166	111	223	263
7th Street	Adeline Street	Market Street	510	15,930	16,550	24,050	24,650	29,700	1,434	173	131	262	478
7th Street	Market Street	Brush Street	3,550	15,370	19,750	23,200	27,650	32,550	3,364	186	393	786	899
Market Street	Embarcadero	3rd Street	13,805	1,300	18,750	2,000	19,450	19,850	7,001	0	770	1,540	1,996
Market Street	3rd Street	7th Street	13,150	3,530	19,950	5,350	21,800	22,950	6,996	0	769	1,538	1,995
Middle Harbor Road	Maritime Street	3rd Street	655	5,940	6,600	9,000	9,650	11,550	0	0	0	0	0
Adeline Street	3rd Street	7th Street	1,300	4,880	6,250	7,400	8,800	10,350	0	0	0	0	0
5th Street	Union Street	Adeline Street	3,260	11,040	15,150	16,600	20,700	24,200	1,646	0	138	277	580
5th Street	Adeline Street	Market Street	3,285	12,440	16,500	18,800	22,850	26,850	1,333	0	138	277	401
5th Street	Market Street	Brush Street	1,305	6,760	8,400	10,300	11,950	14,100	1,602	0	114	229	617
Market Street	7th Street	12th Street	3,795	5,390	10,100	9,500	14,250	18,850	2,942	13	286	571	937
Market Street	12th Street	18th Street	2,630	6,000	9,250	8,900	12,200	13,650	1,073	18	144	287	239
Market Street	18th Street	Grand Avenue	1,835	6,340	8,650	10,950	13,250	17,900	487	22	54	108	137
Market Street	Grand Avenue	Grand North	1,490	4,660	6,500	7,400	9,300	11,500	430	22	47	95	123

Source: Alameda CTC Travel Demand Model for No Project Volumes, Fehr & Peers, 2019.

Appendix C – Microsimulation Vehicle Delay and LOS at Select Intersections

Appendix C: Microsimulation Vehicle Delay and LOS at Select Intersections

Intersection	3-4 PM		4-5 PM		5-6 PM		6-7 PM		7-8 PM	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Existing										
Adeline Street and 3rd Street	6	A	17	C	36	E	5	A	4	A
Adeline Street and 5th Street	18	B	20	B	23	C	16	B	14	B
Market Street and 3rd Street	4 (14)	A (B)	4 (16)	A (C)	3 (19)	A (C)	2 (10)	A (B)	3 (10)	A (B)
Market Street and 5th Street	11	B	11	B	12	B	10	B	9	A
Martin Luther King Jr. Way and 3rd Street	7	A	14	B	30	D	9	A	6	A
Martin Luther King Jr. Way and 5th Street	7	A	9	A	14	B	14	B	7	A
Broadway and 5th Street	37	D	44	D	67	E	54	D	38	D
Existing Plus Full Buildout Non-Ballpark Development										
Adeline Street and 3rd Street	10	A	19	B	16	B	9	A	8	A
Adeline Street and 5th Street	27	C	36	D	36	D	24	C	20	C
Market Street and 3rd Street	15	B	20	B	22	C	15	B	14	B
Market Street and 5th Street	11	B	21	C	25	C	21	C	10	A
Martin Luther King Jr. Way and 3rd Street	9	A	12	B	15	B	11	B	10	A
Martin Luther King Jr. Way and 5th Street	11	B	17	B	21	C	18	B	10	A
Broadway and 5th Street	35	D	35	D	73	E	48	D	30	C

Appendix C: Microsimulation Vehicle Delay and LOS at Select Intersections

Intersection	3-4 PM		4-5 PM		5-6 PM		6-7 PM		7-8 PM	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Existing Plus Full Buildout Non-Ballpark Development Plus Weekday Day Game										
Adeline Street and 3rd Street	15	B	27	C	18	B	13	B	11	B
Adeline Street and 5th Street	27	C	32	C	29	C	19	B	16	B
Market Street and 3rd Street	24	C	44	D	40	D	19	B	22	C
Market Street and 5th Street	17	B	30	C	34	C	24	C	14	B
Martin Luther King Jr. Way and 3rd Street	7	A	15	B	23	C	14	B	13	B
Martin Luther King Jr. Way and 5th Street	25	C	23	C	26	C	24	C	24	C
Broadway and 5th Street	33	C	27	C	45	D	41	D	29	C
Existing Plus Full Buildout Non-Ballpark Development Plus Weekday Evening Game										
Adeline Street and 3rd Street	18	B	25	C	22	C	19	B	17	B
Adeline Street and 5th Street	20	C	26	C	23	C	17	B	15	B
Market Street and 3rd Street	13	B	24	C	25	C	25	C	23	C
Market Street and 5th Street	25	C	30	C	27	C	24	C	24	C
Martin Luther King Jr. Way and 3rd Street	9	A	9	A	20	C	12	B	10	B
Martin Luther King Jr. Way and 5th Street	22	C	20	B	26	C	21	C	20	B
Broadway and 5th Street	36	D	33	C	49	D	37	D	30	C

Source: Fehr & Peers, 2019

APPENDIX C
CALLEEMOD® OUTPUT

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	40.00	1000sqft	0.19	40,000.00	0
Parking Lot	10,000.00	Space	18.63	4,000,000.00	0
Arena	1,400.00	1000sqft	93.17	1,400,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	363	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions - Alameda County, Annual

Project Characteristics - Landscaping emissions only. Updated to estimated CO2 intensity factor for PGE in 2020 with RPS.

Land Use - Acreage scaled to match site area of 112 acres.

Construction Phase - Zero out construction emissions

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Trips and VMT - Zero out construction emissions

Grading -

Architectural Coating - Zero out construction emissions.

Vehicle Trips - Zero out operational emissions from non-landscaping sources.

Consumer Products - Zero out operational emissions from non-landscaping sources.

Area Coating - Zero out operational emissions from non-landscaping sources.

Energy Use - Zero out operational emissions from non-area sources.

Water And Wastewater - Zero out operational emissions from non-landscaping sources.

Solid Waste - Zero out operational emissions from non-landscaping sources.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	720,000.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,160,000.00	0.00
tblArchitecturalCoating	ConstArea_Parking	240,000.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	720000	0
tblAreaCoating	Area_Nonresidential_Interior	2160000	0
tblAreaCoating	Area_Parking	240000	0
tblEnergyUse	LightingElect	2.99	0.00

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions - Alameda County, Annual

tblEnergyUse	LightingElect	3.58	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24E	4.80	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	NT24NG	1.01	0.00
tblEnergyUse	T24E	1.21	0.00
tblEnergyUse	T24E	4.10	0.00
tblEnergyUse	T24NG	17.85	0.00
tblEnergyUse	T24NG	18.32	0.00
tblLandUse	LotAcreage	0.92	0.19
tblLandUse	LotAcreage	90.00	18.63
tblLandUse	LotAcreage	450.00	93.17
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	363
tblSolidWaste	SolidWasteGenerationRate	38.53	0.00
tblSolidWaste	SolidWasteGenerationRate	37.20	0.00
tblTripsAndVMT	VendorTripNumber	892.00	0.00
tblTripsAndVMT	WorkerTripNumber	2,281.00	0.00
tblTripsAndVMT	WorkerTripNumber	456.00	0.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblWater	IndoorWaterUseRate	603,078,164.63	0.00
tblWater	IndoorWaterUseRate	7,109,349.92	0.00
tblWater	OutdoorWaterUseRate	38,494,350.93	0.00
tblWater	OutdoorWaterUseRate	4,357,343.50	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2026	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2030	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2032	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2033	0.0190	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2034	5.4400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2035	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0190**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2026	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2030	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2032	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2033	0.0190	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2034	5.4400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2035	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0190**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
58	**4-18-2033**	**7-17-2033**	0.0058	0.0058
59	**7-18-2033**	**10-17-2033**	0.0073	0.0073
60	**10-18-2033**	**1-17-2034**	0.0073	0.0073
61	**1-18-2034**	**4-17-2034**	0.0040	0.0040
		Highest	0.0073	0.0073

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.9500e-003	9.8000e-004	0.1058	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.2044	0.2044	5.5000e-004	0.0000	0.2181
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.9500e-003**	**9.8000e-004**	**0.1058**	**1.0000e-005**	**0.0000**	**3.8000e-004**	**3.8000e-004**	**0.0000**	**3.8000e-004**	**3.8000e-004**	**0.0000**	**0.2044**	**0.2044**	**5.5000e-004**	**0.0000**	**0.2181**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.9500e-003	9.8000e-004	0.1058	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.2044	0.2044	5.5000e-004	0.0000	0.2181
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.9500e-003**	**9.8000e-004**	**0.1058**	**1.0000e-005**	**0.0000**	**3.8000e-004**	**3.8000e-004**	**0.0000**	**3.8000e-004**	**3.8000e-004**	**0.0000**	**0.2044**	**0.2044**	**5.5000e-004**	**0.0000**	**0.2181**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/18/2019	10/24/2019	5	200	
2	Site Preparation	Site Preparation	10/25/2019	4/9/2020	5	120	
3	Grading	Grading	4/10/2020	6/17/2021	5	310	
4	Building Construction	Building Construction	6/18/2021	5/5/2033	5	3100	
5	Paving	Paving	5/6/2033	3/9/2034	5	220	
6	Architectural Coating	Architectural Coating	3/10/2034	1/11/2035	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 18.63

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Oakland Waterfront Ballpark District - Baseline - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0190					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0190**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0190					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0190**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	5.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4400e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	5.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4400e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.558186	0.040947	0.190770	0.110456	0.017401	0.005228	0.022658	0.042795	0.002118	0.002805	0.005569	0.000308	0.000759
General Office Building	0.558186	0.040947	0.190770	0.110456	0.017401	0.005228	0.022658	0.042795	0.002118	0.002805	0.005569	0.000308	0.000759
Parking Lot	0.558186	0.040947	0.190770	0.110456	0.017401	0.005228	0.022658	0.042795	0.002118	0.002805	0.005569	0.000308	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.9500e-003	9.8000e-004	0.1058	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.2044	0.2044	5.5000e-004	0.0000	0.2181
Unmitigated	9.9500e-003	9.8000e-004	0.1058	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.2044	0.2044	5.5000e-004	0.0000	0.2181

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.9500e-003	9.8000e-004	0.1058	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.2044	0.2044	5.5000e-004	0.0000	0.2181
Total	**9.9500e-003**	**9.8000e-004**	**0.1058**	**1.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**0.2044**	**0.2044**	**5.5000e-004**	**0.0000**	**0.2181**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.9500e-003	9.8000e-004	0.1058	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.2044	0.2044	5.5000e-004	0.0000	0.2181
Total	**9.9500e-003**	**9.8000e-004**	**0.1058**	**1.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**0.2044**	**0.2044**	**5.5000e-004**	**0.0000**	**0.2181**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	2,000.00	Space	18.00	600,000.00	0
Arena	1,200.00	1000sqft	385.71	1,200,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2027
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	258	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

Project Characteristics - Landscaping emissions only for the Ballpark land use.
Updated to estimated CO2 intensity factor for PGE in 2027 with RPS.

Land Use - Land use square footage provided by project sponsor. Default acreage was not updated because it does not impact area source emissions. This run estimates landscaping emissions from the ballpark sources.

Construction Phase - Construction emissions are excluded from this run.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Construction emissions are excluded from this run.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Trips and VMT - Construction emissions are excluded from this run.

Grading - Construction emissions are excluded from this run.

Architectural Coating - Construction emissions are excluded from this run.

Vehicle Trips - Zero out operational emissions from non-area sources.

Woodstoves - No woodstoves or wood fireplaces.

Consumer Products - Zero out non-landscaping emissions.

Area Coating - Zero out non-landscaping emissions.

Energy Use - Zero out operational emissions from non-area sources.

Water And Wastewater - Zero out operational emissions from non-area sources.

Solid Waste - Zero out operational emissions from non-area sources.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	600,000.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,800,000.00	0.00
tblArchitecturalCoating	ConstArea_Parking	36,000.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	600000	0

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

tblAreaCoating	Area_Nonresidential_Interior	1800000	0
tblAreaCoating	Area_Parking	36000	0
tblEnergyUse	LightingElect	2.99	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	T24E	1.21	0.00
tblEnergyUse	T24E	3.92	0.00
tblEnergyUse	T24NG	17.85	0.00
tblLandUse	LandUseSquareFeet	800,000.00	600,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	258
tblSolidWaste	SolidWasteGenerationRate	33.02	0.00
tblTripsAndVMT	VendorTripNumber	295.00	0.00
tblTripsAndVMT	WorkerTripNumber	756.00	0.00
tblTripsAndVMT	WorkerTripNumber	151.00	0.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblWater	IndoorWaterUseRate	516,924,141.11	0.00
tblWater	OutdoorWaterUseRate	32,995,157.94	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2026	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2030	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2032	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2033	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2034	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2035	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2036	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2037	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2038	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2039	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2042	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2043	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2044	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2045	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2046	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2047	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2048	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2049	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2050	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2051	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2052	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2053	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2054	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2055	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2056	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2057	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2058	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2059	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2026	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2030	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2032	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2033	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2034	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2035	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2036	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2037	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2038	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2039	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2042	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2043	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2044	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2045	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2046	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2047	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2048	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2049	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2050	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2051	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2052	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2053	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2054	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2055	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2056	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2057	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2058	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2059	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.7000e-003	2.7000e-004	0.0293	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0572	0.0572	1.5000e-004	0.0000	0.0609
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7000e-003**	**2.7000e-004**	**0.0293**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0572**	**0.0572**	**1.5000e-004**	**0.0000**	**0.0609**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.7000e-003	2.7000e-004	0.0293	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0572	0.0572	1.5000e-004	0.0000	0.0609
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7000e-003**	**2.7000e-004**	**0.0293**	**0.0000**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0572**	**0.0572**	**1.5000e-004**	**0.0000**	**0.0609**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/23/2019	12/22/2020	5	500	
2	Site Preparation	Site Preparation	12/23/2020	2/15/2022	5	300	
3	Grading	Grading	2/16/2022	2/4/2025	5	775	
4	Building Construction	Building Construction	2/5/2025	10/20/2054	5	7750	
5	Paving	Paving	10/21/2054	11/28/2056	5	550	
6	Architectural Coating	Architectural Coating	11/29/2056	1/7/2059	5	550	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 18

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Oakland Waterfront Ballpark District - Project Full Buildout - Ballpark - Landscaping Emissions - Alameda County, Annual

3.5 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2042

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2042

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2042

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2043

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2043

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2043

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2044

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2044

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2044

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2045

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2045

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2045

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2046

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2046

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2046

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2047

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2047

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2047

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2048

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2048

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2048

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2049

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2049

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2049

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2050

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2050

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2050

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2051

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2051

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2051

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2052

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2052

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2052

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2053

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2053

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2053

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2054

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2054

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2054

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2054

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2054

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2054

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2055

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2055

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2055

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2056

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2056

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2056

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2056

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2056

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2056

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2057

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2057

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2057

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2058

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2058

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2058

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2059

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2059

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2059

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663
Enclosed Parking with Elevator	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.7000e-003	2.7000e-004	0.0293	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0572	0.0572	1.5000e-004	0.0000	0.0609
Unmitigated	2.7000e-003	2.7000e-004	0.0293	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0572	0.0572	1.5000e-004	0.0000	0.0609

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-003	2.7000e-004	0.0293	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0572	0.0572	1.5000e-004	0.0000	0.0609
Total	**2.7000e-003**	**2.7000e-004**	**0.0293**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0572**	**0.0572**	**1.5000e-004**	**0.0000**	**0.0609**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-003	2.7000e-004	0.0293	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0572	0.0572	1.5000e-004	0.0000	0.0609
Total	**2.7000e-003**	**2.7000e-004**	**0.0293**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0572**	**0.0572**	**1.5000e-004**	**0.0000**	**0.0609**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,500.00	1000sqft	34.44	1,500,000.00	0
Enclosed Parking with Elevator	6,900.00	Space	62.10	2,070,000.00	0
Arena	50.00	1000sqft	16.07	50,000.00	0
Hotel	400.00	Room	13.33	280,000.00	0
Regional Shopping Center	270.00	1000sqft	6.20	270,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2027
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	258	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission - Alameda County, Annual

Project Characteristics - Landscaping emissions only for Phase 2 (Full Masterplan).
Updated to estimated CO2 intensity factor for PGE in 2027 with RPS.

Land Use - Land use square footage provided by project sponsor. Default acreage was not updated because it does not imapct area source emissions. This run estimates the landscaping emissions from the Full Masterplan (2027) for non-residential sources.

Construction Phase - Zero out construction emissions

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Trips and VMT - Zero out construction emissions

Grading - Zero out construction emissions.

Architectural Coating - Zero out construction emissions.

Vehicle Trips - Zero out operational emissions from non-area sources.

Woodstoves - No woodstoves or wood fireplaces.

Consumer Products - Zero out non-landscaping emissions.

Area Coating - Zero out non-landscaping emissions.

Energy Use - Zero out operational emissions from non-area sources.

Water And Wastewater - Zero out operational emissions from non-area sources.

Solid Waste - Zero out operational emissions from non-area sources.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,050,000.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,150,000.00	0.00
tblArchitecturalCoating	ConstArea_Parking	124,200.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	1050000	0
tblAreaCoating	Area_Nonresidential_Interior	3150000	0

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission - Alameda County, Annual

tblAreaCoating	Area_Parking	124200	0
tblEnergyUse	LightingElect	2.99	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	3.58	0.00
tblEnergyUse	LightingElect	3.13	0.00
tblEnergyUse	LightingElect	4.88	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24E	4.80	0.00
tblEnergyUse	NT24E	2.85	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	NT24NG	1.01	0.00
tblEnergyUse	NT24NG	7.13	0.00
tblEnergyUse	NT24NG	0.70	0.00
tblEnergyUse	T24E	1.21	0.00
tblEnergyUse	T24E	3.92	0.00
tblEnergyUse	T24E	4.10	0.00
tblEnergyUse	T24E	2.19	0.00
tblEnergyUse	T24E	2.24	0.00
tblEnergyUse	T24NG	17.85	0.00
tblEnergyUse	T24NG	18.32	0.00
tblEnergyUse	T24NG	29.38	0.00
tblEnergyUse	T24NG	3.90	0.00
tblLandUse	LandUseSquareFeet	2,760,000.00	2,070,000.00
tblLandUse	LandUseSquareFeet	580,800.00	280,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	258
tblSolidWaste	SolidWasteGenerationRate	1.38	0.00
tblSolidWaste	SolidWasteGenerationRate	1,395.00	0.00
tblSolidWaste	SolidWasteGenerationRate	219.00	0.00
tblSolidWaste	SolidWasteGenerationRate	283.50	0.00
tblTripsAndVMT	VendorTripNumber	683.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,574.00	0.00
tblTripsAndVMT	WorkerTripNumber	315.00	0.00
tblVehicleTrips	ST_TR	10.71	0.00

tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	5.95	0.00
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tblWater	IndoorWaterUseRate	21,538,505.88	0.00
tblWater	IndoorWaterUseRate	266,600,621.99	0.00
tblWater	IndoorWaterUseRate	10,146,708.00	0.00
tblWater	IndoorWaterUseRate	19,999,580.80	0.00
tblWater	OutdoorWaterUseRate	1,374,798.25	0.00
tblWater	OutdoorWaterUseRate	163,400,381.22	0.00
tblWater	OutdoorWaterUseRate	1,127,412.00	0.00
tblWater	OutdoorWaterUseRate	12,257,807.59	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2026	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2030	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2032	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2033	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2034	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2035	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2026	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2030	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2032	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2033	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2034	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2035	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.7000e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.1630	0.1630	4.2000e-004	0.0000	0.1736
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.7000e-003**	**7.6000e-004**	**0.0836**	**1.0000e-005**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.1630**	**0.1630**	**4.2000e-004**	**0.0000**	**0.1736**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.7000e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.1630	0.1630	4.2000e-004	0.0000	0.1736
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.7000e-003**	**7.6000e-004**	**0.0836**	**1.0000e-005**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.1630**	**0.1630**	**4.2000e-004**	**0.0000**	**0.1736**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/23/2019	10/29/2019	5	200	
2	Site Preparation	Site Preparation	10/30/2019	4/14/2020	5	120	
3	Grading	Grading	4/15/2020	6/22/2021	5	310	
4	Building Construction	Building Construction	6/23/2021	5/10/2033	5	3100	
5	Paving	Paving	5/11/2033	3/14/2034	5	220	
6	Architectural Coating	Architectural Coating	3/15/2034	1/16/2035	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 62.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Oakland Waterfront Ballpark District - Project Full Buildout - Nonresidential - Landscaping Emission - Alameda County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663
Enclosed Parking with Elevator	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663
General Office Building	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663
Hotel	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663
Regional Shopping Center	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.7000e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.1630	0.1630	4.2000e-004	0.0000	0.1736
Unmitigated	7.7000e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.1630	0.1630	4.2000e-004	0.0000	0.1736

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.7000e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.1630	0.1630	4.2000e-004	0.0000	0.1736
Total	**7.7000e-003**	**7.6000e-004**	**0.0836**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.1630**	**0.1630**	**4.2000e-004**	**0.0000**	**0.1736**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.7000e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.1630	0.1630	4.2000e-004	0.0000	0.1736
Total	**7.7000e-003**	**7.6000e-004**	**0.0836**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.1630**	**0.1630**	**4.2000e-004**	**0.0000**	**0.1736**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Oakland Waterfront Ballpark District - Project Full Buildout - Residential - Landscaping Emissions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	3,000.00	Dwelling Unit	48.39	3,300,000.00	8580

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2027
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	258	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Oakland Waterfront Ballpark District - Project Full Buildout - Residential - Landscaping Emissions - Alameda County, Annual

Project Characteristics - Landscaping emissions only for Residential Land Uses (Full Masterplan).
Updated to estimated CO2 intensity factor for PGE in 2027 with RPS.

Land Use - Land use square footage provided by project sponsor. Default acreage was not updates because it does not impact area source emissions. This run estimates the landscaping emissions from the residential sources in Full Masterplan (2027).

Construction Phase - Zero out construction emissions

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Trips and VMT - Zero out construction emissions

Grading - Zero out construction emissions.

Architectural Coating - Zero out construction emissions.

Vehicle Trips - Zero out operational emissions from non-area sources.

Woodstoves - No woodstoves or wood fireplaces.

Consumer Products - Zero out non-landscaping emissions.

Area Coating - Zero out non-landscaping emissions

Energy Use - Zero out operational emissions from non-area sources.

Water And Wastewater - Zero out operational emissions from non-area sources.

Solid Waste - Zero out operational emissions from non-area sources.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	2,227,500.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	6,682,500.00	0.00
tblAreaCoating	Area_Residential_Exterior	2227500	0
tblAreaCoating	Area_Residential_Interior	6682500	0
tblEnergyUse	LightingElect	741.44	0.00

tblEnergyUse	NT24E	3,054.10	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	426.45	0.00
tblEnergyUse	T24NG	6,115.43	0.00
tblFireplaces	NumberGas	450.00	0.00
tblFireplaces	NumberNoFireplace	120.00	0.00
tblFireplaces	NumberWood	510.00	0.00
tblLandUse	LandUseSquareFeet	3,000,000.00	3,300,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	258
tblSolidWaste	SolidWasteGenerationRate	1,380.00	0.00
tblTripsAndVMT	VendorTripNumber	321.00	0.00
tblTripsAndVMT	WorkerTripNumber	2,160.00	0.00
tblTripsAndVMT	WorkerTripNumber	432.00	0.00
tblVehicleTrips	ST_TR	4.98	0.00
tblVehicleTrips	SU_TR	3.65	0.00
tblVehicleTrips	WD_TR	4.20	0.00
tblWater	IndoorWaterUseRate	195,462,076.86	0.00
tblWater	OutdoorWaterUseRate	123,226,091.94	0.00
tblWoodstoves	NumberCatalytic	60.00	0.00
tblWoodstoves	NumberNoncatalytic	60.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6682	0.2563	22.2542	1.1800e-003		0.1235	0.1235		0.1235	0.1235	0.0000	36.3864	36.3864	0.0348	0.0000	37.2575
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.6682**	**0.2563**	**22.2542**	**1.1800e-003**	**0.0000**	**0.1235**	**0.1235**	**0.0000**	**0.1235**	**0.1235**	**0.0000**	**36.3864**	**36.3864**	**0.0348**	**0.0000**	**37.2575**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6682	0.2563	22.2542	1.1800e-003		0.1235	0.1235		0.1235	0.1235	0.0000	36.3864	36.3864	0.0348	0.0000	37.2575
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.6682**	**0.2563**	**22.2542**	**1.1800e-003**	**0.0000**	**0.1235**	**0.1235**	**0.0000**	**0.1235**	**0.1235**	**0.0000**	**36.3864**	**36.3864**	**0.0348**	**0.0000**	**37.2575**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Oakland Waterfront Ballpark District - Project Full Buildout - Residential - Landscaping Emissions - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/18/2019	3/28/2019	5	50	
2	Site Preparation	Site Preparation	3/29/2019	5/9/2019	5	30	
3	Grading	Grading	5/10/2019	8/22/2019	5	75	
4	Building Construction	Building Construction	8/23/2019	6/23/2022	5	740	
5	Paving	Paving	6/24/2022	9/8/2022	5	55	
6	Architectural Coating	Architectural Coating	9/9/2022	11/24/2022	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Oakland Waterfront Ballpark District - Project Full Buildout - Residential - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Oakland Waterfront Ballpark District - Project Full Buildout - Residential - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.565129	0.036801	0.190239	0.104144	0.013417	0.005103	0.025765	0.048748	0.002254	0.001991	0.005378	0.000368	0.000663

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6682	0.2563	22.2542	1.1800e-003		0.1235	0.1235		0.1235	0.1235	0.0000	36.3864	36.3864	0.0348	0.0000	37.2575
Unmitigated	0.6682	0.2563	22.2542	1.1800e-003		0.1235	0.1235		0.1235	0.1235	0.0000	36.3864	36.3864	0.0348	0.0000	37.2575

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.6682	0.2563	22.2542	1.1800e-003		0.1235	0.1235		0.1235	0.1235	0.0000	36.3864	36.3864	0.0348	0.0000	37.2575
Total	**0.6682**	**0.2563**	**22.2542**	**1.1800e-003**		**0.1235**	**0.1235**		**0.1235**	**0.1235**	**0.0000**	**36.3864**	**36.3864**	**0.0348**	**0.0000**	**37.2575**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.6682	0.2563	22.2542	1.1800e-003		0.1235	0.1235		0.1235	0.1235	0.0000	36.3864	36.3864	0.0348	0.0000	37.2575
Total	**0.6682**	**0.2563**	**22.2542**	**1.1800e-003**		**0.1235**	**0.1235**		**0.1235**	**0.1235**	**0.0000**	**36.3864**	**36.3864**	**0.0348**	**0.0000**	**37.2575**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Oakland Waterfront Ballpark District - Project Phase 1 - Nonresidential - Landscaping Emissions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	250.00	1000sqft	5.74	250,000.00	0
Enclosed Parking with Elevator	1,240.00	Space	11.16	372,000.00	0
Arena	0.00	1000sqft	16.20	0.00	0
Hotel	400.00	Room	13.33	280,000.00	0
Regional Shopping Center	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	360	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Oakland Waterfront Ballpark District - Project Phase 1 - Nonresidential - Landscaping Emissions - Alameda County, Annual

Project Characteristics - Landscaping emissions only for Phase 1.
Updated to estimated CO2 intensity factor for PGE in 2023 with RPS.

Land Use - Land use square footage provided by project sponsor. Default acreage was not updated because it does not imapct area source emissions. This run estimates the landscaping emissions from the Project Phase 1 (2023) for non-residential sources.

Construction Phase - Zero out construction emissions

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Trips and VMT - Zero out construction emissions

Grading - Zero out construction emissions.

Architectural Coating - Zero out construction emissions.

Vehicle Trips - Zero out operational emissions from non-area sources.

Woodstoves - No woodstoves or wood fireplaces.

Consumer Products - Zero out non-landscaping emissions.

Area Coating - Zero out non-landscaping emissions.

Energy Use - Zero out operational emissions from non-area sources.

Water And Wastewater - Zero out non-landscaping emissions.

Solid Waste - Zero out non-landscaping emissions.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	280,000.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	840,000.00	0.00
tblArchitecturalCoating	ConstArea_Parking	22,320.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	280000	0
tblAreaCoating	Area_Nonresidential_Interior	840000	0

Oakland Waterfront Ballpark District - Project Phase 1 - Nonresidential - Landscaping Emissions - Alameda County, Annual

tblAreaCoating	Area_Parking	22320	0
tblEnergyUse	LightingElect	2.99	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	3.58	0.00
tblEnergyUse	LightingElect	3.13	0.00
tblEnergyUse	LightingElect	4.88	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24E	4.80	0.00
tblEnergyUse	NT24E	2.85	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	NT24NG	1.01	0.00
tblEnergyUse	NT24NG	7.13	0.00
tblEnergyUse	NT24NG	0.70	0.00
tblEnergyUse	T24E	1.21	0.00
tblEnergyUse	T24E	3.92	0.00
tblEnergyUse	T24E	4.10	0.00
tblEnergyUse	T24E	2.19	0.00
tblEnergyUse	T24E	2.24	0.00
tblEnergyUse	T24NG	17.85	0.00
tblEnergyUse	T24NG	18.32	0.00
tblEnergyUse	T24NG	29.38	0.00
tblEnergyUse	T24NG	3.90	0.00
tblLandUse	LandUseSquareFeet	496,000.00	372,000.00
tblLandUse	LandUseSquareFeet	580,800.00	280,000.00
tblLandUse	LotAcreage	0.00	16.20

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	360
tblSolidWaste	SolidWasteGenerationRate	232.50	0.00
tblSolidWaste	SolidWasteGenerationRate	219.00	0.00
tblSolidWaste	SolidWasteGenerationRate	31.50	0.00
tblTripsAndVMT	VendorTripNumber	153.00	0.00
tblTripsAndVMT	WorkerTripNumber	363.00	0.00
tblTripsAndVMT	WorkerTripNumber	73.00	0.00
tblVehicleTrips	ST_TR	10.71	0.00

tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	8.17	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblWater	IndoorWaterUseRate	44,433,437.00	0.00
tblWater	IndoorWaterUseRate	10,146,708.00	0.00
tblWater	IndoorWaterUseRate	2,222,175.64	0.00
tblWater	OutdoorWaterUseRate	27,233,396.87	0.00
tblWater	OutdoorWaterUseRate	1,127,412.00	0.00
tblWater	OutdoorWaterUseRate	1,361,978.62	0.00

2.0 Emissions Summary

Oakland Waterfront Ballpark District - Project Phase 1 - Nonresidential - Landscaping Emissions - Alameda County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6300e-003	1.6000e-004	0.0176	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0343	0.0343	9.0000e-005	0.0000	0.0366
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6300e-003**	**1.6000e-004**	**0.0176**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0343**	**0.0343**	**9.0000e-005**	**0.0000**	**0.0366**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6300e-003	1.6000e-004	0.0176	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0343	0.0343	9.0000e-005	0.0000	0.0366
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6300e-003**	**1.6000e-004**	**0.0176**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0343**	**0.0343**	**9.0000e-005**	**0.0000**	**0.0366**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Oakland Waterfront Ballpark District - Project Phase 1 - Nonresidential - Landscaping Emissions - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/23/2019	4/2/2019	5	50	
2	Site Preparation	Site Preparation	4/3/2019	5/14/2019	5	30	
3	Grading	Grading	5/15/2019	8/27/2019	5	75	
4	Building Construction	Building Construction	8/28/2019	6/28/2022	5	740	
5	Paving	Paving	6/29/2022	9/13/2022	5	55	
6	Architectural Coating	Architectural Coating	9/14/2022	11/29/2022	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 11.16

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Oakland Waterfront Ballpark District - Project Phase 1 - Nonresidential - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Oakland Waterfront Ballpark District - Project Phase 1 - Nonresidential - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.561348	0.038614	0.190285	0.107199	0.015389	0.005180	0.024554	0.046236	0.002209	0.002456	0.005491	0.000334	0.000704
Enclosed Parking with Elevator	0.561348	0.038614	0.190285	0.107199	0.015389	0.005180	0.024554	0.046236	0.002209	0.002456	0.005491	0.000334	0.000704
General Office Building	0.561348	0.038614	0.190285	0.107199	0.015389	0.005180	0.024554	0.046236	0.002209	0.002456	0.005491	0.000334	0.000704
Hotel	0.561348	0.038614	0.190285	0.107199	0.015389	0.005180	0.024554	0.046236	0.002209	0.002456	0.005491	0.000334	0.000704
Regional Shopping Center	0.561348	0.038614	0.190285	0.107199	0.015389	0.005180	0.024554	0.046236	0.002209	0.002456	0.005491	0.000334	0.000704

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6300e-003	1.6000e-004	0.0176	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0343	0.0343	9.0000e-005	0.0000	0.0366
Unmitigated	1.6300e-003	1.6000e-004	0.0176	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0343	0.0343	9.0000e-005	0.0000	0.0366

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6300e-003	1.6000e-004	0.0176	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0343	0.0343	9.0000e-005	0.0000	0.0366
Total	**1.6300e-003**	**1.6000e-004**	**0.0176**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0343**	**0.0343**	**9.0000e-005**	**0.0000**	**0.0366**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6300e-003	1.6000e-004	0.0176	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0343	0.0343	9.0000e-005	0.0000	0.0366
Total	**1.6300e-003**	**1.6000e-004**	**0.0176**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0343**	**0.0343**	**9.0000e-005**	**0.0000**	**0.0366**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Oakland Waterfront Ballpark District - Project Phase 1 - Residential - Landscaping Emissions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	540.00	Dwelling Unit	8.71	594,000.00	1544

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	360	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Oakland Waterfront Ballpark District - Project Phase 1 - Residential - Landscaping Emissions - Alameda County, Annual

Project Characteristics - Landscaping emissions only for Residential Land Uses (Project Phase 1).
Updated to estimated CO2 intensity factor for PGE in 2023 with RPS.

Land Use - Land use square footage provided by project sponsor. Default acreage was not updates because it does not impact area source emissions. This run estimates the landscaping emissions from the residential sources in Project Phase 1 (2023).

Construction Phase - Zero out construction emissions

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Off-road Equipment - Zero out construction emissions.

Trips and VMT - Zero out construction emissions

Grading - Zero out construction emissions.

Architectural Coating - Zero out construction emissions.

Vehicle Trips - Zero out operational emissions from non-area sources.

Woodstoves - Zero out non-landscaping emissions.

Consumer Products - Zero out non-landscaping emissions.

Area Coating - Zero out non-landscaping emissions.

Energy Use - Zero out operational emissions from non-area sources.

Water And Wastewater - Zero out operational emissions from non-area sources.

Solid Waste - Zero out operational emissions from non-area sources.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	400,950.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,202,850.00	0.00
tblAreaCoating	Area_Residential_Exterior	400950	0
tblAreaCoating	Area_Residential_Interior	1202850	0
tblEnergyUse	LightingElect	741.44	0.00

Oakland Waterfront Ballpark District - Project Phase 1 - Residential - Landscaping Emissions - Alameda County, Annual

tblEnergyUse	NT24E	3,054.10	0.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	426.45	0.00
tblEnergyUse	T24NG	6,115.43	0.00
tblFireplaces	NumberGas	81.00	0.00
tblFireplaces	NumberNoFireplace	21.60	0.00
tblFireplaces	NumberWood	91.80	0.00
tblLandUse	LandUseSquareFeet	540,000.00	594,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	360

tblSolidWaste	SolidWasteGenerationRate	248.40	0.00
tblTripsAndVMT	VendorTripNumber	58.00	0.00
tblTripsAndVMT	WorkerTripNumber	389.00	0.00
tblTripsAndVMT	WorkerTripNumber	78.00	0.00
tblVehicleTrips	ST_TR	4.98	0.00
tblVehicleTrips	SU_TR	3.65	0.00
tblVehicleTrips	WD_TR	4.20	0.00
tblWater	IndoorWaterUseRate	35,183,173.84	0.00
tblWater	OutdoorWaterUseRate	22,180,696.55	0.00
tblWoodstoves	NumberCatalytic	10.80	0.00
tblWoodstoves	NumberNoncatalytic	10.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Oakland Waterfront Ballpark District - Project Phase 1 - Residential - Landscaping Emissions - Alameda County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1208	0.0462	4.0105	2.1000e-004		0.0222	0.0222		0.0222	0.0222	0.0000	6.5496	6.5496	6.3000e-003	0.0000	6.7070
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1208**	**0.0462**	**4.0105**	**2.1000e-004**	**0.0000**	**0.0222**	**0.0222**	**0.0000**	**0.0222**	**0.0222**	**0.0000**	**6.5496**	**6.5496**	**6.3000e-003**	**0.0000**	**6.7070**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1208	0.0462	4.0105	2.1000e-004		0.0222	0.0222		0.0222	0.0222	0.0000	6.5496	6.5496	6.3000e-003	0.0000	6.7070
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1208**	**0.0462**	**4.0105**	**2.1000e-004**	**0.0000**	**0.0222**	**0.0222**	**0.0000**	**0.0222**	**0.0222**	**0.0000**	**6.5496**	**6.5496**	**6.3000e-003**	**0.0000**	**6.7070**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Oakland Waterfront Ballpark District - Project Phase 1 - Residential - Landscaping Emissions - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/6/2019	4/2/2019	5	20	
2	Site Preparation	Site Preparation	4/3/2019	4/16/2019	5	10	
3	Grading	Grading	4/17/2019	5/14/2019	5	20	
4	Building Construction	Building Construction	5/15/2019	3/31/2020	5	230	
5	Paving	Paving	4/1/2020	4/28/2020	5	20	
6	Architectural Coating	Architectural Coating	4/29/2020	5/26/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Oakland Waterfront Ballpark District - Project Phase 1 - Residential - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Oakland Waterfront Ballpark District - Project Phase 1 - Residential - Landscaping Emissions - Alameda County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.561348	0.038614	0.190285	0.107199	0.015389	0.005180	0.024554	0.046236	0.002209	0.002456	0.005491	0.000334	0.000704

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1208	0.0462	4.0105	2.1000e-004		0.0222	0.0222		0.0222	0.0222	0.0000	6.5496	6.5496	6.3000e-003	0.0000	6.7070
Unmitigated	0.1208	0.0462	4.0105	2.1000e-004		0.0222	0.0222		0.0222	0.0222	0.0000	6.5496	6.5496	6.3000e-003	0.0000	6.7070

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1208	0.0462	4.0105	2.1000e-004		0.0222	0.0222		0.0222	0.0222	0.0000	6.5496	6.5496	6.3000e-003	0.0000	6.7070
Total	**0.1208**	**0.0462**	**4.0105**	**2.1000e-004**		**0.0222**	**0.0222**		**0.0222**	**0.0222**	**0.0000**	**6.5496**	**6.5496**	**6.3000e-003**	**0.0000**	**6.7070**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1208	0.0462	4.0105	2.1000e-004		0.0222	0.0222		0.0222	0.0222	0.0000	6.5496	6.5496	6.3000e-003	0.0000	6.7070
Total	**0.1208**	**0.0462**	**4.0105**	**2.1000e-004**		**0.0222**	**0.0222**		**0.0222**	**0.0222**	**0.0000**	**6.5496**	**6.5496**	**6.3000e-003**	**0.0000**	**6.7070**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D
PROJECT EMISSIONS AND HEALTH RISKS WITHOUT TRANSPORTATION DEMAND MANAGEMENT & TRANSPORTATION MANAGEMENT PLAN

RAMBOLL

ENVIRONMENT
& HEALTH

MEMORANDUM

Date: February 7, 2020

To: Noah Rosen, Oakland Athletics

From: Michael Keinath
Megan Sutter

Subject: **Project Emissions, Health Risks and Energy Use without TDM/TMP**
Oakland Athletics

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1. Purpose of Memorandum

As a supplemental analysis to the Air Quality Technical Report (AQTR) prepared for the Oakland Waterfront Ballpark District Project in Oakland, California (referred to hereafter as "the Project"), Ramboll evaluated operational emissions and health risk impacts for Phase 1 and Full Project Buildout *without* the reductions from the Transportation Demand Management Plan (TDM) and the Transportation Management Plan (TMP) for mobile exhaust sources. These are compared with emissions and health risk impacts presented in the AQTR which include reductions from the TDM and TMP. Ramboll also estimated changes in energy use if the TDM and TMP are not implemented.

2. Emissions Methodology

Both unmitigated and mitigated Phase 1 and Full Project Buildout emissions presented in the AQTR include TDM and TMP reductions. Trip rates, daily vehicle miles traveled, and traffic volumes are generally higher without the TDM and TMP reductions. Fehr & Peers also provided trip information without the TDM/TMP measures. In order to show total Project unmitigated emissions that do not include TDM and TMP reductions, Phase 1 and Full Project Buildout exhaust and fugitive emissions from mobile sources were calculated for two scenarios: "with TDM/TMP reductions" (AQTR emissions) and "without TDM/TMP reduction". The "with TDM/TMP reductions" mobile source emissions were subtracted from the "without TDM/TMP reductions" mobile source emissions to determine the reduction in emissions associated with TDM/TMP reduction. This reduction was added to the total Project net new unmitigated emissions from the AQTR which included TDM/TMP reductions in order to calculate unmitigated net new emissions that do not include TDM/TMP reductions.

In addition to emissions, Ramboll also calculated the additional energy that would be consumed without the TDM/TMP reductions. Fuel use was calculated using EMFAC2017 and electricity was calculated using US Department of Energy Fuel Economy Guide factors, consistent with the

Project analysis. See **Table D-4** for more details on methodology and results.

3. Emissions Results

Table 1 presents the derivation of Phase 1 total net new unmitigated emissions without TDM/TMP reductions, following the steps outlined above. Table 2 presents the same evaluation for Full Buildout total net new unmitigated emissions without TDM/TMP reductions. As shown in Table 3, total net new mitigated emissions with TDM/TMP reductions are 9 to 23 percent lower than the total net new unmitigated emissions without TDM/TMP reductions.

Table 1. Unmitigated Phase 1 Emissions With and Without TDM/TMP

Emissions Scenario	Emissions				
	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
	[tons/yr]				[MT/yr]
Mobile sources (w/ TDM/TMP reductions)	6.2	11	11	2.5	19,575
Mobile sources (w/o TDM/TMP reductions)	7.7	14	13	3.1	24,156
Mobile source TDM/TMP reductions	1.5	2.6	2.5	0.59	4,581
Total net new unmitigated (w/ TDM/TMP reductions)	8.6	11	7.3	1.8	16,967
Total net new unmitigated (w/o TDM/TMP reductions)	10	13	9.8	2.4	21,548

Table 2. Unmitigated Full Buildout Emissions With and Without TDM/TMP

Emissions Scenario	Emissions				
	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
	[tons/yr]				[MT/yr]
Mobile sources (w/ TDM/TMP reductions)	11	32	26	6.1	45,027
Mobile sources (w/o TDM/TMP reductions)	14	40	32	7.6	55,900
Mobile source TDM/TMP reductions	2.8	7.7	6.3	1.5	10,873
Total net new unmitigated (w/ TDM/TMP reductions)	31	36	23	5.8	50,120
Total net new unmitigated (w/o TDM/TMP reductions)	33	44	29	7.2	60,993

Table 3. TDM/TMP Emissions Reduction Percentage (Net new unmitigated without TDM/TMP vs. Net new unmitigated with TDM/TMP)

Scenario	TDM/TMP Emissions Reduction Percentage				
	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Phase 1	15%	19%	26%	25%	21%
Full Buildout	8%	18%	22%	20%	18%

4. HRA Methodology

In addition to the emissions calculated above, Ramboll also re-calculated Project health risks associated with operation of the Project, assuming no reductions from TDM and TMP. Health risks analyzed include excess lifetime cancer risk, non-cancer chronic hazard index (HI), and fine particulate matter ($PM_{2.5}$) concentration. Potential sensitive receptor locations determined to be the Maximally Exposed Individual Receptors (MEIRs) were evaluated to determine the unmitigated impacts assuming no reductions from TDM and TMP.

Unmitigated Project health risk results from operational traffic at the MEIR locations were scaled using percent increase of PM10 exhaust emissions from Full Buildout mobile sources assuming no TDM and TMP relative to the PM10 exhaust emissions from Full Buildout mobile sources assuming TDM and TMP reductions. This factor was found to be a 24% increase. The total unmitigated health risks at the Project MEIR locations were found by subtracting out the risks from operational traffic assuming TDM and TMP reductions, and then adding back in the scaled risks from operational traffic assuming no TDM and TMP reductions.

5. HRA Results

A breakdown of excess lifetime cancer risk from Project construction, operational generators, operational traffic, and removed existing truck activity at Howard Terminal at the MEIR is shown in Table A-1. The table also shows the Scenario for which the maximum was identified. Similar breakdowns for chronic HI and $PM_{2.5}$ concentration are shown in Table A-2 and Table A-3, respectively. These tables also show the Scenario for which the maximums were identified, as well as the year for which the maximum occurred since chronic HI and $PM_{2.5}$ concentrations are annual impacts.

Table D-1
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR without TDM
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)			
	Unmitigated[2,3]			
	Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**
Construction	10	62	--	--
Operational Generators	191	4.1	592	9.4
Operational Traffic with TDM	0.48	0.88	0.51	2.0
Increase in Traffic w/o TDM	0.11	0.21	0.12	0.48
Operational TRUs	0.030	0.018	0.023	0.035
Existing Howard Terminal Operation[7]	--	-2.2	--	-2.2
Total Project Contribution	**201**	**65**	**592**	**10**

MEIR Location[8]				
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,080
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8
Scenario[9]	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   CF = Conversion Factor (mg/µg)
   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)
   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet; ATCM standard generators at ground level, operating at 50 hrs/yr; and estimated traffic impacts without TDM.

3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.

4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project.

5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project.

Table D-1
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR without TDM
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

6. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
8. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

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Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table D-2
Project Chronic Hazard Index at Off-Site and On-Site MEIR without TDM
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Lifetime Excess Chronic Hazard Index[1] (unitless)			
	Unmitigated[2,3]			
	Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**
Construction	0.019	0.034	--	--
Operational Generators	0.16	--	0.16	5.4E-04
Operational Traffic with TDM	4.8E-04	--	4.8E-04	0.0037
Increase in Traffic w/o TDM	1.1E-04	--	1.1E-04	8.8E-04
Operational TRUs	6.3E-06	--	6.3E-06	2.3E-06
Existing Howard Terminal Operation[6]	--	-5.9E-04	--	-8.1E-05
Total Project Contribution	**0.18**	**0.034**	**0.16**	**0.0050**

	MEIR Location[7]			
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8
Year	2027	2021	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet; ATCM standard generators at ground level, operating at 50 hrs/yr; and estimated traffic impacts without TDM.

3. Values are shown as "--" to indicate that these sources do not contribute to the chronic hazard index during the year associated with the MEIR.

4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project.

5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project.

6. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.

Table D-2
Project Chronic Hazard Index at Off-Site and On-Site MEIR without TDM
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table D-3
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)			
	Unmitigated[2,3]			
	Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**
Construction	0.091	0.0079	--	--
Operational Generators	0.78	0.0027	0.78	0.0027
Operational Traffic with TDM	0.025	0.18	0.025	0.18
Increase in Traffic w/o TDM	0.0059	0.044	0.0059	0.044
Operational TRUs	2.9E-05	1.1E-05	2.9E-05	1.1E-05
Existing Howard Terminal Operation[6]	--	-6.4E-04	--	-6.4E-04
Total Project Contribution	**0.90**	**0.24**	**0.81**	**0.23**

MEIR Location[7]				
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,180	562,820	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8
Year	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emission Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet; ATCM standard generators at ground level, operating at 50 hrs/yr; and estimated traffic impacts without TDM.
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction, operation, and traffic.
6. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.

Table D-3
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
TRU - Transportation Refrigeration Unit
TDM - Transportation Demand Measures
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table D-4
Project Mobile Fuel Consumption without TDM
Oakland Waterfront Ballpark District Project
Oakland, California

Scenario	Land Use and Scenario			Fleet Type	Annual VMT (mi/yr)[1]	Percent Gasoline Vehicle Miles[2]	Gasoline Miles per Gallon[3]	Percent Diesel Vehicle Miles[2]	Diesel Miles per Gallon[3]	Percent Natural Gas Vehicle Miles[2]	Natural Gas Miles per DEG[3]	Percent Electric Vehicle Miles[2]	Electric kWh per Mile[3]	Fuel Consumption[4]			
														(gallons of gasoline)	(gallons of diesel)	(DEG of CNG)	(kWh)
Existing Conditions	Ballpark Stadium	A's Games	Weekday Evening	Passenger	9,534,127	97.7%	25.3	1.0%	35.9	--	--	1.4%	0.30	368,363	2,528	--	38,894
			Weekday Day	Passenger	3,418,787	97.7%	25.3	1.0%	35.9	--	--	1.4%	0.30	132,089	906	--	13,947
			Weekend	Passenger	7,083,068	97.7%	25.3	1.0%	35.9	--	--	1.4%	0.30	273,663	1,878	--	28,895
		Other Events		Passenger	1,092,000	97.7%	25.3	1.0%	35.9	--	--	1.4%	0.30	42,191	290	--	4,455
		NFL Games		Passenger	4,455,000	97.7%	25.3	1.0%	35.9	--	--	1.4%	0.30	172,124	1,181	--	18,174
		A's Games Deliveries		Bus	1,796	25.3%	4.6	67.9%	6.4	6.0%	3.9	0.8%	0.30	98	191	28	4
				Truck	20,951	37.3%	7.4	62.7%	10.7	--	--	0.0%	0.30	1,058	1,228	--	0
		Event Deliveries		Truck	511	37.3%	7.4	62.7%	10.7	--	--	0.0%	0.30	26	30	--	0
		NFL Deliveries		Truck	2,300	37.3%	7.4	62.7%	10.7	--	--	0.0%	0.30	116	135	--	0
		Arena Management		Passenger	178,875	97.7%	25.3	1.0%	35.9	--	--	1.4%	0.30	6,911	47	--	730
	A's Headquarters	Sports Team Management		Passenger	425,358	97.7%	25.3	1.0%	35.9	--	--	1.4%	0.30	16,434	113	--	1,735
	Existing Conditions[5]			--	**26,212,773**	--	--	--	--	--	--	--	--	**1,013,073**	**8,526**	**28**	**106,835**
	A's Related Existing Conditions			**--**	**20,662,962**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**798,616**	**6,891**	**28**	**84,206**
Phase 1 Buildout	Ballpark Stadium	A's Games	Weekday Evening	Passenger	14,678,000	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	486,047	4,304	--	87,383
			Weekday Day	Passenger	5,040,000	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	166,894	1,478	--	30,005
			Weekend	Passenger	10,800,000	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	357,631	3,167	--	64,296
		Other Events	Concerts	Passenger	2,835,000	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	93,878	831	--	16,878
			Other	Passenger	2,485,000	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	82,288	729	--	14,794
			Corporate/Community	Passenger	1,700,000	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	56,294	498	--	10,121
			Plaza	Passenger	544,000	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	18,014	160	--	3,239
		A's Games Deliveries		Bus	1,796	20.1%	4.8	70.0%	6.8	9.1%	4.1	0.8%	0.25	75	184	40	3
				Truck	20,951	32.3%	7.7	67.7%	12.0	--	--	0.0%	0.25	882	1,181	--	0
		Event Deliveries		Truck	40,880	32.3%	7.7	67.7%	12.0	--	--	0.0%	0.25	1,721	2,305	--	0
		Arena Management		Passenger	90,502	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	2,997	27	--	539
	A's Headquarters	Sports Team Management		Passenger	425,358	96.5%	29.1	1.2%	39.7	--	--	2.4%	0.25	14,085	125	--	2,532
	Residential			All	6,445,200	88.7%	27.5	9.1%	9.3	0.07%	3.0	2.1%	0.25	207,503	63,366	1,461	34,627
	Office			All	6,951,600	88.7%	27.5	9.1%	9.3	0.07%	3.0	2.1%	0.25	223,806	68,345	1,576	37,347
	Retail			All	6,068,400	88.7%	27.5	9.1%	9.3	0.07%	3.0	2.1%	0.25	195,372	59,661	1,376	32,602
	Restaurant			All	3,628,800	88.7%	27.5	9.1%	9.3	0.07%	3.0	2.1%	0.25	116,829	35,676	823	19,496
	Hotel			All	10,764,000	88.7%	27.5	9.1%	9.3	0.07%	3.0	2.1%	0.25	346,546	105,826	2,440	57,829
	Performance Venue		Attendees	Passenger	--	--	--	--	--	--	--	--	--	--	--	--	--
			Deliveries	Truck	--	--	--	--	--	--	--	--	--	--	--	--	--
				Bus	--	--	--	--	--	--	--	--	--	--	--	--	--
	Total			**--**	**72,519,487**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**2,370,863**	**347,861**	**7,715**	**411,691**

Table D-4
Project Mobile Fuel Consumption without TDM
Oakland Waterfront Ballpark District Project
Oakland, California

Scenario	Land Use and Scenario			Fleet Type	Annual VMT (mi/yr)[1]	Percent Gasoline Vehicle Miles[2]	Gasoline Miles per Gallon[3]	Percent Diesel Vehicle Miles[2]	Diesel Miles per Gallon[3]	Percent Natural Gas Vehicle Miles[2]	Natural Gas Miles per DEG[3]	Percent Electric Vehicle Miles[2]	Electric kWh per Mile[3]	Fuel Consumption[4]			
														(gallons of gasoline)	(gallons of diesel)	(DEG of CNG)	(kWh)
Full Project Buildout	Ballpark Stadium	A's Games	Weekday Evening	Passenger	14,678,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	425,900	4,166	--	130,947
			Weekday Day	Passenger	5,040,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	146,242	1,431	--	44,963
			Weekend	Passenger	10,800,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	313,375	3,065	--	96,350
		Other Events	Concerts	Passenger	2,835,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	82,261	805	--	25,292
			Other	Passenger	2,485,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	72,105	705	--	22,169
			Corporate/Community	Passenger	1,700,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	49,328	483	--	15,166
			Plaza	Passenger	544,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	15,785	154	--	4,853
		A's Games Deliveries		Bus	1,796	17.6%	5.1	69.5%	7.2	12.90%	4.1	0.0%	0.25	61	172	56	0
				Truck	20,951	29.7%	8.1	70.3%	12.8	--	--	0.0%	0.25	769	1,150	--	0
		Event Deliveries		Truck	40,880	29.7%	8.1	70.3%	12.8	--	--	0.0%	0.25	1,500	2,244	--	0
		Arena Management		Passenger	90,502	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	2,626	26	--	807
	A's Headquarters	Sports Team Management		Passenger	425,358	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	12,342	121	--	3,795
	Residential			All	33,013,700	87.1%	31.0	9.6%	10.0	0.08%	3.1	3.2%	0.25	928,911	317,523	8,605	264,516
	Office			All	32,304,600	87.1%	31.0	9.6%	10.0	0.08%	3.1	3.2%	0.25	908,959	310,703	8,420	258,835
	Retail			All	25,376,900	87.1%	31.0	9.6%	10.0	0.08%	3.1	3.2%	0.25	714,034	244,073	6,614	203,328
	Restaurant			All	29,441,300	87.1%	31.0	9.6%	10.0	0.08%	3.1	3.2%	0.25	828,394	283,164	7,674	235,893
	Hotel			All	10,764,000	87.1%	31.0	9.6%	10.0	0.08%	3.1	3.2%	0.25	302,868	103,527	2,806	86,245
	Performance Venue		Attendees	Passenger	3,420,000	95.2%	32.8	1.2%	43.8	--	--	3.6%	0.25	99,235	971	--	30,511
			Deliveries	Truck	4,380	29.7%	8.1	70.3%	12.8	--	--	0.0%	0.25	161	240	--	0
				Bus	4,380	17.6%	5.1	69.5%	7.2	12.90%	4.1	0.0%	0.25	150	420	138	0
	Total			--	**172,990,747**	--	--	--	--	--	--	--	--	**4,905,006**	**1,275,146**	**34,313**	**1,423,671**

Notes:

1. Annual VMT does not include any reductions from TDM. Trip generation rate and total vehicle miles traveled (VMT) for each land use were provided by Fehr & Peers, and assume that all trips are primary trips. Ballpark trips account for attendees and event-day staff. For Existing Conditions, the trip generation rate and VMT for A's Games provided by Fehr & Peers assume 35,000 attendees per game. These values were scaled down to reflect the actual existing attendance of 22,671 attendees per game.
2. Percentage of gasoline, diesel, natural gas, or electric vehicle miles calculated by taking the ratio of vehicle miles driven by a specific fuel-type vehicle over total miles for that vehicle classification (for all fuel types) in EMFAC.
3. Miles per gallon calculated from the fuel consumption and vehicle miles travelled using EMFAC2017 for calendar years 2018, 2023, and 2027 for the Baseline, Phase 1 Buildout, and Full Project Buildout, respectively. Electric vehicle fuel economy is consistent with the current range of fuel efficiencies of electric cars from US Department of Energy, Fuel Economy Guide.
4. The mobile fuel consumption values are specific to the operation of the Project; however, these values are not expected to change for the Maritime Reservation Scenario.
5. The Existing Conditions emissions incorporate all emissions at the Coliseum Stadium, including those from NFL or other event uses.

Abbreviations:

CNG - compressed natural gas
DEG - diesel equivalent gallons
gal - gallon
kWh - kilowatt-hour
mi - mile
TDM - transportation demand management
yr - year

References:

US Department of Energy (DOE), Fuel Economy Guide. Electric. Available at: https://www.fueleconomy.gov/feg/PowerSearch.do?action=noform&path=1&year1=1984&year2=2019&vtype=Electric. Accessed May 2019.

APPENDIX E
SUPPLEMENTAL ANALYSIS: POTENTIAL TRANSIT HUB EMISSIONS AND HEALTH RISKS

RAMBOLL

ENVIRONMENT
& HEALTH

MEMORANDUM

Date: February 6, 2020

To: Noah Rosen, Oakland Athletics

From: Michael Keinath
Megan Sutter

Subject: **Emissions, Health Risks and Energy Use from Potential Shuttle Buses and Transit Hub**
Oakland Athletics

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1. Purpose of Memorandum

As a supplemental analysis to the Air Quality Technical Report (AQTR) prepared for the Oakland Waterfront Ballpark District Project in Oakland, California (referred to hereafter as "the Project"), Ramboll evaluated potential game day shuttle bus criteria air pollutant (CAP) and greenhouse gas (GHG) emissions for trips between three Bay Area Rapid Transit (BART) stations and for subsequent idling at a transit hub to be constructed along 2nd Street. Shuttle buses and the transit hub are not currently part of the Project; however, it is possible that they will be used as a strategy in the Transportation Management Plan. As such, they are analyzed here for informational purposes.

2. Emissions Methodology and Results

As discussed above, shuttle buses from BART stations to the transit hub are not currently part of the proposed Project so detailed information on the vehicles and capacities was not available at the time of this analysis. Therefore, Ramboll assumed the shuttle fleet is equivalent to the bus fleet assumed in the AQTR. Ramboll additionally assumed that these shuttles would be purchased in 2023 (the first year of ballgames at the Project), and so emission factors used for the shuttles are estimated for calendar year 2023 from EMFAC2017 and do not change over time. Ramboll estimated emissions from both the shuttle trips from three BART stations to the transit hub as well as bus idling assumed while stationed at the transit hub.

Fehr & Peers provided estimates of shuttle routes and trip counts. Trips were assumed to occur for six hours on days with games or ballpark concert events.[1] Shuttles were assumed to travel to and from the following BART stations at the following rates: 36 per hour to West Oakland BART Station, 36 per hour to 12th Street BART Station, and 24 per hour to Lake

[1] In an email from Fehr & Peers on February 3, 2020, the following breakdown was provided. Shuttle trips would occur from two hours before until one hour after the start of a ballgame or concert and from one hour before until two hours after the end of a ballgame or concert.

Merritt BART Station. Consistent with the AQTR, Ramboll assumed the ballpark would host 82 ballgames per year and 9 large concerts per year.

The emissions from shuttle idling at the transit hub were estimated assuming that shuttles idle onsite at the transit hub for five minutes, consistent with California Air Resource Board (ARB) Airborne Toxic Control Measure (ATCM).[2]

Table E-1 and **Table E-2** present potential GHG and CAP emissions, respectively, from the shuttles and transit hub using the assumptions and calculation methodology outlined above.

3. Health Risk Analysis Methodology

In addition to the emissions calculated above, Ramboll also calculated health risks associated with the potential shuttles and transit hub, including excess lifetime cancer risk, non-cancer chronic hazard index (HI), and fine particulate matter ($PM_{2.5}$) concentration. This HRA evaluates potential sensitive receptors using receptor locations and modeling methodology consistent with the Project AQTR.

Model release parameters for the shuttle trips were assumed to be the same as the operational trucks used in the AQTR. The shuttle routes were modeled as a series of adjacent volume sources on roadways with consistent widths and using the same center-to-center spacing as the operational roadways. The idling emissions were represented by an area source over the transit hub between Castro Street and Washington Street with a width representative of two traffic lanes.

Emissions and exposure parameters assume constant activity and emission factors for 30 years of exposure, beginning in 2023 (the first year of ballpark operation); this is consistent with the Transportation Refrigeration Units (TRUs) health risk impacts included in the Project analysis.[3]

4. Health Risk Analysis Results

Health impacts from shuttle trips and transit hub idling were added to both unmitigated and mitigated Project construction and Project operations in order to estimate the combined health risk impacts of construction activities and Project operations, including shuttle trips and transit hub idling, for each exposure Scenario discussed for the Project in the AQTR. For the off-site MEIR, net health impacts are estimated by identifying the sensitive receptor location with the maximum value for the combined Project and shuttle bus and transit hub health impacts minus the existing operational health impact of sources planned for removal at Howard Terminal. This is consistent with the analysis done for the Project health risks outlined in the AQTR.

A breakdown of excess lifetime cancer risk at the MEIR, including shuttle trips and transit hub idling, is included in **Table E-3** of the attached summary results tables, along with impacts from Project construction, operational generators, operational traffic, and removed existing truck activity at Howard Terminal. The table also shows the Scenario for which the maximum was identified. Similar breakdowns for Chronic HI and $PM_{2.5}$ concentration are shown in **Table E-4** and **Table E-5**, respectively. These tables show the year for which the maximum occurred because chronic HI and $PM_{2.5}$ concentrations are annual impacts.

All MEIR locations are the same as the corresponding Project MEIRs.

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[2] ARB. 2016. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. 13 CCR § 2485. Available at: https://ww3.arb.ca.gov/msprog/truck-idling/13ccr2485_09022016.pdf. Accessed: February 2020.

[3] See the AQTR for a full discussion of the TRU health risk analysis.

Table E-1
Greenhouse Gas Emissions from Shuttle Trips and Transit Hub Idling
Oakland Waterfront Ballpark District Project
Oakland, California

Inputs:

Parameter	West Oakland	12th Street	Lake Merritt
Number of Buses per Hour (#/hour)	24	36	36
Total Trip Length[1] (mi/trip)	3.3	2.0	2.6
Trips per Event (trips/event)	144	216	216
Events per Year (events/year)	91		
Annual Trips (trips/year)	13,104	19,656	19,656
Maximum Idling Time (min)	5		

Emission Factors:

Source	CO_2e	Units
Diesel Bus[2,3]	1,552	g/mile
	90.9	g/trip
	6,149	g/idle-hr

Greenhouse Gas Emissions:

Emissions (MT/year)
CO_2e
264

Notes:

1. Trip lengths were pulled from GIS based on bus routes provided.
2. Diesel bus emission factors were obtained from EMFAC2017 for diesel powered buses in calendar year 2023.
3. The fleet of buses is assumed to be 100% diesel fueled.

Abbreviations:

- number
CO_2e - carbon dioxide equivalents
g - gram
hr - hour
mi - mile
min - minute
MT - metric ton

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Table E-2
Criteria Air Pollutant Emissions from Shuttle Trips and Transit Hub Idling
Oakland Waterfront Ballpark District Project
Oakland, California

Inputs:

Parameter	West Oakland	12th Street	Lake Merritt
Number of Buses per Hour (#/hour)	24	36	36
Total Bus Route Length[1] (mi/trip)	3.3	2.0	2.6
Trips per Event (trips/event)	144	216	216
Events per Year (events/year)	91		
Annual Trips per Bus (trips/year)	13,104	19,656	19,656
Maximum Idling Time (min)	5		

Emission Factors:

Source	ROG	NOx	PM_{10}	$PM_{2.5}$	Units	Process
Diesel Bus[2,3]	0.0052	1.5	0.13	0.053	g/mile	Running
	0.028	1.1	1.3E-04	1.3E-04	g/trip	Starting
	2.0	28	9.6E-03	9.2E-03	g/idle-hr	Idling
Fugitive Dust[4]	--	--	2.6E-04	3.9E-05	lb/VMT	--

Criteria Air Pollutant Emissions:

Emissions (ton/year)				Emissions (lb/day)[5]			
ROG	NOx	PM_{10}	$PM_{2.5}$	ROG	NOx	PM_{10}	$PM_{2.5}$
0.022	0.55	0.036	0.010	0.48	12	0.78	0.23

Notes:

1. Trip lengths were pulled from GIS based on bus routes provided.
2. Diesel bus emission factors were obtained from EMFAC2017 for diesel powered transit buses in calendar year 2023.
3. The fleet of buses is assumed to be 100% diesel fueled.
4. Fugitive dust emissions were estimated using the methodology outlined in AQTR Table 28.
5. The conversion between tons per year and pounds per day is based on 91 days per year of operation, for 6 hours per day.

Abbreviations:

- number
CO_2e - carbon dioxide equivalents
g - gram
hr - hour
mi - mile
min - minute
MT - metric ton

Table E-3
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR with Transit Hub
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Construction	10	62	--	--	2.0	7.2	--	--
Operational Generators	191	4.1	592	9.4	0.040	0.15	1.5	0.049
Operational Traffic	0.48	0.88	0.51	2.0	0.11	0.88	0.058	3.5
Operational TRUs	0.030	0.018	0.023	0.035	0.036	0.018	0.0011	0.0086
Existing Howard Terminal Operation[7]	--	-2.2	--	-2.2	--	-2.2	--	-0.30
Shuttles and Transit Hub[8]	0.115	0.039	0.028	0.074	0.0078	0.039	0.0015	0.088
Total Project Contribution	201	65	592	9.3	2.2	6.1	1.6	3.4

	MEIR Location[9]							
MEIR by Scenario	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
UTMx (m)	563,420	563,080	562,820	563,080	562,940	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,660	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	38	1.8
Scenario[10]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk including the transit hub are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   CF = Conversion Factor (mg/µg)

   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$

   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which may be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3); Tier 4 emergency generators on rooftops, which may be tested and maintained for up to 20 hrs/yr.

3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.

4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the shuttle activity at the transit hub.

5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the shuttle activity at the transit hub.

6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table E-3
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR with Transit Hub
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

[7] Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.

[8] The Project may include shuttles from BART stations during games and events. The shuttles would go from the three nearby BART stations (West Oakland, 12th Street, and Lake Merritt) and the potential transit hub, which would be a bus and shuttle station on 2nd street between Castro Street and Broadway.

[9] Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

[10] Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table E-4
Project Chronic Hazard Index at Off-Site and On-Site MEIR with Transit Hub
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Lifetime Excess Chronic Hazard Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.019	0.034	--	--	6.8E-04	2.2E-04	--	--
Operational Generators	0.16	--	0.16	5.4E-04	3.1E-05	1.3E-05	3.1E-05	1.3E-05
Operational Traffic	4.8E-04	--	4.8E-04	0.0037	0.0014	0.0037	0.0014	0.0037
Operational TRUs	6.3E-06	--	6.3E-06	2.3E-06	2.5E-06	2.3E-06	2.5E-06	2.3E-06
Existing Howard Terminal Operation[7]	--	-5.9E-04	--	-8.1E-05	--	-8.1E-05	--	-8.1E-05
Shuttles and Transit Hub[8]	7.5E-06	--	7.5E-06	2.4E-05	3.4E-06	2.4E-05	3.4E-06	2.4E-05
Total Project Contribution	**0.18**	**0.034**	**0.16**	**0.0042**	**0.0021**	**0.0039**	**0.0014**	**0.0036**

	MEIR Location[9]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2021	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which may be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3); Tier 4 emergency generators on rooftops, which may be tested and maintained for up to 20 hrs/yr.

3. Values are shown as "--" to indicate that these sources do not contribute to the chronic hazard index during the year associated with the MEIR.

4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project, including the shuttle activity at the transit hub.

5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum chronic HI attributed to the emissions associated with the Project, including the shuttle activity at the transit hub.

6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table E-4
Project Chronic Hazard Index at Off-Site and On-Site MEIR with Transit Hub
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. The Project may include shuttles from BART stations during games and events. The shuttles would go from the three nearby BART stations (West Oakland, 12th Street, and Lake Merritt) and the potential transit hub, which would be a bus and shuttle station on 2nd street between Castro Street and Broadway.
9. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table E-5
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR with Transit Hub
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Construction	0.091	0.0079	--	--	0.0038	0.0025	--	--
Operational Generators	0.78	0.0027	0.78	0.0027	1.6E-04	6.6E-05	1.6E-04	6.6E-05
Operational Traffic	0.025	0.18	0.025	0.18	0.020	0.18	0.020	0.18
Operational TRUs	2.9E-05	1.1E-05	2.9E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05
Existing Howard Terminal Operation[7]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Shuttles and Transit Hub[8]	3.1E-04	0.0010	3.1E-04	0.0010	1.4E-04	0.0010	1.4E-04	0.0010
Total Project Contribution	0.89	0.19	0.80	0.19	0.024	0.19	0.020	0.18

	MEIR Location[9]							
MEIR by Scenario	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$

   Where:

   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)

   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)

   E = Emission Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which may be tested and maintained for up to 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3); Tier 4 emergency generators on rooftops, which may be tested and maintained for up to 20 hrs/yr.

3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.

4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction and operations, including the shuttle activity at the transit hub.

5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Project construction and operations, including the shuttle activity at the transit hub.

6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.

8. The Project may include shuttles from BART stations during games and events. The shuttles would go from the three nearby BART stations (West Oakland, 12th Street, and Lake Merritt) and the potential transit hub, which would be a bus and shuttle station on 2nd street between Castro Street and Broadway.

9. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

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Table E-5
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR with Transit Hub
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
TRU - Transportation Refrigeration Unit
TDM - Transportation Demand Measures
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan
OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table E-6
Energy Consumption from Shuttle Trips and Transit Hub Idling
Oakland Waterfront Ballpark District Project
Oakland, California

Fuel Consumption from Driving:

Fleet Type	Annual VMT[1] (mi/yr)	Diesel Miles per Gallon[2]	Annual Fuel Consumption (gallons of diesel)
Diesel Bus	132,318	6.83	19,387

Fuel Consumption from Idling:

Fleet Type	Annual Idling Emissions (MT CO_2e/year)	GHG Emissions per Gallon of Diesel Fuel[3] (MT CO_2e/gallon diesel)	Annual Fuel Consumption (gallons of diesel)
Diesel Bus	54	0.011	4,957

Notes:

1. Annual vehicle miles traveled (VMT) were estimated based on the total trip lengths and number of annual trips. See Transit Hub Memo Table E-1.
2. Miles per gallon calculated from the fuel consumption and vehicle miles travelled using EMFAC2017 for calendar year 2023.
3. Mobile greenhouse gas emissions are produced from the consumption of fuel. Therefore, the ratio between greenhouse gas emissions and fuel consumption will be constant for both running and idling processes. Running emissions were divided by running diesel fuel consumption to calculate this ratio, which was then applied to annual idling emissions.

Abbreviations:

CO_2e - carbon dioxide equivalents
MT - metric tons
mi - mile
yr - year

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APPENDIX F
EV CHARGING CALCULATION DETAILS

2023 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2023
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	3.4%
Percent All VMT from EVs at Full Buildout[2]	%	3.4%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	0,884	--	9,902	--	0	--	--	3	405,993	--
		Weekday Day	Passenger	0,901	--	9,936	--	0	--	--	3	139,110	--
		Weekend	Passenger	--	0,925	--	11,029	0	--	--	3	297,785	--
	Other Events	Concerts	Passenger	0,915	--	8,673		0	--		3	78,057	--
		Other	Passenger	0,205	--	1,980		0	--		3	69,316	--
		Corporate/Community	Passenger	51	--	478		0	--		3	47,804	--
		Plaza	Passenger	99	--	922		0	--		3	14,751	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.2	--	12	--	0	--	--	3	3,090	--
	Sports Team Management		Passenger	6	--	56	--	0	--	--	3	14,524	--
Residential			All	41	38	489	448	54	54	54	0.4	174,223	174,223
Office			All	58	10	693	122	50	3	--	8	193,495	157,853
Retail			All	38	44	448	530	4	1	2	10	172,064	118,188
Restaurant			All	20	24	244	285	4	--	1	10	93,468	26,208
Hotel			All	72	58	856	693	20	16	13	2	295,356	278,611
Performance Venue	Attendees		Passenger	--	--	--		0	--		3	--	--
	Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**755,083**

2023 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2024 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2024
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.1%
Percent All VMT from EVs at Full Buildout[2]	%	4.1%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,073	--	12,014	--	0	--	--	3	492,575	--
		Weekday Day	Passenger	1,094	--	12,055	--	0	--	--	3	168,776	--
		Weekend	Passenger	--	1,123	--	13,381	0	--	--	3	361,291	--
	Other Events	Concerts	Passenger	1,110	--	10,523		0	--		3	94,704	--
		Other	Passenger	0,249	--	2,403		0	--		3	84,098	--
		Corporate/Community	Passenger	62	--	580		0	--		3	57,999	--
		Plaza	Passenger	120	--	1,119		0	--		3	17,897	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.5	--	14	--	0	--	--	3	3,749	--
	Sports Team Management		Passenger	7	--	68	--	0	--	--	3	17,622	--
Residential			All	50	46	593	544	54	54	54	0.4	211,391	211,391
Office			All	70	12	840	148	50	4	--	8	234,774	210,470
Retail			All	46	54	544	643	4	2	2	10	208,770	183,960
Restaurant			All	25	29	297	346	4	1	1	10	113,407	91,980
Hotel			All	87	70	1,038	840	20	20	16	2	358,365	346,954
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,044,755**

2024 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2025 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2025
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.9%
Percent All VMT from EVs at Full Buildout[2]	%	4.9%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,269	--	14,212	--	0	--	--	3	582,679	--
		Weekday Day	Passenger	1,294	--	14,261	--	0	--	--	3	199,650	--
		Weekend	Passenger	--	1,328	--	15,829	0	--	--	3	427,379	--
	Other Events	Concerts	Passenger	1,313	--	12,447		0	--		3	112,027	--
		Other	Passenger	0,294	--	2,842		0	--		3	99,482	--
		Corporate/Community	Passenger	74	--	686		0	--		3	68,608	--
		Plaza	Passenger	142	--	1,323		0	--		3	21,170	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.8	--	17	--	0	--	--	3	4,435	--
	Sports Team Management		Passenger	8	--	80	--	0	--	--	3	20,845	--
Residential			All	59	54	702	643	54	54	54	0.5	250,074	250,074
Office			All	83	15	994	175	50	4	--	8	277,736	210,470
Retail			All	54	64	643	760	4	2	3	10	246,974	210,168
Restaurant			All	29	34	351	409	4	1	1	10	134,160	91,980
Hotel			All	103	83	1,228	994	20	20	19	2	423,944	362,678
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,125,371**

2025 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2026 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2026
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	5.6%
Percent All VMT from EVs at Full Buildout[2]	%	5.5%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,441	--	16,138	--	0	--	--	3	661,678	--
		Weekday Day	Passenger	1,469	--	16,194	--	0	--	--	3	226,718	--
		Weekend	Passenger	--	1,508	--	17,975	0	--	--	3	485,323	--
	Other Events	Concerts	Passenger	1,491	--	14,135		0	--		3	127,216	--
		Other	Passenger	0,334	--	3,228		0	--		3	112,969	--
		Corporate/Community	Passenger	83	--	779		0	--		3	77,910	--
		Plaza	Passenger	161	--	1,503		0	--		3	24,041	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.0	--	19	--	0	--	--	3	5,036	--
	Sports Team Management		Passenger	10	--	91	--	0	--	--	3	23,671	--
Residential			All	67	61	797	731	54	54	54	0.6	283,993	283,993
Office			All	95	17	1,129	199	50	5	--	8	315,407	263,088
Retail			All	61	72	731	863	4	2	3	10	280,473	210,168
Restaurant			All	33	39	398	465	4	1	1	10	152,357	91,980
Hotel			All	117	95	1,395	1,129	20	20	20	2	481,446	367,920
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,217,149**

2026 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2027 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2027
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	6.2%
Percent All VMT from EVs at Full Buildout[2]	%	6.1%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,594	--	17,850	--	0	--	--	3	731,836	--
		Weekday Day	Passenger	1,625	--	17,911	--	0	--	--	3	250,757	--
		Weekend	Passenger	--	1,668	--	19,881	0	--	--	3	536,783	--
	Other Events	Concerts	Passenger	1,650	--	15,634		0	--		3	140,705	--
		Other	Passenger	0,369	--	3,570		0	--		3	124,948	--
		Corporate/Community	Passenger	92	--	862		0	--		3	86,171	--
		Plaza	Passenger	178	--	1,662		0	--		3	26,590	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.2	--	21	--	0	--	--	3	5,570	--
	Sports Team Management		Passenger	11	--	100	--	0	--	--	3	26,181	--
Residential			All	74	68	882	808	54	54	54	0.6	314,126	314,126
Office			All	105	18	1,249	220	50	6	1	8	348,873	336,672
Retail			All	68	80	808	955	4	3	3	10	310,232	275,940
Restaurant			All	37	43	441	514	4	1	2	10	168,523	118,188
Hotel			All	129	105	1,543	1,249	20	20	20	2	532,530	367,920
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,412,846**

2027 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2028 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2028
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	6.7%
Percent All VMT from EVs at Full Buildout[2]	%	6.6%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,730	--	19,370	--	0	--	--	3	794,154	--
		Weekday Day	Passenger	1,763	--	19,436	--	0	--	--	3	272,110	--
		Weekend	Passenger	--	1,810	--	21,574	0	--	--	3	582,491	--
	Other Events	Concerts	Passenger	1,790	--	16,965		0	--		3	152,686	--
		Other	Passenger	0,401	--	3,874		0	--		3	135,587	--
		Corporate/Community	Passenger	100	--	935		0	--		3	93,508	--
		Plaza	Passenger	194	--	1,803		0	--		3	28,854	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.4	--	23	--	0	--	--	3	6,045	--
	Sports Team Management		Passenger	11	--	109	--	0	--	--	3	28,410	--
Residential			All	80	73	957	877	54	54	54	0.7	340,891	340,891
Office			All	114	20	1,355	239	50	6	1	8	378,599	336,672
Retail			All	73	87	877	1,036	4	3	4	10	336,666	302,148
Restaurant			All	40	47	478	558	4	1	2	10	182,882	118,188
Hotel			All	140	114	1,674	1,355	20	20	20	2	577,904	367,920
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,465,819**

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark	A's Games	Weekday Evening	Passenger	1,730	--	19,370	--	200	200	--	3	794,154	619,920
		Weekday Day	Passenger	1,763	--	19,436	--	200	200	--	3	272,110	211,680
		Weekend	Passenger	--	1,810	--	21,574	200	--	200	3	582,491	408,240
	Other Events	Concerts	Passenger	1,790		16,965		200	200		3	152,686	136,080
		Other	Passenger	401		3,874		200	51		3	135,587	134,946
		Corporate/Community	Passenger	100		935		200	12		3	93,508	90,720

2028 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Stadium		Plaza	Passenger	194		1,803		200	23		3	28,854	27,821
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	2	--	23	--	200	0	--	3	6,045	--
	Sports Team Management		Passenger	11	--	109	--	200	1	--	3	28,410	19,732
Residential			All	407	381	4,870	4,551	300	300	300	0.6	1,744,269	1,744,269
Office[9]			All	521	80	6,225	957	300	30	4	8	1,724,205	1,662,394
Retail			All	307	321	3,674	3,833	36	14	15	10	1,357,538	1,313,928
Restaurant			All	347	401	4,152	4,790	36	16	19	10	1,581,875	1,550,304
Hotel			All	140	114	1,674	1,355	20	20	20	2	577,904	367,920
Performance Venue		Attendees	Passenger	160		1,890		200	25		3	189,021	189,000
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**8,476,953**

2028 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2029 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2029
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.1%
Percent All VMT from EVs at Full Buildout[2]	%	7.1%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,851	--	20,721	--	0	--	--	3	849,553	--
		Weekday Day	Passenger	1,886	--	20,792	--	0	--	--	3	291,092	--
		Weekend	Passenger	--	1,936	--	23,079	0	--	--	3	623,125	--
	Other Events	Concerts	Passenger	1,915	--	18,149		0	--		3	163,337	--
		Other	Passenger	0,429	--	4,144		0	--		3	145,046	--
		Corporate/Community	Passenger	107	--	1,000		0	--		3	100,031	--
		Plaza	Passenger	207	--	1,929		0	--		3	30,867	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.6	--	25	--	0	--	--	3	6,466	--
	Sports Team Management		Passenger	12	--	116	--	0	--	--	3	30,392	--
Residential			All	86	79	1,023	938	54	54	54	0.7	364,695	364,695
Office			All	121	21	1,450	256	50	7	1	8	405,036	389,290
Retail			All	79	93	938	1,109	4	3	4	10	360,174	302,148
Restaurant			All	43	50	512	597	4	2	2	10	195,652	183,960
Hotel			All	150	121	1,791	1,450	20	20	20	2	618,258	367,920
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,608,012**

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark	A's Games	Weekday Evening	Passenger	1,851	--	20,721	--	200	200	--	3	849,553	619,920
		Weekday Day	Passenger	1,886	--	20,792	--	200	200	--	3	291,092	211,680
		Weekend	Passenger	--	1,936	--	23,079	200	--	200	3	623,125	408,240
	Other Events	Concerts	Passenger	1,915		18,149		200	200		3	163,337	136,080
		Other	Passenger	429		4,144		200	54		3	145,046	142,884
		Corporate/Community	Passenger	107		1,000		200	13		3	100,031	98,280

2029 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Stadium		Plaza	Passenger	207		1,929		200	25		3	30,867	30,240
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	25	--	200	0	--	3	6,466	--
	Sports Team Management		Passenger	12	--	116	--	200	1	--	3	30,392	19,732
Residential			All	436	407	5,210	4,869	300	300	300	0.7	1,866,067	1,866,067
Office[9]			All	557	86	6,660	1,023	300	33	5	8	1,844,603	1,841,213
Retail			All	329	343	3,930	4,101	36	15	16	10	1,452,332	1,405,908
Restaurant			All	372	429	4,442	5,124	36	17	20	10	1,692,334	1,642,284
Hotel			All	150	121	1,791	1,450	20	20	20	2	618,258	367,920
Performance Venue		Attendees	Passenger	171		2,022		200	26		3	202,206	196,560
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**8,987,008**

2029 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

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8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

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Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2030 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2030
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.6%
Percent All VMT from EVs at Full Buildout[2]	%	7.5%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,958	--	21,919	--	0	--	--	3	898,671	--
		Weekday Day	Passenger	1,995	--	21,994	--	0	--	--	3	307,922	--
		Weekend	Passenger	--	2,048	--	24,413	0	--	--	3	659,152	--
	Other Events	Concerts	Passenger	2,026	--	19,198		0	--		3	172,781	--
		Other	Passenger	0,453	--	4,384		0	--		3	153,432	--
		Corporate/Community	Passenger	113	--	1,058		0	--		3	105,815	--
		Plaza	Passenger	219	--	2,041		0	--		3	32,651	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.8	--	26	--	0	--	--	3	6,840	--
	Sports Team Management		Passenger	13	--	123	--	0	--	--	3	32,149	--
Residential			All	91	83	1,083	992	54	54	54	0.8	385,790	385,790
Office			All	128	23	1,534	271	50	7	1	8	428,465	389,290
Retail			All	83	98	992	1,173	4	3	4	10	381,008	302,148
Restaurant			All	45	53	541	632	4	2	2	10	206,970	183,960
Hotel			All	159	128	1,895	1,534	20	20	20	2	654,021	367,920
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,629,108**

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark	A's Games	Weekday Evening	Passenger	1,958	--	21,919	--	200	200	--	3	898,671	619,920
		Weekday Day	Passenger	1,995	--	21,994	--	200	200	--	3	307,922	211,680
		Weekend	Passenger	--	2,048	--	24,413	200	--	200	3	659,152	408,240
	Other Events	Concerts	Passenger	2,026		19,198		200	200		3	172,781	136,080
		Other	Passenger	453		4,384		200	57		3	153,432	150,822
		Corporate/Community	Passenger	113		1,058		200	13		3	105,815	98,280

2030 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Stadium		Plaza	Passenger	219		2,041		200	26		3	32,651	31,450
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	26	--	200	0	--	3	6,840	--
	Sports Team Management		Passenger	13	--	123	--	200	1	--	3	32,149	19,732
Residential			All	461	431	5,511	5,150	300	300	300	0.7	1,974,009	1,974,009
Office[9]			All	590	91	7,045	1,083	300	34	5	8	1,951,303	1,893,830
Retail			All	348	363	4,158	4,338	36	16	17	10	1,536,341	1,497,888
Restaurant			All	393	453	4,699	5,421	36	18	21	10	1,790,227	1,734,264
Hotel			All	159	128	1,895	1,534	20	20	20	2	654,021	367,920
Performance Venue		Attendees	Passenger	181		2,139		200	28		3	213,897	211,680
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**9,355,795**

2030 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2031 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2031
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.9%
Percent All VMT from EVs at Full Buildout[2]	%	7.9%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,052	--	22,977	--	200	200	--	3	942,063	619,920
		Weekday Day	Passenger	2,092	--	23,056	--	200	200	--	3	322,789	211,680
		Weekend	Passenger	--	2,147	--	25,592	200	--	200	3	690,978	408,240
	Other Events	Concerts	Passenger	2,123		20,125		200	200		3	181,123	136,080
		Other	Passenger	475		4,595		200	60		3	160,840	158,760
		Corporate/Community	Passenger	119		1,109		200	14		3	110,924	105,840
		Plaza	Passenger	230		2,139		200	28		3	34,228	33,869
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	27	--	200	0	--	3	7,171	--
	Sports Team Management		Passenger	14	--	129	--	200	1	--	3	33,702	19,732
Residential			All	483	452	5,777	5,399	300	300	300	0.7	2,069,364	2,069,364
Office[9]			All	618	95	7,385	1,135	300	36	5	8	2,045,561	1,999,066
Retail			All	364	380	4,359	4,548	36	17	18	10	1,610,554	1,589,868
Restaurant			All	412	475	4,926	5,683	36	19	22	10	1,876,703	1,826,244
Hotel			All	166	135	1,986	1,608	20	20	20	2	685,613	367,920
Performance Venue		Attendees	Passenger	190		2,242		200	29		3	224,225	219,240
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**9,765,822**

2031 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2032 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2032
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.2%
Percent All VMT from EVs at Full Buildout[2]	%	8.2%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,135	--	23,908	--	200	200	--	3	980,228	619,920
		Weekday Day	Passenger	2,176	--	23,990	--	200	200	--	3	335,866	211,680
		Weekend	Passenger	--	2,234	--	26,629	200	--	200	3	718,971	408,240
	Other Events	Concerts	Passenger	2,209		20,940		200	200		3	188,461	136,080
		Other	Passenger	495		4,782		200	63		3	167,356	166,698
		Corporate/Community	Passenger	124		1,154		200	15		3	115,418	113,400
		Plaza	Passenger	239		2,226		200	29		3	35,615	35,078
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	29	--	200	0	--	3	7,461	--
	Sports Team Management		Passenger	14	--	134	--	200	1	--	3	35,067	19,732
Residential			All	503	470	6,011	5,618	300	300	300	0.8	2,153,219	2,153,219
Office[9]			All	643	99	7,684	1,181	300	38	5	8	2,128,452	2,104,301
Retail			All	379	396	4,535	4,732	36	17	18	10	1,675,818	1,589,868
Restaurant			All	429	495	5,126	5,913	36	20	23	10	1,952,752	1,918,224
Hotel			All	173	140	2,067	1,673	20	20	20	2	713,396	367,920
Performance Venue		Attendees	Passenger	198		2,333		200	30		3	233,309	226,800
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,071,160**

2032 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

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8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

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Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2033 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2033
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.5%
Percent All VMT from EVs at Full Buildout[2]	%	8.5%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,208	--	24,719	--	200	200	--	3	1,013,493	619,920
		Weekday Day	Passenger	2,250	--	24,805	--	200	200	--	3	347,264	211,680
		Weekend	Passenger	--	2,310	--	27,532	200	--	200	3	743,370	408,240
	Other Events	Concerts	Passenger	2,284		21,651		200	200		3	194,857	136,080
		Other	Passenger	511		4,944		200	65		3	173,035	171,990
		Corporate/Community	Passenger	128		1,193		200	15		3	119,335	113,400
		Plaza	Passenger	247		2,301		200	30		3	36,823	36,288
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	30	--	200	0	--	3	7,714	--
	Sports Team Management		Passenger	15	--	139	--	200	1	--	3	36,257	19,732
Residential			All	520	486	6,216	5,809	300	300	300	0.8	2,226,340	2,226,340
Office[9]			All	665	102	7,945	1,221	300	39	6	8	2,200,732	2,177,885
Retail			All	392	409	4,689	4,893	36	18	19	10	1,732,727	1,681,848
Restaurant			All	443	511	5,300	6,114	36	21	24	10	2,019,065	2,010,204
Hotel			All	179	145	2,137	1,730	20	20	20	2	737,622	367,920
Performance Venue		Attendees	Passenger	205		2,412		200	31		3	241,227	234,360
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,415,887**

2033 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

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Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2034 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2034
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.8%
Percent All VMT from EVs at Full Buildout[2]	%	8.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,270	--	25,422	--	200	200	--	3	1,042,295	619,920
		Weekday Day	Passenger	2,314	--	25,509	--	200	200	--	3	357,133	211,680
		Weekend	Passenger	--	2,376	--	28,315	200	--	200	3	764,496	408,240
	Other Events	Concerts	Passenger	2,349		22,266		200	200		3	200,394	136,080
		Other	Passenger	526		5,084		200	67		3	177,953	177,282
		Corporate/Community	Passenger	131		1,227		200	16		3	122,726	120,960
		Plaza	Passenger	254		2,367		200	31		3	37,870	37,498
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	30	--	200	0	--	3	7,934	--
	Sports Team Management		Passenger	15	--	143	--	200	1	--	3	37,288	19,732
Residential			All	535	500	6,392	5,974	300	300	300	0.8	2,289,640	2,289,640
Office[9]			All	684	105	8,171	1,256	300	40	6	8	2,263,304	2,230,502
Retail			All	403	421	4,823	5,032	36	19	19	10	1,781,992	1,747,620
Restaurant			All	456	526	5,450	6,288	36	21	24	10	2,076,472	2,010,204
Hotel			All	184	149	2,198	1,779	20	20	20	2	758,594	367,920
Performance Venue		Attendees	Passenger	210		2,481		200	32		3	248,082	241,920
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,619,198**

2034 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2035 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2035
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.0%
Percent All VMT from EVs at Full Buildout[2]	%	8.9%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,324	--	26,023	--	200	200	--	3	1,066,926	619,920
		Weekday Day	Passenger	2,369	--	26,112	--	200	200	--	3	365,572	211,680
		Weekend	Passenger	--	2,432	--	28,984	200	--	200	3	782,562	408,240
	Other Events	Concerts	Passenger	2,405		22,792		200	200		3	205,130	136,080
		Other	Passenger	538		5,205		200	68		3	182,158	179,928
		Corporate/Community	Passenger	135		1,256		200	16		3	125,626	120,960
		Plaza	Passenger	260		2,423		200	32		3	38,765	38,707
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	31	--	200	0	--	3	8,121	--
	Sports Team Management		Passenger	15	--	146	--	200	1	--	3	38,169	19,732
Residential			All	547	511	6,543	6,115	300	300	300	0.8	2,343,779	2,343,779
Office[9]			All	700	108	8,364	1,285	300	41	6	8	2,316,820	2,283,120
Retail			All	413	431	4,937	5,151	36	19	20	10	1,824,127	1,773,828
Restaurant			All	467	538	5,579	6,436	36	22	25	10	2,125,570	2,102,184
Hotel			All	188	153	2,250	1,821	20	20	20	2	776,531	367,920
Performance Venue		Attendees	Passenger	215		2,539		200	33		3	253,945	249,480
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,855,558**

2035 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2036 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2036
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.1%
Percent All VMT from EVs at Full Buildout[2]	%	9.1%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,369	--	26,530	--	200	200	--	3	1,087,727	619,920
		Weekday Day	Passenger	2,415	--	26,621	--	200	200	--	3	372,700	211,680
		Weekend	Passenger	--	2,479	--	29,549	200	--	200	3	797,819	408,240
	Other Events	Concerts	Passenger	2,452		23,237		200	200		3	209,129	136,080
		Other	Passenger	549		5,306		200	70		3	185,709	185,220
		Corporate/Community	Passenger	137		1,281		200	16		3	128,075	120,960
		Plaza	Passenger	265		2,470		200	32		3	39,520	38,707
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	32	--	200	0	--	3	8,279	--
	Sports Team Management		Passenger	16	--	149	--	200	1	--	3	38,913	19,732
Residential			All	558	521	6,671	6,234	300	300	300	0.9	2,389,496	2,389,496
Office[9]			All	714	110	8,528	1,311	300	42	6	8	2,362,011	2,335,738
Retail			All	421	439	5,033	5,251	36	19	20	10	1,859,708	1,773,828
Restaurant			All	476	549	5,688	6,562	36	22	26	10	2,167,031	2,128,392
Hotel			All	192	156	2,293	1,857	20	20	20	2	791,678	367,920
Performance Venue		Attendees	Passenger	220		2,589		200	34		3	258,895	257,040
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,992,952**

2036 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2037 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2037
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.3%
Percent All VMT from EVs at Full Buildout[2]	%	9.2%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,407	--	26,952	--	200	200	--	3	1,105,021	619,920
		Weekday Day	Passenger	2,454	--	27,045	--	200	200	--	3	378,625	211,680
		Weekend	Passenger	--	2,519	--	30,019	200	--	200	3	810,503	408,240
	Other Events	Concerts	Passenger	2,491		23,606		200	200		3	212,454	136,080
		Other	Passenger	558		5,390		200	71		3	188,662	187,866
		Corporate/Community	Passenger	139		1,301		200	17		3	130,112	128,520
		Plaza	Passenger	270		2,509		200	33		3	40,149	39,917
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	32	--	200	0	--	3	8,411	--
	Sports Team Management		Passenger	16	--	151	--	200	2	--	3	39,532	39,463
Residential			All	567	530	6,777	6,333	300	300	300	0.9	2,427,503	2,427,503
Office[9]			All	725	112	8,663	1,331	300	42	6	8	2,399,580	2,335,738
Retail			All	428	446	5,113	5,335	36	20	21	10	1,889,288	1,865,808
Restaurant			All	483	558	5,779	6,666	36	22	26	10	2,201,499	2,128,392
Hotel			All	195	158	2,330	1,886	20	20	20	2	804,270	367,920
Performance Venue		Attendees	Passenger	223		2,630		200	34		3	263,012	257,040
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,154,086**

2037 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2038 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2038
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.4%
Percent All VMT from EVs at Full Buildout[2]	%	9.4%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,438	--	27,299	--	200	200	--	3	1,119,243	619,920
		Weekday Day	Passenger	2,485	--	27,393	--	200	200	--	3	383,499	211,680
		Weekend	Passenger	--	2,551	--	30,405	200	--	200	3	820,935	408,240
	Other Events	Concerts	Passenger	2,523		23,910		200	200		3	215,188	136,080
		Other	Passenger	565		5,460		200	72		3	191,090	190,512
		Corporate/Community	Passenger	141		1,318		200	17		3	131,786	128,520
		Plaza	Passenger	273		2,542		200	33		3	40,666	39,917
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	33	--	200	0	--	3	8,519	--
	Sports Team Management		Passenger	16	--	153	--	200	2	--	3	40,040	39,463
Residential			All	574	537	6,864	6,415	300	300	300	0.9	2,458,746	2,458,746
Office[9]			All	734	113	8,775	1,349	300	43	6	8	2,430,464	2,388,355
Retail			All	433	452	5,179	5,403	36	20	21	10	1,913,604	1,865,808
Restaurant			All	489	565	5,853	6,752	36	23	26	10	2,229,834	2,194,164
Hotel			All	198	160	2,360	1,910	20	20	20	2	814,622	367,920
Performance Venue		Attendees	Passenger	226		2,664		200	35		3	266,397	264,600
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,313,925**

2038 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2039 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2039
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.5%
Percent All VMT from EVs at Full Buildout[2]	%	9.5%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,463	--	27,580	--	200	200	--	3	1,130,770	619,920
		Weekday Day	Passenger	2,511	--	27,675	--	200	200	--	3	387,448	211,680
		Weekend	Passenger	--	2,577	--	30,718	200	--	200	3	829,390	408,240
	Other Events	Concerts	Passenger	2,549		24,156		200	200		3	217,405	136,080
		Other	Passenger	571		5,516		200	72		3	193,058	190,512
		Corporate/Community	Passenger	143		1,331		200	17		3	133,144	128,520
		Plaza	Passenger	276		2,568		200	33		3	41,084	39,917
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	33	--	200	0	--	3	8,607	--
	Sports Team Management		Passenger	16	--	155	--	200	2	--	3	40,453	39,463
Residential			All	580	542	6,935	6,481	300	300	300	0.9	2,484,063	2,484,063
Office[9]			All	742	114	8,865	1,362	300	43	6	8	2,455,490	2,388,355
Retail			All	437	456	5,232	5,459	36	20	21	10	1,933,308	1,865,808
Restaurant			All	495	571	5,913	6,822	36	23	27	10	2,252,794	2,220,372
Hotel			All	200	162	2,384	1,930	20	20	20	2	823,010	367,920
Performance Venue		Attendees	Passenger	228		2,691		200	35		3	269,140	264,600
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,365,450**

2039 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2040 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2040
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.6%
Percent All VMT from EVs at Full Buildout[2]	%	9.5%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,483	--	27,805	--	200	200	--	3	1,139,992	619,920
		Weekday Day	Passenger	2,531	--	27,901	--	200	200	--	3	390,608	211,680
		Weekend	Passenger	--	2,598	--	30,969	200	--	200	3	836,154	408,240
	Other Events	Concerts	Passenger	2,570		24,353		200	200		3	219,178	136,080
		Other	Passenger	575		5,561		200	73		3	194,633	193,158
		Corporate/Community	Passenger	144		1,342		200	17		3	134,230	128,520
		Plaza	Passenger	278		2,589		200	34		3	41,419	41,126
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	33	--	200	0	--	3	8,677	--
	Sports Team Management		Passenger	16	--	156	--	200	2	--	3	40,783	39,463
Residential			All	585	547	6,992	6,534	300	300	300	0.9	2,504,310	2,504,310
Office[9]			All	748	115	8,937	1,374	300	44	6	8	2,475,504	2,440,973
Retail			All	441	460	5,275	5,504	36	20	21	10	1,949,066	1,865,808
Restaurant			All	499	575	5,961	6,877	36	23	27	10	2,271,156	2,220,372
Hotel			All	201	163	2,404	1,946	20	20	20	2	829,718	367,920
Performance Venue		Attendees	Passenger	230		2,713		200	35		3	271,335	264,600
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,442,170**

2040 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

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8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2041 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2041
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.6%
Percent All VMT from EVs at Full Buildout[2]	%	9.6%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,499	--	27,981	--	200	200	--	3	1,147,226	619,920
		Weekday Day	Passenger	2,547	--	28,078	--	200	200	--	3	393,086	211,680
		Weekend	Passenger	--	2,615	--	31,165	200	--	200	3	841,460	408,240
	Other Events	Concerts	Passenger	2,586		24,508		200	200		3	220,568	136,080
		Other	Passenger	579		5,596		200	74		3	195,868	195,804
		Corporate/Community	Passenger	145		1,351		200	17		3	135,081	128,520
		Plaza	Passenger	280		2,605		200	34		3	41,682	41,126
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	33	--	200	0	--	3	8,732	--
	Sports Team Management		Passenger	17	--	157	--	200	2	--	3	41,041	39,463
Residential			All	589	550	7,036	6,575	300	300	300	0.9	2,520,188	2,520,188
Office[9]			All	753	116	8,994	1,382	300	44	6	8	2,491,200	2,440,973
Retail			All	444	463	5,308	5,538	36	21	21	10	1,961,424	1,931,580
Restaurant			All	502	579	5,999	6,921	36	23	27	10	2,285,555	2,220,372
Hotel			All	203	164	2,419	1,958	20	20	20	2	834,978	367,920
Performance Venue		Attendees	Passenger	232		2,731		200	36		3	273,057	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,534,026**

2041 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2042 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2042
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.7%
Percent All VMT from EVs at Full Buildout[2]	%	9.6%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,511	--	28,120	--	200	200	--	3	1,152,915	619,920
		Weekday Day	Passenger	2,560	--	28,217	--	200	200	--	3	395,036	211,680
		Weekend	Passenger	--	2,628	--	31,320	200	--	200	3	845,632	408,240
	Other Events	Concerts	Passenger	2,599		24,629		200	200		3	221,662	136,080
		Other	Passenger	582		5,624		200	74		3	196,839	195,804
		Corporate/Community	Passenger	145		1,358		200	17		3	135,751	128,520
		Plaza	Passenger	281		2,618		200	34		3	41,889	41,126
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,776	--
	Sports Team Management		Passenger	17	--	158	--	200	2	--	3	41,245	39,463
Residential			All	591	553	7,071	6,608	300	300	300	0.9	2,532,692	2,532,692
Office[9]			All	756	116	9,039	1,389	300	44	6	8	2,503,560	2,440,973
Retail			All	446	465	5,334	5,566	36	21	22	10	1,971,155	1,957,788
Restaurant			All	504	582	6,029	6,955	36	23	27	10	2,296,895	2,220,372
Hotel			All	204	165	2,431	1,968	20	20	20	2	839,121	367,920
Performance Venue		Attendees	Passenger	233		2,744		200	36		3	274,411	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,572,738**

2042 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2043 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2043
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.7%
Percent All VMT from EVs at Full Buildout[2]	%	9.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,521	--	28,228	--	200	200	--	3	1,157,328	619,920
		Weekday Day	Passenger	2,570	--	28,325	--	200	200	--	3	396,548	211,680
		Weekend	Passenger	--	2,638	--	31,440	200	--	200	3	848,869	408,240
	Other Events	Concerts	Passenger	2,609		24,723		200	200		3	222,511	136,080
		Other	Passenger	584		5,646		200	74		3	197,593	195,804
		Corporate/Community	Passenger	146		1,363		200	18		3	136,271	136,080
		Plaza	Passenger	282		2,628		200	34		3	42,049	41,126
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,809	--
	Sports Team Management		Passenger	17	--	159	--	200	2	--	3	41,403	39,463
Residential			All	594	555	7,098	6,633	300	300	300	0.9	2,542,398	2,542,398
Office[9]			All	759	117	9,073	1,394	300	45	6	8	2,513,154	2,493,590
Retail			All	448	467	5,355	5,587	36	21	22	10	1,978,709	1,957,788
Restaurant			All	506	584	6,052	6,982	36	24	27	10	2,305,697	2,286,144
Hotel			All	204	165	2,440	1,975	20	20	20	2	842,337	367,920
Performance Venue		Attendees	Passenger	234		2,755		200	36		3	275,461	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,708,394**

2043 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2044 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2044
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,529	--	28,311	--	200	200	--	3	1,160,769	619,920
		Weekday Day	Passenger	2,577	--	28,409	--	200	200	--	3	397,727	211,680
		Weekend	Passenger	--	2,646	--	31,533	200	--	200	3	851,393	408,240
	Other Events	Concerts	Passenger	2,616		24,797		200	200		3	223,172	136,080
		Other	Passenger	586		5,662		200	74		3	198,180	195,804
		Corporate/Community	Passenger	146		1,367		200	18		3	136,676	136,080
		Plaza	Passenger	283		2,636		200	34		3	42,174	41,126
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,835	--
	Sports Team Management		Passenger	17	--	159	--	200	2	--	3	41,526	39,463
Residential			All	596	556	7,119	6,653	300	300	300	0.9	2,549,939	2,549,939
Office[9]			All	761	117	9,100	1,399	300	45	6	8	2,520,609	2,493,590
Retail			All	449	469	5,371	5,604	36	21	22	10	1,984,579	1,957,788
Restaurant			All	508	586	6,070	7,002	36	24	27	10	2,312,537	2,286,144
Hotel			All	205	166	2,447	1,981	20	20	20	2	844,836	367,920
Performance Venue		Attendees	Passenger	234		2,763		200	36		3	276,280	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,715,935**

2044 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2045 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2045
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,534	--	28,377	--	200	200	--	3	1,163,459	619,920
		Weekday Day	Passenger	2,583	--	28,475	--	200	200	--	3	398,648	211,680
		Weekend	Passenger	--	2,652	--	31,606	200	--	200	3	853,366	408,240
	Other Events	Concerts	Passenger	2,622		24,854		200	200		3	223,689	136,080
		Other	Passenger	587		5,675		200	75		3	198,639	198,450
		Corporate/Community	Passenger	147		1,370		200	18		3	136,993	136,080
		Plaza	Passenger	284		2,642		200	34		3	42,272	41,126
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,856	--
	Sports Team Management		Passenger	17	--	159	--	200	2	--	3	41,622	39,463
Residential			All	597	558	7,135	6,668	300	300	300	0.9	2,555,847	2,555,847
Office[9]			All	763	117	9,121	1,402	300	45	6	8	2,526,448	2,493,590
Retail			All	450	470	5,383	5,617	36	21	22	10	1,989,177	1,957,788
Restaurant			All	509	587	6,084	7,019	36	24	27	10	2,317,894	2,286,144
Hotel			All	205	166	2,453	1,986	20	20	20	2	846,793	367,920
Performance Venue		Attendees	Passenger	235		2,769		200	36		3	276,921	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,724,489**

2045 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2046 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2046
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,539	--	28,428	--	200	200	--	3	1,165,568	619,920
		Weekday Day	Passenger	2,588	--	28,527	--	200	200	--	3	399,371	211,680
		Weekend	Passenger	--	2,657	--	31,663	200	--	200	3	854,913	408,240
	Other Events	Concerts	Passenger	2,627		24,899		200	200		3	224,095	136,080
		Other	Passenger	588		5,686		200	75		3	198,999	198,450
		Corporate/Community	Passenger	147		1,372		200	18		3	137,241	136,080
		Plaza	Passenger	284		2,647		200	35		3	42,349	42,336
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,872	--
	Sports Team Management		Passenger	17	--	160	--	200	2	--	3	41,698	39,463
Residential			All	598	559	7,148	6,680	300	300	300	0.9	2,560,468	2,560,468
Office[9]			All	765	118	9,138	1,404	300	45	6	8	2,531,016	2,493,590
Retail			All	451	471	5,393	5,627	36	21	22	10	1,992,773	1,957,788
Restaurant			All	510	588	6,095	7,031	36	24	27	10	2,322,085	2,286,144
Hotel			All	206	167	2,458	1,989	20	20	20	2	848,324	367,920
Performance Venue		Attendees	Passenger	235		2,774		200	36		3	277,423	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,730,320**

2046 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2047 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2047
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,543	--	28,469	--	200	200	--	3	1,167,226	619,920
		Weekday Day	Passenger	2,592	--	28,567	--	200	200	--	3	399,939	211,680
		Weekend	Passenger	--	2,660	--	31,708	200	--	200	3	856,129	408,240
	Other Events	Concerts	Passenger	2,631		24,935		200	200		3	224,414	136,080
		Other	Passenger	589		5,694		200	75		3	199,282	198,450
		Corporate/Community	Passenger	147		1,374		200	18		3	137,436	136,080
		Plaza	Passenger	285		2,651		200	35		3	42,409	42,336
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,884	--
	Sports Team Management		Passenger	17	--	160	--	200	2	--	3	41,757	39,463
Residential			All	599	560	7,158	6,690	300	300	300	0.9	2,564,098	2,564,098
Office[9]			All	766	118	9,151	1,406	300	45	6	8	2,534,605	2,493,590
Retail			All	452	471	5,401	5,635	36	21	22	10	1,995,598	1,957,788
Restaurant			All	510	589	6,104	7,041	36	24	27	10	2,325,377	2,286,144
Hotel			All	206	167	2,461	1,992	20	20	20	2	849,527	367,920
Performance Venue		Attendees	Passenger	236		2,778		200	36		3	277,817	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,733,950**

2047 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2048 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2048
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,545	--	28,500	--	200	200	--	3	1,168,506	619,920
		Weekday Day	Passenger	2,594	--	28,598	--	200	200	--	3	400,378	211,680
		Weekend	Passenger	--	2,663	--	31,743	200	--	200	3	857,068	408,240
	Other Events	Concerts	Passenger	2,634		24,962		200	200		3	224,660	136,080
		Other	Passenger	590		5,700		200	75		3	199,501	198,450
		Corporate/Community	Passenger	147		1,376		200	18		3	137,587	136,080
		Plaza	Passenger	285		2,653		200	35		3	42,455	42,336
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,894	--
	Sports Team Management		Passenger	17	--	160	--	200	2	--	3	41,803	39,463
Residential			All	599	560	7,166	6,697	300	300	300	0.9	2,566,907	2,566,907
Office[9]			All	767	118	9,161	1,408	300	45	6	8	2,537,381	2,493,590
Retail			All	452	472	5,407	5,641	36	21	22	10	1,997,784	1,957,788
Restaurant			All	511	590	6,110	7,049	36	24	27	10	2,327,925	2,286,144
Hotel			All	206	167	2,464	1,994	20	20	20	2	850,457	367,920
Performance Venue		Attendees	Passenger	236		2,781		200	36		3	278,122	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,736,758**

2048 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2049 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2049
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,548	--	28,525	--	200	200	--	3	1,169,526	619,920
		Weekday Day	Passenger	2,597	--	28,623	--	200	200	--	3	400,728	211,680
		Weekend	Passenger	--	2,666	--	31,771	200	--	200	3	857,817	408,240
	Other Events	Concerts	Passenger	2,636		24,984		200	200		3	224,856	136,080
		Other	Passenger	590		5,705		200	75		3	199,675	198,450
		Corporate/Community	Passenger	148		1,377		200	18		3	137,707	136,080
		Plaza	Passenger	285		2,656		200	35		3	42,492	42,336
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,902	--
	Sports Team Management		Passenger	17	--	160	--	200	2	--	3	41,839	39,463
Residential			All	600	561	7,173	6,703	300	300	300	0.9	2,569,125	2,569,125
Office[9]			All	767	118	9,169	1,409	300	45	6	8	2,539,574	2,493,590
Retail			All	452	472	5,411	5,646	36	21	22	10	1,999,511	1,957,788
Restaurant			All	511	590	6,116	7,055	36	24	27	10	2,329,937	2,286,144
Hotel			All	207	167	2,466	1,996	20	20	20	2	851,192	367,920
Performance Venue		Attendees	Passenger	236		2,784		200	36		3	278,365	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,738,977**

2049 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2050 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2050
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,549	--	28,545	--	200	200	--	3	1,170,346	619,920
		Weekday Day	Passenger	2,599	--	28,643	--	200	200	--	3	401,008	211,680
		Weekend	Passenger	--	2,667	--	31,793	200	--	200	3	858,418	408,240
	Other Events	Concerts	Passenger	2,638		25,001		200	200		3	225,013	136,080
		Other	Passenger	591		5,709		200	75		3	199,815	198,450
		Corporate/Community	Passenger	148		1,378		200	18		3	137,804	136,080
		Plaza	Passenger	285		2,658		200	35		3	42,522	42,336
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	200	0	--	3	8,908	--
	Sports Team Management		Passenger	17	--	160	--	200	2	--	3	41,868	39,463
Residential			All	600	561	7,177	6,707	300	300	300	0.9	2,570,898	2,570,898
Office[9]			All	768	118	9,175	1,410	300	45	6	8	2,541,326	2,493,590
Retail			All	453	472	5,415	5,650	36	21	22	10	2,000,891	1,957,788
Restaurant			All	512	591	6,120	7,060	36	24	28	10	2,331,544	2,312,352
Hotel			All	207	167	2,468	1,998	20	20	20	2	851,779	367,920
Performance Venue		Attendees	Passenger	236		2,786		200	36		3	278,560	272,160
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,766,957**

2050 Reference with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2023 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2023
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	3.4%
Percent All VMT from EVs at Full Buildout[2]	%	3.4%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	0,884	--	9,902	--	0	--	--	3	405,993	--
		Weekday Day	Passenger	0,901	--	9,936	--	0	--	--	3	139,110	--
		Weekend	Passenger	--	0,925	--	11,029	0	--	--	3	297,785	--
	Other Events	Concerts	Passenger	0,915	--	8,673		0	--		3	78,057	--
		Other	Passenger	0,205	--	1,980		0	--		3	69,316	--
		Corporate/Community	Passenger	51	--	478		0	--		3	47,804	--
		Plaza	Passenger	99	--	922		0	--		3	14,751	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.2	--	12	--	0	--	--	3	3,090	--
	Sports Team Management		Passenger	6	--	56	--	0	--	--	3	14,524	--
Residential			All	41	38	489	448	81	81	81	0.2	174,223	174,223
Office			All	58	10	693	122	50	3	--	8	193,495	157,853
Retail			All	38	44	448	530	8	1	2	10	172,064	118,188
Restaurant			All	20	24	244	285	8	--	1	10	93,468	26,208
Hotel			All	72	58	856	693	30	16	13	2	295,356	278,611
Performance Venue	Attendees		Passenger	--	--	--		0	--		3	--	--
	Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**755,083**

2023 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2024 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2024
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.1%
Percent All VMT from EVs at Full Buildout[2]	%	4.1%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,073	--	12,014	--	0	--	--	3	492,575	--
		Weekday Day	Passenger	1,094	--	12,055	--	0	--	--	3	168,776	--
		Weekend	Passenger	--	1,123	--	13,381	0	--	--	3	361,291	--
	Other Events	Concerts	Passenger	1,110	--	10,523		0	--		3	94,704	--
		Other	Passenger	0,249	--	2,403		0	--		3	84,098	--
		Corporate/Community	Passenger	62	--	580		0	--		3	57,999	--
		Plaza	Passenger	120	--	1,119		0	--		3	17,897	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.5	--	14	--	0	--	--	3	3,749	--
	Sports Team Management		Passenger	7	--	68	--	0	--	--	3	17,622	--
Residential			All	50	46	593	544	81	81	81	0.3	211,391	211,391
Office			All	70	12	840	148	50	4	--	8	234,774	210,470
Retail			All	46	54	544	643	8	2	2	10	208,770	183,960
Restaurant			All	25	29	297	346	8	1	1	10	113,407	91,980
Hotel			All	87	70	1,038	840	30	20	16	2	358,365	346,954
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,044,755**

2024 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2025 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2025
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.9%
Percent All VMT from EVs at Full Buildout[2]	%	4.9%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,269	--	14,212	--	0	--	--	3	582,679	--
		Weekday Day	Passenger	1,294	--	14,261	--	0	--	--	3	199,650	--
		Weekend	Passenger	--	1,328	--	15,829	0	--	--	3	427,379	--
	Other Events	Concerts	Passenger	1,313	--	12,447		0	--		3	112,027	--
		Other	Passenger	0,294	--	2,842		0	--		3	99,482	--
		Corporate/Community	Passenger	74	--	686		0	--		3	68,608	--
		Plaza	Passenger	142	--	1,323		0	--		3	21,170	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.8	--	17	--	0	--	--	3	4,435	--
	Sports Team Management		Passenger	8	--	80	--	0	--	--	3	20,845	--
Residential			All	59	54	702	643	81	81	81	0.3	250,074	250,074
Office			All	83	15	994	175	50	4	--	8	277,736	210,470
Retail			All	54	64	643	760	8	2	3	10	246,974	210,168
Restaurant			All	29	34	351	409	8	1	1	10	134,160	91,980
Hotel			All	103	83	1,228	994	30	24	19	2	423,944	415,296
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,177,988**

2025 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2026 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2026
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	5.6%
Percent All VMT from EVs at Full Buildout[2]	%	5.5%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,441	--	16,138	--	0	--	--	3	661,678	--
		Weekday Day	Passenger	1,469	--	16,194	--	0	--	--	3	226,718	--
		Weekend	Passenger	--	1,508	--	17,975	0	--	--	3	485,323	--
	Other Events	Concerts	Passenger	1,491	--	14,135		0	--		3	127,216	--
		Other	Passenger	0,334	--	3,228		0	--		3	112,969	--
		Corporate/Community	Passenger	83	--	779		0	--		3	77,910	--
		Plaza	Passenger	161	--	1,503		0	--		3	24,041	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.0	--	19	--	0	--	--	3	5,036	--
	Sports Team Management		Passenger	10	--	91	--	0	--	--	3	23,671	--
Residential			All	67	61	797	731	81	81	81	0.4	283,993	283,993
Office			All	95	17	1,129	199	50	5	--	8	315,407	263,088
Retail			All	61	72	731	863	8	2	3	10	280,473	210,168
Restaurant			All	33	39	398	465	8	1	1	10	152,357	91,980
Hotel			All	117	95	1,395	1,129	30	27	22	2	481,446	470,484
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,319,713**

2026 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2027 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2027
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	6.2%
Percent All VMT from EVs at Full Buildout[2]	%	6.1%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,594	--	17,850	--	0	--	--	3	731,836	--
		Weekday Day	Passenger	1,625	--	17,911	--	0	--	--	3	250,757	--
		Weekend	Passenger	--	1,668	--	19,881	0	--	--	3	536,783	--
	Other Events	Concerts	Passenger	1,650	--	15,634		0	--		3	140,705	--
		Other	Passenger	0,369	--	3,570		0	--		3	124,948	--
		Corporate/Community	Passenger	92	--	862		0	--		3	86,171	--
		Plaza	Passenger	178	--	1,662		0	--		3	26,590	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.2	--	21	--	0	--	--	3	5,570	--
	Sports Team Management		Passenger	11	--	100	--	0	--	--	3	26,181	--
Residential			All	74	68	882	808	81	81	81	0.4	314,126	314,126
Office			All	105	18	1,249	220	50	6	1	8	348,873	336,672
Retail			All	68	80	808	955	8	3	3	10	310,232	275,940
Restaurant			All	37	43	441	514	8	1	2	10	168,523	118,188
Hotel			All	129	105	1,543	1,249	30	30	24	2	532,530	520,430
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,565,356**

2027 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2028 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2028
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	6.7%
Percent All VMT from EVs at Full Buildout[2]	%	6.6%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,730	--	19,370	--	700	256	--	3	794,154	793,498
		Weekday Day	Passenger	1,763	--	19,436	--	700	257	--	3	272,110	272,009
		Weekend	Passenger	--	1,810	--	21,574	700	--	285	3	582,491	581,742
	Other Events	Concerts	Passenger	1,790		16,965		700	224		3	152,686	152,410
		Other	Passenger	401		3,874		700	51		3	135,587	134,946
		Corporate/Community	Passenger	100		935		700	12		3	93,508	90,720
		Plaza	Passenger	194		1,803		700	23		3	28,854	27,821
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	2	--	23	--	700	0	--	3	6,045	--
	Sports Team Management		Passenger	11	--	109	--	700	1	--	3	28,410	19,732
Residential			All	407	381	4,870	4,551	450	300	300	0.6	1,744,269	1,744,269
Office[9]			All	521	80	6,225	957	300	30	4	8	1,724,205	1,662,394
Retail			All	307	321	3,674	3,833	71	14	15	10	1,357,538	1,313,928
Restaurant			All	347	401	4,152	4,790	71	16	19	10	1,581,875	1,550,304
Hotel			All	140	114	1,674	1,355	30	30	26	2	577,904	530,914
Performance Venue		Attendees	Passenger	160		1,890		700	25		3	189,021	189,000
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**9,063,684**

2028 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2029 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2029
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.1%
Percent All VMT from EVs at Full Buildout[2]	%	7.1%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,851	--	20,721	--	700	274	--	3	849,553	849,290
		Weekday Day	Passenger	1,886	--	20,792	--	700	275	--	3	291,092	291,060
		Weekend	Passenger	--	1,936	--	23,079	700	--	305	3	623,125	622,566
	Other Events	Concerts	Passenger	1,915		18,149		700	240		3	163,337	163,296
		Other	Passenger	429		4,144		700	54		3	145,046	142,884
		Corporate/Community	Passenger	107		1,000		700	13		3	100,031	98,280
		Plaza	Passenger	207		1,929		700	25		3	30,867	30,240
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	25	--	700	0	--	3	6,466	--
	Sports Team Management		Passenger	12	--	116	--	700	1	--	3	30,392	19,732
Residential			All	436	407	5,210	4,869	450	300	300	0.7	1,866,067	1,866,067
Office[9]			All	557	86	6,660	1,023	300	33	5	8	1,844,603	1,841,213
Retail			All	329	343	3,930	4,101	71	15	16	10	1,452,332	1,405,908
Restaurant			All	372	429	4,442	5,124	71	17	20	10	1,692,334	1,642,284
Hotel			All	150	121	1,791	1,450	30	30	28	2	618,258	541,397
Performance Venue		Attendees	Passenger	171		2,022		700	26		3	202,206	196,560
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**9,710,777**

2029 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2030 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2030
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.6%
Percent All VMT from EVs at Full Buildout[2]	%	7.5%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,958	--	21,919	--	700	289	--	3	898,671	895,784
		Weekday Day	Passenger	1,995	--	21,994	--	700	290	--	3	307,922	306,936
		Weekend	Passenger	--	2,048	--	24,413	700	--	322	3	659,152	657,266
	Other Events	Concerts	Passenger	2,026		19,198		700	253		3	172,781	172,141
		Other	Passenger	453		4,384		700	57		3	153,432	150,822
		Corporate/Community	Passenger	113		1,058		700	13		3	105,815	98,280
		Plaza	Passenger	219		2,041		700	26		3	32,651	31,450
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	26	--	700	0	--	3	6,840	--
	Sports Team Management		Passenger	13	--	123	--	700	1	--	3	32,149	19,732
Residential			All	461	431	5,511	5,150	450	300	300	0.7	1,974,009	1,974,009
Office[9]			All	590	91	7,045	1,083	300	34	5	8	1,951,303	1,893,830
Retail			All	348	363	4,158	4,338	71	16	17	10	1,536,341	1,497,888
Restaurant			All	393	453	4,699	5,421	71	18	21	10	1,790,227	1,734,264
Hotel			All	159	128	1,895	1,534	30	30	30	2	654,021	551,880
Performance Venue		Attendees	Passenger	181		2,139		700	28		3	213,897	211,680
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,195,963**

2030 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2031 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2031
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.9%
Percent All VMT from EVs at Full Buildout[2]	%	7.9%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,052	--	22,977	--	700	303	--	3	942,063	939,179
		Weekday Day	Passenger	2,092	--	23,056	--	700	304	--	3	322,789	321,754
		Weekend	Passenger	--	2,147	--	25,592	700	--	338	3	690,978	689,926
	Other Events	Concerts	Passenger	2,123		20,125		700	266		3	181,123	180,986
		Other	Passenger	475		4,595		700	60		3	160,840	158,760
		Corporate/Community	Passenger	119		1,109		700	14		3	110,924	105,840
		Plaza	Passenger	230		2,139		700	28		3	34,228	33,869
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	27	--	700	0	--	3	7,171	--
	Sports Team Management		Passenger	14	--	129	--	700	1	--	3	33,702	19,732
Residential			All	483	452	5,777	5,399	450	300	300	0.7	2,069,364	2,069,364
Office[9]			All	618	95	7,385	1,135	300	36	5	8	2,045,561	1,999,066
Retail			All	364	380	4,359	4,548	71	17	18	10	1,610,554	1,589,868
Restaurant			All	412	475	4,926	5,683	71	19	22	10	1,876,703	1,826,244
Hotel			All	166	135	1,986	1,608	30	30	30	2	685,613	551,880
Performance Venue		Attendees	Passenger	190		2,242		700	29		3	224,225	219,240
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,705,706**

2031 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

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5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2032 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2032
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.2%
Percent All VMT from EVs at Full Buildout[2]	%	8.2%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,135	--	23,908	--	700	316	--	3	980,228	979,474
		Weekday Day	Passenger	2,176	--	23,990	--	700	317	--	3	335,866	335,513
		Weekend	Passenger	--	2,234	--	26,629	700	--	352	3	718,971	718,502
	Other Events	Concerts	Passenger	2,209		20,940		700	276		3	188,461	187,790
		Other	Passenger	495		4,782		700	63		3	167,356	166,698
		Corporate/Community	Passenger	124		1,154		700	15		3	115,418	113,400
		Plaza	Passenger	239		2,226		700	29		3	35,615	35,078
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	29	--	700	0	--	3	7,461	--
	Sports Team Management		Passenger	14	--	134	--	700	1	--	3	35,067	19,732
Residential			All	503	470	6,011	5,618	450	300	300	0.8	2,153,219	2,153,219
Office[9]			All	643	99	7,684	1,181	300	38	5	8	2,128,452	2,104,301
Retail			All	379	396	4,535	4,732	71	17	18	10	1,675,818	1,589,868
Restaurant			All	429	495	5,126	5,913	71	20	23	10	1,952,752	1,918,224
Hotel			All	173	140	2,067	1,673	30	30	30	2	713,396	551,880
Performance Venue		Attendees	Passenger	198		2,333		700	30		3	233,309	226,800
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,100,479**

2032 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2033 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2033
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.5%
Percent All VMT from EVs at Full Buildout[2]	%	8.5%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,208	--	24,719	--	700	326	--	3	1,013,493	1,010,470
		Weekday Day	Passenger	2,250	--	24,805	--	700	328	--	3	347,264	347,155
		Weekend	Passenger	--	2,310	--	27,532	700	--	364	3	743,370	742,997
	Other Events	Concerts	Passenger	2,284		21,651		700	286		3	194,857	194,594
		Other	Passenger	511		4,944		700	65		3	173,035	171,990
		Corporate/Community	Passenger	128		1,193		700	15		3	119,335	113,400
		Plaza	Passenger	247		2,301		700	30		3	36,823	36,288
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	30	--	700	0	--	3	7,714	--
	Sports Team Management		Passenger	15	--	139	--	700	1	--	3	36,257	19,732
Residential			All	520	486	6,216	5,809	450	300	300	0.8	2,226,340	2,226,340
Office[9]			All	665	102	7,945	1,221	300	39	6	8	2,200,732	2,177,885
Retail			All	392	409	4,689	4,893	71	18	19	10	1,732,727	1,681,848
Restaurant			All	443	511	5,300	6,114	71	21	24	10	2,019,065	2,010,204
Hotel			All	179	145	2,137	1,730	30	30	30	2	737,622	551,880
Performance Venue		Attendees	Passenger	205		2,412		700	31		3	241,227	234,360
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,519,143**

2033 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2034 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2034
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.8%
Percent All VMT from EVs at Full Buildout[2]	%	8.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,270	--	25,422	--	700	336	--	3	1,042,295	1,041,466
		Weekday Day	Passenger	2,314	--	25,509	--	700	337	--	3	357,133	356,681
		Weekend	Passenger	--	2,376	--	28,315	700	--	374	3	764,496	763,409
	Other Events	Concerts	Passenger	2,349		22,266		700	294		3	200,394	200,038
		Other	Passenger	526		5,084		700	67		3	177,953	177,282
		Corporate/Community	Passenger	131		1,227		700	16		3	122,726	120,960
		Plaza	Passenger	254		2,367		700	31		3	37,870	37,498
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	30	--	700	0	--	3	7,934	--
	Sports Team Management		Passenger	15	--	143	--	700	1	--	3	37,288	19,732
Residential			All	535	500	6,392	5,974	450	300	300	0.8	2,289,640	2,289,640
Office[9]			All	684	105	8,171	1,256	300	40	6	8	2,263,304	2,230,502
Retail			All	403	421	4,823	5,032	71	19	19	10	1,781,992	1,747,620
Restaurant			All	456	526	5,450	6,288	71	21	24	10	2,076,472	2,010,204
Hotel			All	184	149	2,198	1,779	30	30	30	2	758,594	551,880
Performance Venue		Attendees	Passenger	210		2,481		700	32		3	248,082	241,920
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,788,830**

2034 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

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VMT - vehicle miles travelled

2035 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2035
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.0%
Percent All VMT from EVs at Full Buildout[2]	%	8.9%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,324	--	26,023	--	700	344	--	3	1,066,926	1,066,262
		Weekday Day	Passenger	2,369	--	26,112	--	700	345	--	3	365,572	365,148
		Weekend	Passenger	--	2,432	--	28,984	700	--	383	3	782,562	781,780
	Other Events	Concerts	Passenger	2,405		22,792		700	301		3	205,130	204,800
		Other	Passenger	538		5,205		700	68		3	182,158	179,928
		Corporate/Community	Passenger	135		1,256		700	16		3	125,626	120,960
		Plaza	Passenger	260		2,423		700	32		3	38,765	38,707
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	31	--	700	0	--	3	8,121	--
	Sports Team Management		Passenger	15	--	146	--	700	1	--	3	38,169	19,732
Residential			All	547	511	6,543	6,115	450	300	300	0.8	2,343,779	2,343,779
Office[9]			All	700	108	8,364	1,285	300	41	6	8	2,316,820	2,283,120
Retail			All	413	431	4,937	5,151	71	19	20	10	1,824,127	1,773,828
Restaurant			All	467	538	5,579	6,436	71	22	25	10	2,125,570	2,102,184
Hotel			All	188	153	2,250	1,821	30	30	30	2	776,531	551,880
Performance Venue		Attendees	Passenger	215		2,539		700	33		3	253,945	249,480
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,081,588**

2035 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2036 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2036
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.1%
Percent All VMT from EVs at Full Buildout[2]	%	9.1%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,369	--	26,530	--	700	350	--	3	1,087,727	1,084,860
		Weekday Day	Passenger	2,415	--	26,621	--	700	352	--	3	372,700	372,557
		Weekend	Passenger	--	2,479	--	29,549	700	--	390	3	797,819	796,068
	Other Events	Concerts	Passenger	2,452		23,237		700	307		3	209,129	208,883
		Other	Passenger	549		5,306		700	70		3	185,709	185,220
		Corporate/Community	Passenger	137		1,281		700	16		3	128,075	120,960
		Plaza	Passenger	265		2,470		700	32		3	39,520	38,707
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	32	--	700	0	--	3	8,279	--
	Sports Team Management		Passenger	16	--	149	--	700	1	--	3	38,913	19,732
Residential			All	558	521	6,671	6,234	450	300	300	0.9	2,389,496	2,389,496
Office[9]			All	714	110	8,528	1,311	300	42	6	8	2,362,011	2,335,738
Retail			All	421	439	5,033	5,251	71	19	20	10	1,859,708	1,773,828
Restaurant			All	476	549	5,688	6,562	71	22	26	10	2,167,031	2,128,392
Hotel			All	192	156	2,293	1,857	30	30	30	2	791,678	551,880
Performance Venue		Attendees	Passenger	220		2,589		700	34		3	258,895	257,040
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,263,360**

2036 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2037 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2037
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.3%
Percent All VMT from EVs at Full Buildout[2]	%	9.2%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,407	--	26,952	--	700	356	--	3	1,105,021	1,103,458
		Weekday Day	Passenger	2,454	--	27,045	--	700	357	--	3	378,625	377,849
		Weekend	Passenger	--	2,519	--	30,019	700	--	397	3	810,503	810,356
	Other Events	Concerts	Passenger	2,491		23,606		700	312		3	212,454	212,285
		Other	Passenger	558		5,390		700	71		3	188,662	187,866
		Corporate/Community	Passenger	139		1,301		700	17		3	130,112	128,520
		Plaza	Passenger	270		2,509		700	33		3	40,149	39,917
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	32	--	700	0	--	3	8,411	--
	Sports Team Management		Passenger	16	--	151	--	700	2	--	3	39,532	39,463
Residential			All	567	530	6,777	6,333	450	300	300	0.9	2,427,503	2,427,503
Office[9]			All	725	112	8,663	1,331	300	42	6	8	2,399,580	2,335,738
Retail			All	428	446	5,113	5,335	71	20	21	10	1,889,288	1,865,808
Restaurant			All	483	558	5,779	6,666	71	22	26	10	2,201,499	2,128,392
Hotel			All	195	158	2,330	1,886	30	30	30	2	804,270	551,880
Performance Venue		Attendees	Passenger	223		2,630		700	34		3	263,012	257,040
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,466,074**

2037 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2038 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2038
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.4%
Percent All VMT from EVs at Full Buildout[2]	%	9.4%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,438	--	27,299	--	700	361	--	3	1,119,243	1,118,956
		Weekday Day	Passenger	2,485	--	27,393	--	700	362	--	3	383,499	383,141
		Weekend	Passenger	--	2,551	--	30,405	700	--	402	3	820,935	820,562
	Other Events	Concerts	Passenger	2,523		23,910		700	316		3	215,188	215,006
		Other	Passenger	565		5,460		700	72		3	191,090	190,512
		Corporate/Community	Passenger	141		1,318		700	17		3	131,786	128,520
		Plaza	Passenger	273		2,542		700	33		3	40,666	39,917
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	33	--	700	0	--	3	8,519	--
	Sports Team Management		Passenger	16	--	153	--	700	2	--	3	40,040	39,463
Residential			All	574	537	6,864	6,415	450	300	300	0.9	2,458,746	2,458,746
Office[9]			All	734	113	8,775	1,349	300	43	6	8	2,430,464	2,388,355
Retail			All	433	452	5,179	5,403	71	20	21	10	1,913,604	1,865,808
Restaurant			All	489	565	5,853	6,752	71	23	26	10	2,229,834	2,194,164
Hotel			All	198	160	2,360	1,910	30	30	30	2	814,622	551,880
Performance Venue		Attendees	Passenger	226		2,664		700	35		3	266,397	264,600
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,659,630**

2038 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

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5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

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   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2039 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2039
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.5%
Percent All VMT from EVs at Full Buildout[2]	%	9.5%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,463	--	27,580	--	700	364	--	3	1,130,770	1,128,254
		Weekday Day	Passenger	2,511	--	27,675	--	700	366	--	3	387,448	387,374
		Weekend	Passenger	--	2,577	--	30,718	700	--	406	3	829,390	828,727
	Other Events	Concerts	Passenger	2,549		24,156		700	319		3	217,405	217,048
		Other	Passenger	571		5,516		700	72		3	193,058	190,512
		Corporate/Community	Passenger	143		1,331		700	17		3	133,144	128,520
		Plaza	Passenger	276		2,568		700	33		3	41,084	39,917
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	33	--	700	0	--	3	8,607	--
	Sports Team Management		Passenger	16	--	155	--	700	2	--	3	40,453	39,463
Residential			All	580	542	6,935	6,481	450	300	300	0.9	2,484,063	2,484,063
Office[9]			All	742	114	8,865	1,362	300	43	6	8	2,455,490	2,388,355
Retail			All	437	456	5,232	5,459	71	20	21	10	1,933,308	1,865,808
Restaurant			All	495	571	5,913	6,822	71	23	27	10	2,252,794	2,220,372
Hotel			All	200	162	2,384	1,930	30	30	30	2	823,010	551,880
Performance Venue		Attendees	Passenger	228		2,691		700	35		3	269,140	264,600
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,734,894**

2039 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2040 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2040
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.6%
Percent All VMT from EVs at Full Buildout[2]	%	9.5%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,483	--	27,805	--	700	367	--	3	1,139,992	1,137,553
		Weekday Day	Passenger	2,531	--	27,901	--	700	369	--	3	390,608	390,550
		Weekend	Passenger	--	2,598	--	30,969	700	--	409	3	836,154	834,851
	Other Events	Concerts	Passenger	2,570		24,353		700	322		3	219,178	219,089
		Other	Passenger	575		5,561		700	73		3	194,633	193,158
		Corporate/Community	Passenger	144		1,342		700	17		3	134,230	128,520
		Plaza	Passenger	278		2,589		700	34		3	41,419	41,126
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	33	--	700	0	--	3	8,677	--
	Sports Team Management		Passenger	16	--	156	--	700	2	--	3	40,783	39,463
Residential			All	585	547	6,992	6,534	450	300	300	0.9	2,504,310	2,504,310
Office[9]			All	748	115	8,937	1,374	300	44	6	8	2,475,504	2,440,973
Retail			All	441	460	5,275	5,504	71	20	21	10	1,949,066	1,865,808
Restaurant			All	499	575	5,961	6,877	71	23	27	10	2,271,156	2,220,372
Hotel			All	201	163	2,404	1,946	30	30	30	2	829,718	551,880
Performance Venue		Attendees	Passenger	230		2,713		700	35		3	271,335	264,600
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,832,253**

2040 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2041 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2041
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.6%
Percent All VMT from EVs at Full Buildout[2]	%	9.6%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,499	--	27,981	--	700	370	--	3	1,147,226	1,146,852
		Weekday Day	Passenger	2,547	--	28,078	--	700	371	--	3	393,086	392,666
		Weekend	Passenger	--	2,615	--	31,165	700	--	412	3	841,460	840,974
	Other Events	Concerts	Passenger	2,586		24,508		700	324		3	220,568	220,450
		Other	Passenger	579		5,596		700	74		3	195,868	195,804
		Corporate/Community	Passenger	145		1,351		700	17		3	135,081	128,520
		Plaza	Passenger	280		2,605		700	34		3	41,682	41,126
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	33	--	700	0	--	3	8,732	--
	Sports Team Management		Passenger	17	--	157	--	700	2	--	3	41,041	39,463
Residential			All	589	550	7,036	6,575	450	300	300	0.9	2,520,188	2,520,188
Office[9]			All	753	116	8,994	1,382	300	44	6	8	2,491,200	2,440,973
Retail			All	444	463	5,308	5,538	71	21	21	10	1,961,424	1,931,580
Restaurant			All	502	579	5,999	6,921	71	23	27	10	2,285,555	2,220,372
Hotel			All	203	164	2,419	1,958	30	30	30	2	834,978	551,880
Performance Venue		Attendees	Passenger	232		2,731		700	36		3	273,057	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,943,009**

2041 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2042 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2042
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.7%
Percent All VMT from EVs at Full Buildout[2]	%	9.6%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,511	--	28,120	--	700	371	--	3	1,152,915	1,149,952
		Weekday Day	Passenger	2,560	--	28,217	--	700	373	--	3	395,036	394,783
		Weekend	Passenger	--	2,628	--	31,320	700	--	414	3	845,632	845,057
	Other Events	Concerts	Passenger	2,599		24,629		700	325		3	221,662	221,130
		Other	Passenger	582		5,624		700	74		3	196,839	195,804
		Corporate/Community	Passenger	145		1,358		700	17		3	135,751	128,520
		Plaza	Passenger	281		2,618		700	34		3	41,889	41,126
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,776	--
	Sports Team Management		Passenger	17	--	158	--	700	2	--	3	41,245	39,463
Residential			All	591	553	7,071	6,608	450	300	300	0.9	2,532,692	2,532,692
Office[9]			All	756	116	9,039	1,389	300	44	6	8	2,503,560	2,440,973
Retail			All	446	465	5,334	5,566	71	21	22	10	1,971,155	1,957,788
Restaurant			All	504	582	6,029	6,955	71	23	27	10	2,296,895	2,220,372
Hotel			All	204	165	2,431	1,968	30	30	30	2	839,121	551,880
Performance Venue		Attendees	Passenger	233		2,744		700	36		3	274,411	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**12,991,700**

2042 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2043 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2043
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.7%
Percent All VMT from EVs at Full Buildout[2]	%	9.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,521	--	28,228	--	700	373	--	3	1,157,328	1,156,151
		Weekday Day	Passenger	2,570	--	28,325	--	700	374	--	3	396,548	395,842
		Weekend	Passenger	--	2,638	--	31,440	700	--	415	3	848,869	847,098
	Other Events	Concerts	Passenger	2,609		24,723		700	327		3	222,511	222,491
		Other	Passenger	584		5,646		700	74		3	197,593	195,804
		Corporate/Community	Passenger	146		1,363		700	18		3	136,271	136,080
		Plaza	Passenger	282		2,628		700	34		3	42,049	41,126
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,809	--
	Sports Team Management		Passenger	17	--	159	--	700	2	--	3	41,403	39,463
Residential			All	594	555	7,098	6,633	450	300	300	0.9	2,542,398	2,542,398
Office[9]			All	759	117	9,073	1,394	300	45	6	8	2,513,154	2,493,590
Retail			All	448	467	5,355	5,587	71	21	22	10	1,978,709	1,957,788
Restaurant			All	506	584	6,052	6,982	71	24	27	10	2,305,697	2,286,144
Hotel			All	204	165	2,440	1,975	30	30	30	2	842,337	551,880
Performance Venue		Attendees	Passenger	234		2,755		700	36		3	275,461	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,138,015**

2043 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2044 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2044
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,529	--	28,311	--	700	374	--	3	1,160,769	1,159,250
		Weekday Day	Passenger	2,577	--	28,409	--	700	375	--	3	397,727	396,900
		Weekend	Passenger	--	2,646	--	31,533	700	--	417	3	851,393	851,180
	Other Events	Concerts	Passenger	2,616		24,797		700	328		3	223,172	223,171
		Other	Passenger	586		5,662		700	74		3	198,180	195,804
		Corporate/Community	Passenger	146		1,367		700	18		3	136,676	136,080
		Plaza	Passenger	283		2,636		700	34		3	42,174	41,126
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,835	--
	Sports Team Management		Passenger	17	--	159	--	700	2	--	3	41,526	39,463
Residential			All	596	556	7,119	6,653	450	300	300	0.9	2,549,939	2,549,939
Office[9]			All	761	117	9,100	1,399	300	45	6	8	2,520,609	2,493,590
Retail			All	449	469	5,371	5,604	71	21	22	10	1,984,579	1,957,788
Restaurant			All	508	586	6,070	7,002	71	24	27	10	2,312,537	2,286,144
Hotel			All	205	166	2,447	1,981	30	30	30	2	844,836	551,880
Performance Venue		Attendees	Passenger	234		2,763		700	36		3	276,280	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,154,477**

2044 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2045 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2045
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,534	--	28,377	--	700	375	--	3	1,163,459	1,162,350
		Weekday Day	Passenger	2,583	--	28,475	--	700	376	--	3	398,648	397,958
		Weekend	Passenger	--	2,652	--	31,606	700	--	418	3	853,366	853,222
	Other Events	Concerts	Passenger	2,622		24,854		700	328		3	223,689	223,171
		Other	Passenger	587		5,675		700	75		3	198,639	198,450
		Corporate/Community	Passenger	147		1,370		700	18		3	136,993	136,080
		Plaza	Passenger	284		2,642		700	34		3	42,272	41,126
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,856	--
	Sports Team Management		Passenger	17	--	159	--	700	2	--	3	41,622	39,463
Residential			All	597	558	7,135	6,668	450	300	300	0.9	2,555,847	2,555,847
Office[9]			All	763	117	9,121	1,402	300	45	6	8	2,526,448	2,493,590
Retail			All	450	470	5,383	5,617	71	21	22	10	1,989,177	1,957,788
Restaurant			All	509	587	6,084	7,019	71	24	27	10	2,317,894	2,286,144
Hotel			All	205	166	2,453	1,986	30	30	30	2	846,793	551,880
Performance Venue		Attendees	Passenger	235		2,769		700	36		3	276,921	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,169,230**

2045 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2046 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2046
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,539	--	28,428	--	700	376	--	3	1,165,568	1,165,450
		Weekday Day	Passenger	2,588	--	28,527	--	700	377	--	3	399,371	399,017
		Weekend	Passenger	--	2,657	--	31,663	700	--	418	3	854,913	853,222
	Other Events	Concerts	Passenger	2,627		24,899		700	329		3	224,095	223,852
		Other	Passenger	588		5,686		700	75		3	198,999	198,450
		Corporate/Community	Passenger	147		1,372		700	18		3	137,241	136,080
		Plaza	Passenger	284		2,647		700	35		3	42,349	42,336
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,872	--
	Sports Team Management		Passenger	17	--	160	--	700	2	--	3	41,698	39,463
Residential			All	598	559	7,148	6,680	450	300	300	0.9	2,560,468	2,560,468
Office[9]			All	765	118	9,138	1,404	300	45	6	8	2,531,016	2,493,590
Retail			All	451	471	5,393	5,627	71	21	22	10	1,992,773	1,957,788
Restaurant			All	510	588	6,095	7,031	71	24	27	10	2,322,085	2,286,144
Hotel			All	206	167	2,458	1,989	30	30	30	2	848,324	551,880
Performance Venue		Attendees	Passenger	235		2,774		700	36		3	277,423	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,179,899**

2046 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2047 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2047
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,543	--	28,469	--	700	376	--	3	1,167,226	1,165,450
		Weekday Day	Passenger	2,592	--	28,567	--	700	377	--	3	399,939	399,017
		Weekend	Passenger	--	2,660	--	31,708	700	--	419	3	856,129	855,263
	Other Events	Concerts	Passenger	2,631		24,935		700	329		3	224,414	223,852
		Other	Passenger	589		5,694		700	75		3	199,282	198,450
		Corporate/Community	Passenger	147		1,374		700	18		3	137,436	136,080
		Plaza	Passenger	285		2,651		700	35		3	42,409	42,336
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,884	--
	Sports Team Management		Passenger	17	--	160	--	700	2	--	3	41,757	39,463
Residential			All	599	560	7,158	6,690	450	300	300	0.9	2,564,098	2,564,098
Office[9]			All	766	118	9,151	1,406	300	45	6	8	2,534,605	2,493,590
Retail			All	452	471	5,401	5,635	71	21	22	10	1,995,598	1,957,788
Restaurant			All	510	589	6,104	7,041	71	24	27	10	2,325,377	2,286,144
Hotel			All	206	167	2,461	1,992	30	30	30	2	849,527	551,880
Performance Venue		Attendees	Passenger	236		2,778		700	36		3	277,817	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,185,570**

2047 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2048 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2048
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,545	--	28,500	--	700	376	--	3	1,168,506	1,165,450
		Weekday Day	Passenger	2,594	--	28,598	--	700	378	--	3	400,378	400,075
		Weekend	Passenger	--	2,663	--	31,743	700	--	419	3	857,068	855,263
	Other Events	Concerts	Passenger	2,634		24,962		700	330		3	224,660	224,532
		Other	Passenger	590		5,700		700	75		3	199,501	198,450
		Corporate/Community	Passenger	147		1,376		700	18		3	137,587	136,080
		Plaza	Passenger	285		2,653		700	35		3	42,455	42,336
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,894	--
	Sports Team Management		Passenger	17	--	160	--	700	2	--	3	41,803	39,463
Residential			All	599	560	7,166	6,697	450	300	300	0.9	2,566,907	2,566,907
Office[9]			All	767	118	9,161	1,408	300	45	6	8	2,537,381	2,493,590
Retail			All	452	472	5,407	5,641	71	21	22	10	1,997,784	1,957,788
Restaurant			All	511	590	6,110	7,049	71	24	27	10	2,327,925	2,286,144
Hotel			All	206	167	2,464	1,994	30	30	30	2	850,457	551,880
Performance Venue		Attendees	Passenger	236		2,781		700	36		3	278,122	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,190,118**

2048 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2049 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2049
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,548	--	28,525	--	700	377	--	3	1,169,526	1,168,549
		Weekday Day	Passenger	2,597	--	28,623	--	700	378	--	3	400,728	400,075
		Weekend	Passenger	--	2,666	--	31,771	700	--	420	3	857,817	857,304
	Other Events	Concerts	Passenger	2,636		24,984		700	330		3	224,856	224,532
		Other	Passenger	590		5,705		700	75		3	199,675	198,450
		Corporate/Community	Passenger	148		1,377		700	18		3	137,707	136,080
		Plaza	Passenger	285		2,656		700	35		3	42,492	42,336
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,902	--
	Sports Team Management		Passenger	17	--	160	--	700	2	--	3	41,839	39,463
Residential			All	600	561	7,173	6,703	450	300	300	0.9	2,569,125	2,569,125
Office[9]			All	767	118	9,169	1,409	300	45	6	8	2,539,574	2,493,590
Retail			All	452	472	5,411	5,646	71	21	22	10	1,999,511	1,957,788
Restaurant			All	511	590	6,116	7,055	71	24	27	10	2,329,937	2,286,144
Hotel			All	207	167	2,466	1,996	30	30	30	2	851,192	551,880
Performance Venue		Attendees	Passenger	236		2,784		700	36		3	278,365	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,197,477**

2049 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2050 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2050
Scenario	-	Reference
Percent Passenger VMT from EVs at Full Buildout[2]	%	9.8%
Percent All VMT from EVs at Full Buildout[2]	%	9.8%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,549	--	28,545	--	700	377	--	3	1,170,346	1,168,549
		Weekday Day	Passenger	2,599	--	28,643	--	700	378	--	3	401,008	400,075
		Weekend	Passenger	--	2,667	--	31,793	700	--	420	3	858,418	857,304
	Other Events	Concerts	Passenger	2,638		25,001		700	330		3	225,013	224,532
		Other	Passenger	591		5,709		700	75		3	199,815	198,450
		Corporate/Community	Passenger	148		1,378		700	18		3	137,804	136,080
		Plaza	Passenger	285		2,658		700	35		3	42,522	42,336
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	34	--	700	0	--	3	8,908	--
	Sports Team Management		Passenger	17	--	160	--	700	2	--	3	41,868	39,463
Residential			All	600	561	7,177	6,707	450	300	300	0.9	2,570,898	2,570,898
Office[9]			All	768	118	9,175	1,410	300	45	6	8	2,541,326	2,493,590
Retail			All	453	472	5,415	5,650	71	21	22	10	2,000,891	1,957,788
Restaurant			All	512	591	6,120	7,060	71	24	28	10	2,331,544	2,312,352
Hotel			All	207	167	2,468	1,998	30	30	30	2	851,779	551,880
Performance Venue		Attendees	Passenger	236		2,786		700	36		3	278,560	272,160
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,225,458**

2050 Reference with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2023 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2023
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	3.4%
Percent All VMT from EVs at Full Buildout[2]	%	3.4%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	0,884	--	9,902	--	0	--	--	3	406,000	--
		Weekday Day	Passenger	0,901	--	9,937	--	0	--	--	3	139,112	--
		Weekend	Passenger	--	0,925	--	11,029	0	--	--	3	297,790	--
	Other Events	Concerts	Passenger	0,915	--	8,673		0	--		3	78,059	--
		Other	Passenger	0,205	--	1,980		0	--		3	69,317	--
		Corporate/Community	Passenger	51	--	478		0	--		3	47,805	--
		Plaza	Passenger	99	--	922		0	--		3	14,751	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.2	--	12	--	0	--	--	3	3,090	--
	Sports Team Management		Passenger	6	--	56	--	0	--	--	3	14,524	--
Residential			All	41	38	491	450	54	54	54	0.4	174,878	174,878
Office			All	58	10	695	123	50	3	--	8	194,222	157,853
Retail			All	38	44	450	532	4	1	2	10	172,710	118,188
Restaurant			All	20	24	245	286	4	--	1	10	93,819	26,208
Hotel			All	72	58	859	695	20	17	13	2	296,466	291,766
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**768,892**

2023 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

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2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2024 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2024
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.1%
Percent All VMT from EVs at Full Buildout[2]	%	4.1%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,073	--	12,014	--	0	--	--	3	492,581	--
		Weekday Day	Passenger	1,094	--	12,056	--	0	--	--	3	168,778	--
		Weekend	Passenger	--	1,123	--	13,381	0	--	--	3	361,295	--
	Other Events	Concerts	Passenger	1,110	--	10,523		0	--		3	94,705	--
		Other	Passenger	0,249	--	2,403		0	--		3	84,099	--
		Corporate/Community	Passenger	62	--	580		0	--		3	57,999	--
		Plaza	Passenger	120	--	1,119		0	--		3	17,897	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.5	--	14	--	0	--	--	3	3,749	--
	Sports Team Management		Passenger	7	--	68	--	0	--	--	3	17,622	--
Residential			All	50	46	595	546	54	54	54	0.4	212,135	212,135
Office			All	70	12	843	149	50	4	--	8	235,601	210,470
Retail			All	46	54	546	645	4	2	2	10	209,506	183,960
Restaurant			All	25	29	298	347	4	1	1	10	113,807	91,980
Hotel			All	87	70	1,042	843	20	20	16	2	359,628	346,954
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,045,499**

2024 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

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2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

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Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2025 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2025
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.9%
Percent All VMT from EVs at Full Buildout[2]	%	4.9%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,269	--	14,212	--	0	--	--	3	582,684	--
		Weekday Day	Passenger	1,294	--	14,261	--	0	--	--	3	199,651	--
		Weekend	Passenger	--	1,328	--	15,829	0	--	--	3	427,383	--
	Other Events	Concerts	Passenger	1,313	--	12,448		0	--		3	112,028	--
		Other	Passenger	0,294	--	2,842		0	--		3	99,483	--
		Corporate/Community	Passenger	74	--	686		0	--		3	68,609	--
		Plaza	Passenger	142	--	1,323		0	--		3	21,171	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.8	--	17	--	0	--	--	3	4,435	--
	Sports Team Management		Passenger	8	--	80	--	0	--	--	3	20,845	--
Residential			All	59	54	704	646	54	54	54	0.5	250,955	250,955
Office			All	83	15	998	176	50	4	--	8	278,715	210,470
Retail			All	54	64	646	763	4	2	3	10	247,844	210,168
Restaurant			All	29	34	352	411	4	1	1	10	134,633	91,980
Hotel			All	103	83	1,232	998	20	20	19	2	425,438	362,678
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,126,252**

2025 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2026 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2026
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	5.9%
Percent All VMT from EVs at Full Buildout[2]	%	5.9%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,525	--	17,080	--	0	--	--	3	700,263	--
		Weekday Day	Passenger	1,555	--	17,138	--	0	--	--	3	239,939	--
		Weekend	Passenger	--	1,596	--	19,023	0	--	--	3	513,624	--
	Other Events	Concerts	Passenger	1,578	--	14,959		0	--		3	134,634	--
		Other	Passenger	0,353	--	3,416		0	--		3	119,557	--
		Corporate/Community	Passenger	88	--	825		0	--		3	82,453	--
		Plaza	Passenger	171	--	1,590		0	--		3	25,443	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.1	--	20	--	0	--	--	3	5,330	--
	Sports Team Management		Passenger	10	--	96	--	0	--	--	3	25,052	--
Residential			All	71	65	846	776	54	54	54	0.6	301,618	301,618
Office			All	100	18	1,199	212	50	5	1	8	334,982	284,054
Retail			All	65	77	776	917	4	3	3	10	297,880	275,940
Restaurant			All	35	41	423	494	4	1	1	10	161,813	91,980
Hotel			All	124	100	1,481	1,199	20	20	20	2	511,326	367,920
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,321,513**

2026 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2027 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2027
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.1%
Percent All VMT from EVs at Full Buildout[2]	%	7.1%
Project Chargers Commitment	%	10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,837	--	20,569	--	0	--	--	3	843,319	--
		Weekday Day	Passenger	1,872	--	20,640	--	0	--	--	3	288,956	--
		Weekend	Passenger	--	1,922	--	22,909	0	--	--	3	618,552	--
	Other Events	Concerts	Passenger	1,901	--	18,015		0	--		3	162,139	--
		Other	Passenger	0,426	--	4,114		0	--		3	143,981	--
		Corporate/Community	Passenger	106	--	993		0	--		3	99,297	--
		Plaza	Passenger	206	--	1,915		0	--		3	30,640	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.6	--	25	--	0	--	--	3	6,419	--
	Sports Team Management		Passenger	12	--	116	--	0	--	--	3	30,169	--
Residential			All	85	78	1,019	935	54	54	54	0.7	363,275	363,275
Office			All	121	21	1,444	255	50	7	1	8	403,459	389,290
Retail			All	78	92	935	1,104	4	3	4	10	358,772	302,148
Restaurant			All	43	50	510	595	4	2	2	10	194,890	183,960
Hotel			All	149	121	1,784	1,444	20	20	20	2	615,851	367,920
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,606,592**

2027 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2028 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2028
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.5%
Percent All VMT from EVs at Full Buildout[2]	%	8.5%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,197	--	24,597	--	200	200	--	3	1,008,480	619,920
		Weekday Day	Passenger	2,239	--	24,682	--	200	200	--	3	345,546	211,680
		Weekend	Passenger	--	2,299	--	27,396	200	--	200	3	739,693	408,240
	Other Events	Concerts	Passenger	2,273		21,544		200	200		3	193,893	136,080
		Other	Passenger	509		4,919		200	65		3	172,179	171,990
		Corporate/Community	Passenger	127		1,187		200	15		3	118,744	113,400
		Plaza	Passenger	246		2,290		200	30		3	36,641	36,288
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	3	--	29	--	200	0	--	3	7,676	--
	Sports Team Management		Passenger	15	--	138	--	200	1	--	3	36,078	19,732
Residential			All	517	483	6,206	5,799	300	300	300	0.8	2,222,792	2,222,792
Office[9]			All	662	102	7,933	1,219	300	39	6	8	2,197,224	2,177,885
Retail			All	390	407	4,682	4,885	36	18	19	10	1,729,965	1,681,848
Restaurant			All	441	509	5,291	6,104	36	20	24	10	2,015,847	1,944,432
Hotel			All	178	144	2,133	1,727	20	20	20	2	736,446	367,920
Performance Venue		Attendees	Passenger	204		2,400		200	31		3	240,033	234,360
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**10,346,566**

2028 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

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   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2029 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2029
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	10.0%
Percent All VMT from EVs at Full Buildout[2]	%	10.0%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,601	--	29,118	--	200	200	--	3	1,193,846	619,920
		Weekday Day	Passenger	2,651	--	29,219	--	200	200	--	3	409,060	211,680
		Weekend	Passenger	--	2,721	--	32,432	200	--	200	3	875,654	408,240
	Other Events	Concerts	Passenger	2,691		25,504		200	200		3	229,532	136,080
		Other	Passenger	602		5,824		200	77		3	203,827	203,742
		Corporate/Community	Passenger	151		1,406		200	18		3	140,571	136,080
		Plaza	Passenger	291		2,711		200	35		3	43,376	42,336
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	35	--	200	0	--	3	9,087	--
	Sports Team Management		Passenger	17	--	164	--	200	2	--	3	42,709	39,463
Residential			All	612	572	7,346	6,865	300	300	300	1.0	2,631,179	2,631,179
Office[9]			All	783	120	9,390	1,443	300	46	7	8	2,600,914	2,567,174
Retail			All	462	482	5,542	5,782	36	21	22	10	2,047,806	1,957,788
Restaurant			All	522	602	6,263	7,226	36	24	28	10	2,386,213	2,312,352
Hotel			All	211	171	2,525	2,044	20	20	20	2	871,752	367,920
Performance Venue		Attendees	Passenger	241		2,842		200	37		3	284,153	279,720
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,913,674**

2029 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2030 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2030
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	11.8%
Percent All VMT from EVs at Full Buildout[2]	%	11.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	3,045	--	34,096	--	200	200	--	3	1,397,928	619,920
		Weekday Day	Passenger	3,104	--	34,213	--	200	200	--	3	478,987	211,680
		Weekend	Passenger	--	3,186	--	37,976	200	--	200	3	1,025,343	408,240
	Other Events	Concerts	Passenger	3,151		29,863		200	200		3	268,769	136,080
		Other	Passenger	705		6,819		200	90		3	238,671	238,140
		Corporate/Community	Passenger	176		1,646		200	21		3	164,600	158,760
		Plaza	Passenger	341		3,174		200	41		3	50,791	49,594
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	4	--	41	--	200	0	--	3	10,640	--
	Sports Team Management		Passenger	20	--	192	--	200	2	--	3	50,010	39,463
Residential			All	717	670	8,604	8,041	300	300	300	1.1	3,081,917	3,081,917
Office[9]			All	917	141	10,999	1,690	300	54	8	8	3,046,468	3,009,082
Retail			All	541	564	6,491	6,773	36	25	26	10	2,398,609	2,325,708
Restaurant			All	611	705	7,336	8,463	36	29	33	10	2,794,987	2,772,252
Hotel			All	247	200	2,958	2,395	20	20	20	2	1,021,088	367,920
Performance Venue		Attendees	Passenger	282		3,327		200	44		3	332,728	332,640
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,751,396**

2030 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2031 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2031
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	13.7%
Percent All VMT from EVs at Full Buildout[2]	%	13.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	3,543	--	39,672	--	200	200	--	3	1,626,550	619,920
		Weekday Day	Passenger	3,612	--	39,809	--	200	200	--	3	557,323	211,680
		Weekend	Passenger	--	3,707	--	44,186	200	--	200	3	1,193,031	408,240
	Other Events	Concerts	Passenger	3,666		34,747		200	200		3	312,724	136,080
		Other	Passenger	821		7,934		200	104		3	277,704	275,184
		Corporate/Community	Passenger	205		1,915		200	25		3	191,520	189,000
		Plaza	Passenger	397		3,694		200	48		3	59,098	58,061
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	5	--	47	--	200	0	--	3	12,381	--
	Sports Team Management		Passenger	23	--	223	--	200	2	--	3	58,189	39,463
Residential			All	834	780	10,013	9,357	300	300	300	1.3	3,586,543	3,586,543
Office[9]			All	1,067	164	12,800	1,967	300	63	9	8	3,545,289	3,503,606
Retail			All	629	657	7,554	7,882	36	29	31	10	2,791,352	2,719,836
Restaurant			All	711	821	8,538	9,849	36	33	36	10	3,252,632	3,100,860
Hotel			All	287	233	3,442	2,787	20	20	20	2	1,188,279	367,920
Performance Venue		Attendees	Passenger	328		3,871		200	51		3	387,144	385,560
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**15,601,954**

2031 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2032 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2032
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	15.7%
Percent All VMT from EVs at Full Buildout[2]	%	15.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	4,069	--	45,563	--	200	200	--	3	1,868,064	619,920
		Weekday Day	Passenger	4,148	--	45,720	--	200	200	--	3	640,075	211,680
		Weekend	Passenger	--	4,258	--	50,747	200	--	200	3	1,370,175	408,240
	Other Events	Concerts	Passenger	4,211		39,906		200	200		3	359,158	136,080
		Other	Passenger	943		9,113		200	120		3	318,938	317,520
		Corporate/Community	Passenger	236		2,200		200	29		3	219,957	219,240
		Plaza	Passenger	456		4,242		200	56		3	67,872	67,738
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	6	--	54	--	200	0	--	3	14,219	--
	Sports Team Management		Passenger	27	--	256	--	200	3	--	3	66,829	59,195
Residential			All	958	896	11,501	10,747	300	300	300	1.5	4,119,386	4,119,386
Office[9]			All	1,225	189	14,701	2,259	300	72	11	8	4,072,004	4,019,098
Retail			All	723	754	8,676	9,053	36	34	36	10	3,206,056	3,166,632
Restaurant			All	817	943	9,806	11,312	36	36	36	10	3,735,867	3,265,290
Hotel			All	330	267	3,954	3,201	20	20	20	2	1,364,819	367,920
Performance Venue		Attendees	Passenger	377		4,446		200	58		3	444,627	438,480
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**17,416,418**

2032 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2033 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2033
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	17.8%
Percent All VMT from EVs at Full Buildout[2]	%	17.8%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	4,620	--	51,726	--	200	200	--	3	2,120,766	619,920
		Weekday Day	Passenger	4,709	--	51,904	--	200	200	--	3	726,661	211,680
		Weekend	Passenger	--	4,834	--	57,612	200	--	200	3	1,555,526	408,240
	Other Events	Concerts	Passenger	4,780		45,305		200	200		3	407,744	136,080
		Other	Passenger	1,070		10,345		200	136		3	362,082	359,856
		Corporate/Community	Passenger	268		2,497		200	33		3	249,712	249,480
		Plaza	Passenger	517		4,816		200	63		3	77,054	76,205
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	7	--	62	--	200	0	--	3	16,142	--
	Sports Team Management		Passenger	31	--	291	--	200	3	--	3	75,869	59,195
Residential			All	1,088	1,017	13,057	12,202	300	300	300	1.7	4,676,784	4,676,784
Office[9]			All	1,391	214	16,691	2,565	300	82	12	8	4,622,990	4,566,240
Retail			All	820	856	9,850	10,278	36	36	36	10	3,639,870	3,265,290
Restaurant			All	928	1,070	11,133	12,843	36	36	36	10	4,241,370	3,265,290
Hotel			All	375	303	4,489	3,634	20	20	20	2	1,549,493	367,920
Performance Venue		Attendees	Passenger	428		5,048		200	66		3	504,775	498,960
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**18,761,140**

2033 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2034 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2034
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	20.0%
Percent All VMT from EVs at Full Buildout[2]	%	20.0%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	5,193	--	58,144	--	200	200	--	3	2,383,891	619,920
		Weekday Day	Passenger	5,293	--	58,344	--	200	200	--	3	816,818	211,680
		Weekend	Passenger	--	5,433	--	64,760	200	--	200	3	1,748,521	408,240
	Other Events	Concerts	Passenger	5,373		50,926		200	200		3	458,333	136,080
		Other	Passenger	1,203		11,629		200	153		3	407,006	404,838
		Corporate/Community	Passenger	301		2,807		200	37		3	280,694	279,720
		Plaza	Passenger	581		5,413		200	71		3	86,614	85,882
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	7	--	70	--	200	0	--	3	18,145	--
	Sports Team Management		Passenger	34	--	327	--	200	4	--	3	85,282	78,926
Residential			All	1,223	1,143	14,676	13,715	300	300	300	1.9	5,256,960	5,256,960
Office[9]			All	1,564	241	18,761	2,883	300	93	14	8	5,196,493	5,186,966
Retail			All	922	962	11,072	11,553	36	36	36	10	4,091,412	3,265,290
Restaurant			All	1,043	1,203	12,514	14,436	36	36	36	10	4,767,531	3,265,290
Hotel			All	421	341	5,046	4,085	20	20	20	2	1,741,715	367,920
Performance Venue		Attendees	Passenger	481		5,674		200	75		3	567,402	567,000
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**20,134,713**

2034 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2035 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2035
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	22.3%
Percent All VMT from EVs at Full Buildout[2]	%	22.3%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	5,786	--	64,790	--	200	200	--	3	2,656,376	619,920
		Weekday Day	Passenger	5,898	--	65,013	--	200	200	--	3	910,183	211,680
		Weekend	Passenger	--	6,054	--	72,162	200	--	200	3	1,948,382	408,240
	Other Events	Concerts	Passenger	5,987		56,747		200	200		3	510,721	136,080
		Other	Passenger	1,340		12,958		200	171		3	453,528	452,466
		Corporate/Community	Passenger	335		3,128		200	41		3	312,778	309,960
		Plaza	Passenger	648		6,032		200	79		3	96,514	95,558
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	8	--	77	--	200	1	--	3	20,219	19,732
	Sports Team Management		Passenger	38	--	364	--	200	4	--	3	95,030	78,926
Residential			All	1,363	1,273	16,353	15,282	300	300	300	2.1	5,857,586	5,857,586
Office[9]			All	1,743	268	20,905	3,213	300	103	15	8	5,790,209	5,734,109
Retail			All	1,028	1,072	12,337	12,873	36	36	36	10	4,558,870	3,265,290
Restaurant			All	1,162	1,340	13,944	16,086	36	36	36	10	5,312,238	3,265,290
Hotel			All	469	380	5,622	4,551	20	20	20	2	1,940,712	367,920
Performance Venue		Attendees	Passenger	536		6,323		200	83		3	632,258	627,480
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**21,450,237**

2035 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2036 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2036
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	24.7%
Percent All VMT from EVs at Full Buildout[2]	%	24.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	6,397	--	71,631	--	200	200	--	3	2,936,875	619,920
		Weekday Day	Passenger	6,521	--	71,878	--	200	200	--	3	1,006,294	211,680
		Weekend	Passenger	--	6,694	--	79,782	200	--	200	3	2,154,120	408,240
	Other Events	Concerts	Passenger	6,620		62,739		200	200		3	564,651	136,080
		Other	Passenger	1,482		14,326		200	189		3	501,418	500,094
		Corporate/Community	Passenger	371		3,458		200	45		3	345,805	340,200
		Plaza	Passenger	716		6,669		200	88		3	106,706	106,445
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	9	--	86	--	200	1	--	3	22,354	19,732
	Sports Team Management		Passenger	42	--	403	--	200	5	--	3	105,065	98,658
Residential			All	1,507	1,408	18,079	16,895	300	300	300	2.3	6,475,647	6,475,647
Office[9]			All	1,927	296	23,110	3,552	300	114	17	8	6,401,161	6,354,835
Retail			All	1,136	1,186	13,639	14,231	36	36	36	10	5,039,897	3,265,290
Restaurant			All	1,284	1,482	15,415	17,783	36	36	36	10	5,872,756	3,265,290
Hotel			All	519	420	6,215	5,031	20	20	20	2	2,145,485	367,920
Performance Venue		Attendees	Passenger	593		6,990		200	92		3	699,021	695,520
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**22,865,550**

2036 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2037 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2037
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	27.1%
Percent All VMT from EVs at Full Buildout[2]	%	27.1%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	7,023	--	78,640	--	200	200	--	3	3,224,229	619,920
		Weekday Day	Passenger	7,159	--	78,911	--	200	200	--	3	1,104,753	211,680
		Weekend	Passenger	--	7,349	--	87,588	200	--	200	3	2,364,886	408,240
	Other Events	Concerts	Passenger	7,267		68,878		200	200		3	619,898	136,080
		Other	Passenger	1,627		15,728		200	200		3	550,478	529,200
		Corporate/Community	Passenger	407		3,796		200	50		3	379,640	378,000
		Plaza	Passenger	786		7,322		200	96		3	117,146	116,122
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	10	--	94	--	200	1	--	3	24,541	19,732
	Sports Team Management		Passenger	47	--	442	--	200	5	--	3	115,345	98,658
Residential			All	1,654	1,546	19,846	18,546	300	300	300	2.6	7,108,603	7,108,603
Office[9]			All	2,115	325	25,369	3,899	300	125	19	8	7,026,836	6,975,562
Retail			All	1,247	1,302	14,972	15,622	36	36	36	10	5,532,517	3,265,290
Restaurant			All	1,410	1,627	16,922	19,521	36	36	36	10	6,446,783	3,265,290
Hotel			All	569	461	6,823	5,523	20	20	20	2	2,355,193	367,920
Performance Venue		Attendees	Passenger	651		7,674		200	101		3	767,415	763,560
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**24,263,855**

2037 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2038 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2038
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	29.6%
Percent All VMT from EVs at Full Buildout[2]	%	29.5%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	7,663	--	85,800	--	200	200	--	3	3,517,792	619,920
		Weekday Day	Passenger	7,811	--	86,096	--	200	200	--	3	1,205,339	211,680
		Weekend	Passenger	--	8,018	--	95,563	200	--	200	3	2,580,207	408,240
	Other Events	Concerts	Passenger	7,929		75,149		200	200		3	676,339	136,080
		Other	Passenger	1,775		17,160		200	200		3	600,599	529,200
		Corporate/Community	Passenger	444		4,142		200	54		3	414,206	408,240
		Plaza	Passenger	858		7,988		200	105		3	127,812	127,008
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	11	--	103	--	200	1	--	3	26,776	19,732
	Sports Team Management		Passenger	51	--	482	--	200	6	--	3	125,847	118,390
Residential			All	1,805	1,686	21,651	20,233	300	300	300	2.8	7,754,985	7,754,985
Office[9]			All	2,308	355	27,676	4,253	300	137	21	8	7,665,784	7,648,906
Retail			All	1,361	1,420	16,334	17,043	36	36	36	10	6,035,587	3,265,290
Restaurant			All	1,538	1,775	18,461	21,296	36	36	36	10	7,032,987	3,265,290
Hotel			All	621	503	7,443	6,026	20	20	20	2	2,569,350	367,920
Performance Venue		Attendees	Passenger	710		8,373		200	110		3	837,288	831,600
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**25,712,480**

2038 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2039 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2039
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	32.1%
Percent All VMT from EVs at Full Buildout[2]	%	32.0%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	8,314	--	93,089	--	200	200	--	3	3,816,643	619,920
		Weekday Day	Passenger	8,474	--	93,410	--	200	200	--	3	1,307,738	211,680
		Weekend	Passenger	--	8,699	--	103,682	200	--	200	3	2,799,406	408,240
	Other Events	Concerts	Passenger	8,603		81,533		200	200		3	733,797	136,080
		Other	Passenger	1,926		18,618		200	200		3	651,622	529,200
		Corporate/Community	Passenger	481		4,494		200	59		3	449,394	446,040
		Plaza	Passenger	931		8,667		200	114		3	138,670	137,894
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	12	--	111	--	200	1	--	3	29,051	19,732
	Sports Team Management		Passenger	55	--	523	--	200	6	--	3	136,538	118,390
Residential			All	1,958	1,830	23,487	21,949	300	300	300	3.0	8,412,843	8,412,843
Office[9]			All	2,504	385	30,024	4,614	300	148	22	8	8,316,075	8,248,666
Retail			All	1,477	1,541	17,719	18,488	36	36	36	10	6,547,588	3,265,290
Restaurant			All	1,669	1,926	20,027	23,103	36	36	36	10	7,629,598	3,265,290
Hotel			All	674	546	8,075	6,537	20	20	20	2	2,787,309	367,920
Performance Venue		Attendees	Passenger	770		9,084		200	120		3	908,419	907,200
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**27,094,385**

2039 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2040 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2040
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	34.7%
Percent All VMT from EVs at Full Buildout[2]	%	34.6%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	8,975	--	100,492	--	200	200	--	3	4,120,152	619,920
		Weekday Day	Passenger	9,148	--	100,838	--	200	200	--	3	1,411,732	211,680
		Weekend	Passenger	--	9,391	--	111,927	200	--	200	3	3,022,022	408,240
	Other Events	Concerts	Passenger	9,287		88,017		200	200		3	792,150	136,080
		Other	Passenger	2,079		20,098		200	200		3	703,441	529,200
		Corporate/Community	Passenger	520		4,851		200	64		3	485,131	483,840
		Plaza	Passenger	1,005		9,356		200	123		3	149,698	148,781
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	13	--	120	--	200	1	--	3	31,361	19,732
	Sports Team Management		Passenger	59	--	565	--	200	7	--	3	147,396	138,121
Residential			All	2,114	1,975	25,352	23,692	300	300	300	3.3	9,080,732	9,080,732
Office[9]			All	2,703	416	32,407	4,980	300	160	24	8	8,976,282	8,922,010
Retail			All	1,594	1,663	19,126	19,956	36	36	36	10	7,067,395	3,265,290
Restaurant			All	1,802	2,079	21,616	24,937	36	36	36	10	8,235,305	3,265,290
Hotel			All	728	589	8,716	7,056	20	20	20	2	3,008,592	367,920
Performance Venue		Attendees	Passenger	832		9,807		200	129		3	980,658	975,240
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**28,572,075**

2040 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2041 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2041
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	37.2%
Percent All VMT from EVs at Full Buildout[2]	%	37.2%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	9,643	--	107,977	--	200	200	--	3	4,427,037	619,920
		Weekday Day	Passenger	9,830	--	108,349	--	200	200	--	3	1,516,884	211,680
		Weekend	Passenger	--	10,090	--	120,263	200	--	200	3	3,247,114	408,240
	Other Events	Concerts	Passenger	9,979		94,573		200	200		3	851,153	136,080
		Other	Passenger	2,234		21,595		200	200		3	755,836	529,200
		Corporate/Community	Passenger	558		5,213		200	68		3	521,266	514,080
		Plaza	Passenger	1,080		10,053		200	132		3	160,848	159,667
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	14	--	129	--	200	1	--	3	33,697	19,732
	Sports Team Management		Passenger	64	--	607	--	200	8	--	3	158,375	157,853
Residential			All	2,271	2,122	27,237	25,453	300	300	300	3.5	9,755,866	9,755,866
Office[9]			All	2,904	447	34,817	5,351	300	172	26	8	9,643,650	9,595,354
Retail			All	1,713	1,787	20,548	21,440	36	36	36	10	7,592,842	3,265,290
Restaurant			All	1,936	2,234	23,224	26,791	36	36	36	10	8,847,583	3,265,290
Hotel			All	782	633	9,364	7,580	20	20	20	2	3,232,274	367,920
Performance Venue		Attendees	Passenger	894		10,537		200	139		3	1,053,702	1,050,840
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**30,057,012**

2041 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2042 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2042
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	39.8%
Percent All VMT from EVs at Full Buildout[2]	%	39.8%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	10,319	--	115,540	--	200	200	--	3	4,737,149	619,920
		Weekday Day	Passenger	10,518	--	115,939	--	200	200	--	3	1,623,141	211,680
		Weekend	Passenger	--	10,797	--	128,688	200	--	200	3	3,474,573	408,240
	Other Events	Concerts	Passenger	10,678		101,197		200	200		3	910,776	136,080
		Other	Passenger	2,390		23,108		200	200		3	808,782	529,200
		Corporate/Community	Passenger	598		5,578		200	73		3	557,780	551,880
		Plaza	Passenger	1,155		10,757		200	142		3	172,115	171,763
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	15	--	138	--	200	1	--	3	36,057	19,732
	Sports Team Management		Passenger	68	--	649	--	200	8	--	3	169,469	157,853
Residential			All	2,430	2,271	29,141	27,233	300	300	300	3.8	10,438,034	10,438,034
Office[9]			All	3,108	478	37,251	5,725	300	184	28	8	10,317,971	10,268,698
Retail			All	1,833	1,912	21,985	22,939	36	36	36	10	8,123,763	3,265,290
Restaurant			All	2,072	2,390	24,847	28,664	36	36	36	10	9,466,241	3,265,290
Hotel			All	837	677	10,018	8,110	20	20	20	2	3,458,287	367,920
Performance Venue		Attendees	Passenger	956		11,275		200	149		3	1,127,513	1,126,440
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**31,538,019**

2042 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2043 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2043
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	42.5%
Percent All VMT from EVs at Full Buildout[2]	%	42.4%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	11,000	--	123,168	--	200	200	--	3	5,049,870	619,920
		Weekday Day	Passenger	11,212	--	123,592	--	200	200	--	3	1,730,292	211,680
		Weekend	Passenger	--	11,510	--	137,183	200	--	200	3	3,703,946	408,240
	Other Events	Concerts	Passenger	11,382		107,878		200	200		3	970,900	136,080
		Other	Passenger	2,548		24,634		200	200		3	862,173	529,200
		Corporate/Community	Passenger	637		5,946		200	78		3	594,602	589,680
		Plaza	Passenger	1,232		11,467		200	151		3	183,477	182,650
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	16	--	147	--	200	1	--	3	38,438	19,732
	Sports Team Management		Passenger	73	--	692	--	200	9	--	3	180,656	177,584
Residential			All	2,591	2,421	31,061	29,027	300	300	300	4.0	11,125,781	11,125,781
Office[9]			All	3,313	510	39,706	6,102	300	196	30	8	10,997,807	10,942,042
Retail			All	1,954	2,039	23,434	24,451	36	36	36	10	8,659,026	3,265,290
Restaurant			All	2,209	2,548	26,485	30,553	36	36	36	10	10,089,957	3,265,290
Hotel			All	892	722	10,679	8,645	20	20	20	2	3,686,149	367,920
Performance Venue		Attendees	Passenger	1,019		12,019		200	158		3	1,201,945	1,194,480
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**33,035,568**

2043 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2044 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2044
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	45.1%
Percent All VMT from EVs at Full Buildout[2]	%	45.0%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	11,687	--	130,853	--	200	200	--	3	5,364,993	619,920
		Weekday Day	Passenger	11,912	--	131,305	--	200	200	--	3	1,838,266	211,680
		Weekend	Passenger	--	12,228	--	145,744	200	--	200	3	3,935,080	408,240
	Other Events	Concerts	Passenger	12,093		114,610		200	200		3	1,031,486	136,080
		Other	Passenger	2,707		26,171		200	200		3	915,974	529,200
		Corporate/Community	Passenger	677		6,317		200	83		3	631,706	627,480
		Plaza	Passenger	1,309		12,183		200	161		3	194,927	194,746
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	16	--	156	--	200	2	--	3	40,836	39,463
	Sports Team Management		Passenger	77	--	735	--	200	9	--	3	191,930	177,584
Residential			All	2,752	2,572	32,995	30,834	300	300	300	4.3	11,818,512	11,818,512
Office[9]			All	3,520	541	42,178	6,482	300	209	32	8	11,682,570	11,668,003
Retail			All	2,076	2,166	24,893	25,973	36	36	36	10	9,198,168	3,265,290
Restaurant			All	2,346	2,707	28,134	32,455	36	36	36	10	10,718,194	3,265,290
Hotel			All	948	767	11,343	9,183	20	20	20	2	3,915,662	367,920
Performance Venue		Attendees	Passenger	1,083		12,769		200	168		3	1,276,950	1,270,080
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**34,599,489**

2044 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2045 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2045
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	47.8%
Percent All VMT from EVs at Full Buildout[2]	%	47.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	12,377	--	138,588	--	200	200	--	3	5,682,090	619,920
		Weekday Day	Passenger	12,616	--	139,065	--	200	200	--	3	1,946,916	211,680
		Weekend	Passenger	--	12,951	--	154,358	200	--	200	3	4,167,663	408,240
	Other Events	Concerts	Passenger	12,807		121,384		200	200		3	1,092,452	136,080
		Other	Passenger	2,867		27,718		200	200		3	970,113	529,200
		Corporate/Community	Passenger	717		6,690		200	88		3	669,043	665,280
		Plaza	Passenger	1,386		12,903		200	170		3	206,448	205,632
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	17	--	166	--	200	2	--	3	43,250	39,463
	Sports Team Management		Passenger	82	--	779	--	200	10	--	3	203,274	197,316
Residential			All	2,915	2,724	34,941	32,653	300	300	300	4.5	12,515,522	12,515,522
Office[9]			All	3,728	573	44,665	6,864	300	221	34	8	12,371,563	12,341,347
Retail			All	2,198	2,294	26,361	27,505	36	36	36	10	9,740,640	3,265,290
Restaurant			All	2,485	2,867	29,793	34,369	36	36	36	10	11,350,312	3,265,290
Hotel			All	1,004	812	12,012	9,724	20	20	20	2	4,146,592	367,920
Performance Venue		Attendees	Passenger	1,147		13,524		200	178		3	1,352,424	1,345,680
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**36,113,861**

2045 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2046 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2046
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	50.5%
Percent All VMT from EVs at Full Buildout[2]	%	50.3%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	13,071	--	146,357	--	200	200	--	3	6,000,621	619,920
		Weekday Day	Passenger	13,323	--	146,861	--	200	200	--	3	2,056,058	211,680
		Weekend	Passenger	--	13,677	--	163,011	200	--	200	3	4,401,296	408,240
	Other Events	Concerts	Passenger	13,525		128,188		200	200		3	1,153,694	136,080
		Other	Passenger	3,028		29,271		200	200		3	1,024,496	529,200
		Corporate/Community	Passenger	757		7,065		200	93		3	706,549	703,080
		Plaza	Passenger	1,464		13,626		200	180		3	218,021	217,728
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	18	--	175	--	200	2	--	3	45,674	39,463
	Sports Team Management		Passenger	87	--	822	--	200	10	--	3	214,669	197,316
Residential			All	3,079	2,877	36,895	34,479	300	300	300	4.8	13,215,472	13,215,472
Office[9]			All	3,936	606	47,163	7,248	300	233	35	8	13,063,462	12,993,725
Retail			All	2,322	2,422	27,835	29,043	36	36	36	10	10,285,401	3,265,290
Restaurant			All	2,624	3,028	31,459	36,291	36	36	36	10	11,985,096	3,265,290
Hotel			All	1,060	858	12,684	10,268	20	20	20	2	4,378,497	367,920
Performance Venue		Attendees	Passenger	1,211		14,282		200	188		3	1,428,239	1,421,280
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**37,591,684**

2046 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

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   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2047 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2047
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	53.2%
Percent All VMT from EVs at Full Buildout[2]	%	53.0%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	13,768	--	154,155	--	200	200	--	3	6,320,340	619,920
		Weekday Day	Passenger	14,033	--	154,686	--	200	200	--	3	2,165,607	211,680
		Weekend	Passenger	--	14,405	--	171,696	200	--	200	3	4,635,802	408,240
	Other Events	Concerts	Passenger	14,246		135,018		200	200		3	1,215,164	136,080
		Other	Passenger	3,189		30,831		200	200		3	1,079,082	529,200
		Corporate/Community	Passenger	797		7,442		200	98		3	744,195	740,880
		Plaza	Passenger	1,542		14,352		200	189		3	229,637	228,614
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	19	--	184	--	200	2	--	3	48,108	39,463
	Sports Team Management		Passenger	91	--	866	--	200	11	--	3	226,107	217,048
Residential			All	3,243	3,030	38,856	36,312	300	300	300	5.0	13,917,885	13,917,885
Office[9]			All	4,146	638	49,670	7,633	300	246	37	8	13,757,796	13,719,686
Retail			All	2,445	2,552	29,314	30,587	36	36	36	10	10,832,078	3,265,290
Restaurant			All	2,764	3,189	33,131	38,220	36	36	36	10	12,622,114	3,265,290
Hotel			All	1,116	904	13,358	10,814	20	20	20	2	4,611,218	367,920
Performance Venue		Attendees	Passenger	1,276		15,043		200	198		3	1,504,337	1,496,880
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**39,164,077**

2047 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2048 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2048
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	55.9%
Percent All VMT from EVs at Full Buildout[2]	%	55.7%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	14,466	--	161,973	--	200	200	--	3	6,640,900	619,920
		Weekday Day	Passenger	14,745	--	162,532	--	200	200	--	3	2,275,444	211,680
		Weekend	Passenger	--	15,136	--	180,405	200	--	200	3	4,870,924	408,240
	Other Events	Concerts	Passenger	14,969		141,866		200	200		3	1,276,795	136,080
		Other	Passenger	3,351		32,395		200	200		3	1,133,812	529,200
		Corporate/Community	Passenger	838		7,819		200	103		3	781,939	778,680
		Plaza	Passenger	1,620		15,080		200	199		3	241,284	240,710
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	20	--	194	--	200	2	--	3	50,548	39,463
	Sports Team Management		Passenger	96	--	910	--	200	12	--	3	237,575	236,779
Residential			All	3,407	3,184	40,822	38,149	300	300	300	5.3	14,622,063	14,622,063
Office[9]			All	4,357	670	52,183	8,020	300	258	39	8	14,453,873	14,393,030
Retail			All	2,569	2,681	30,798	32,134	36	36	36	10	11,380,129	3,265,290
Restaurant			All	2,904	3,351	34,807	40,154	36	36	36	10	13,260,731	3,265,290
Hotel			All	1,173	949	14,034	11,361	20	20	20	2	4,844,523	367,920
Performance Venue		Attendees	Passenger	1,340		15,806		200	200		3	1,580,635	1,512,000
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**40,626,346**

2048 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2049 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2049
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	58.6%
Percent All VMT from EVs at Full Buildout[2]	%	58.4%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	15,166	--	169,816	--	200	200	--	3	6,962,444	619,920
		Weekday Day	Passenger	15,459	--	170,401	--	200	200	--	3	2,385,618	211,680
		Weekend	Passenger	--	15,869	--	189,140	200	--	200	3	5,106,768	408,240
	Other Events	Concerts	Passenger	15,693		148,735		200	200		3	1,338,616	136,080
		Other	Passenger	3,513		33,963		200	200		3	1,188,710	529,200
		Corporate/Community	Passenger	878		8,198		200	108		3	819,800	816,480
		Plaza	Passenger	1,698		15,810		200	200		3	252,967	241,920
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	21	--	203	--	200	2	--	3	52,995	39,463
	Sports Team Management		Passenger	100	--	954	--	200	12	--	3	249,078	236,779
Residential			All	3,572	3,338	42,793	39,991	300	300	300	5.6	15,328,126	15,328,126
Office[9]			All	4,567	703	54,703	8,407	300	271	41	8	15,151,815	15,118,992
Retail			All	2,694	2,811	32,285	33,686	36	36	36	10	11,929,647	3,265,290
Restaurant			All	3,045	3,513	36,488	42,093	36	36	36	10	13,901,059	3,265,290
Hotel			All	1,230	995	14,712	11,910	20	20	20	2	5,078,453	367,920
Performance Venue		Attendees	Passenger	1,405		16,572		200	200		3	1,657,167	1,512,000
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**42,097,380**

2049 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2050 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2050
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	61.3%
Percent All VMT from EVs at Full Buildout[2]	%	61.1%
Project Chargers Commitment	%	10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	15,869	--	177,678	--	200	200	--	3	7,284,816	619,920
		Weekday Day	Passenger	16,175	--	178,291	--	200	200	--	3	2,496,076	211,680
		Weekend	Passenger	--	16,604	--	197,897	200	--	200	3	5,343,219	408,240
	Other Events	Concerts	Passenger	16,420		155,622		200	200		3	1,400,596	136,080
		Other	Passenger	3,676		35,536		200	200		3	1,243,749	529,200
		Corporate/Community	Passenger	919		8,578		200	113		3	857,758	854,280
		Plaza	Passenger	1,777		16,542		200	200		3	264,680	241,920
	A's Games Deliveries		Bus	--	--	--	--	200	--	--	--	--	--
			Truck	--	--	--	--	200	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	200	--	--	--	--	--
	Arena Management		Passenger	22	--	212	--	200	2	--	3	55,449	39,463
	Sports Team Management		Passenger	105	--	999	--	200	13	--	3	260,610	256,511
Residential			All	3,737	3,492	44,769	41,837	300	300	300	5.8	16,035,837	16,035,837
Office[9]			All	4,779	735	57,229	8,795	300	283	43	8	15,851,386	15,792,336
Retail			All	2,818	2,941	33,775	35,241	36	36	36	10	12,480,448	3,265,290
Restaurant			All	3,186	3,676	38,173	44,036	36	36	36	10	14,542,882	3,265,290
Hotel			All	1,287	1,042	15,391	12,460	20	20	20	2	5,312,929	367,920
Performance Venue		Attendees	Passenger	1,470		17,339		200	200		3	1,733,896	1,512,000
		Deliveries	Truck	--	--	--	--	200	--	--	--	--	--
			Bus	--	--	--	--	200	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**43,535,967**

2050 CTF with Project Charger Commitment of 10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations. The 10 percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2023 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2023
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	3.4%
Percent All VMT from EVs at Full Buildout[2]	%	3.4%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	0,884	--	9,902	--	0	--	--	3	406,000	--
		Weekday Day	Passenger	0,901	--	9,937	--	0	--	--	3	139,112	--
		Weekend	Passenger	--	0,925	--	11,029	0	--	--	3	297,790	--
	Other Events	Concerts	Passenger	0,915	--	8,673		0	--		3	78,059	--
		Other	Passenger	0,205	--	1,980		0	--		3	69,317	--
		Corporate/Community	Passenger	51	--	478		0	--		3	47,805	--
		Plaza	Passenger	99	--	922		0	--		3	14,751	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.2	--	12	--	0	--	--	3	3,090	--
	Sports Team Management		Passenger	6	--	56	--	0	--	--	3	14,524	--
Residential			All	41	38	491	450	81	81	81	0.2	174,878	174,878
Office			All	58	10	695	123	50	3	--	8	194,222	157,853
Retail			All	38	44	450	532	8	1	2	10	172,710	118,188
Restaurant			All	20	24	245	286	8	--	1	10	93,819	26,208
Hotel			All	72	58	859	695	30	17	13	2	296,466	291,766
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**768,892**

2023 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2024 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2024
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.1%
Percent All VMT from EVs at Full Buildout[2]	%	4.1%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,073	--	12,014	--	0	--	--	3	492,581	--
		Weekday Day	Passenger	1,094	--	12,056	--	0	--	--	3	168,778	--
		Weekend	Passenger	--	1,123	--	13,381	0	--	--	3	361,295	--
	Other Events	Concerts	Passenger	1,110	--	10,523		0	--		3	94,705	--
		Other	Passenger	0,249	--	2,403		0	--		3	84,099	--
		Corporate/Community	Passenger	62	--	580		0	--		3	57,999	--
		Plaza	Passenger	120	--	1,119		0	--		3	17,897	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.5	--	14	--	0	--	--	3	3,749	--
	Sports Team Management		Passenger	7	--	68	--	0	--	--	3	17,622	--
Residential			All	50	46	595	546	81	81	81	0.3	212,135	212,135
Office			All	70	12	843	149	50	4	--	8	235,601	210,470
Retail			All	46	54	546	645	8	2	2	10	209,506	183,960
Restaurant			All	25	29	298	347	8	1	1	10	113,807	91,980
Hotel			All	87	70	1,042	843	30	20	16	2	359,628	346,954
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,045,499**

2024 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2025 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2025
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	4.9%
Percent All VMT from EVs at Full Buildout[2]	%	4.9%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,269	--	14,212	--	0	--	--	3	582,684	--
		Weekday Day	Passenger	1,294	--	14,261	--	0	--	--	3	199,651	--
		Weekend	Passenger	--	1,328	--	15,829	0	--	--	3	427,383	--
	Other Events	Concerts	Passenger	1,313	--	12,448		0	--		3	112,028	--
		Other	Passenger	0,294	--	2,842		0	--		3	99,483	--
		Corporate/Community	Passenger	74	--	686		0	--		3	68,609	--
		Plaza	Passenger	142	--	1,323		0	--		3	21,171	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	1.8	--	17	--	0	--	--	3	4,435	--
	Sports Team Management		Passenger	8	--	80	--	0	--	--	3	20,845	--
Residential			All	59	54	704	646	81	81	81	0.3	250,955	250,955
Office			All	83	15	998	176	50	4	--	8	278,715	210,470
Retail			All	54	64	646	763	8	2	3	10	247,844	210,168
Restaurant			All	29	34	352	411	8	1	1	10	134,633	91,980
Hotel			All	103	83	1,232	998	30	24	19	2	425,438	415,296
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,178,869**

2025 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2026 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2026
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	5.9%
Percent All VMT from EVs at Full Buildout[2]	%	5.9%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,525	--	17,080	--	0	--	--	3	700,263	--
		Weekday Day	Passenger	1,555	--	17,138	--	0	--	--	3	239,939	--
		Weekend	Passenger	--	1,596	--	19,023	0	--	--	3	513,624	--
	Other Events	Concerts	Passenger	1,578	--	14,959		0	--		3	134,634	--
		Other	Passenger	0,353	--	3,416		0	--		3	119,557	--
		Corporate/Community	Passenger	88	--	825		0	--		3	82,453	--
		Plaza	Passenger	171	--	1,590		0	--		3	25,443	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.1	--	20	--	0	--	--	3	5,330	--
	Sports Team Management		Passenger	10	--	96	--	0	--	--	3	25,052	--
Residential			All	71	65	846	776	81	81	81	0.4	301,618	301,618
Office			All	100	18	1,199	212	50	5	1	8	334,982	284,054
Retail			All	65	77	776	917	8	3	3	10	297,880	275,940
Restaurant			All	35	41	423	494	8	1	1	10	161,813	91,980
Hotel			All	124	100	1,481	1,199	30	29	23	2	511,326	502,034
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,455,627**

2026 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2027 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2027
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	7.1%
Percent All VMT from EVs at Full Buildout[2]	%	7.1%
Project Chargers Commitment	%	>10

Phase 1 Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	1,837	--	20,569	--	0	--	--	3	843,319	--
		Weekday Day	Passenger	1,872	--	20,640	--	0	--	--	3	288,956	--
		Weekend	Passenger	--	1,922	--	22,909	0	--	--	3	618,552	--
	Other Events	Concerts	Passenger	1,901	--	18,015		0	--		3	162,139	--
		Other	Passenger	0,426	--	4,114		0	--		3	143,981	--
		Corporate/Community	Passenger	106	--	993		0	--		3	99,297	--
		Plaza	Passenger	206	--	1,915		0	--		3	30,640	--
	A's Games Deliveries		Bus	--	--	--	--	0	--	--	--	--	--
			Truck	--	--	--	--	0	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	0	--	--	--	--	--
	Arena Management		Passenger	2.6	--	25	--	0	--	--	3	6,419	--
	Sports Team Management		Passenger	12	--	116	--	0	--	--	3	30,169	--
Residential			All	85	78	1,019	935	81	81	81	0.5	363,275	363,275
Office			All	121	21	1,444	255	50	7	1	8	403,459	389,290
Retail			All	78	92	935	1,104	8	3	4	10	358,772	302,148
Restaurant			All	43	50	510	595	8	2	2	10	194,890	183,960
Hotel			All	149	121	1,784	1,444	30	30	28	2	615,851	541,397
Performance Venue		Attendees	Passenger	--	--	--		0	--		3	--	--
		Deliveries	Truck	--	--	--	--	0	--	--	--	--	--
			Bus	--	--	--	--	0	--	--	--	--	--
Total Phase 1 Buildout Miles Charged by Project Chargers Per Year													**1,780,069**

2027 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2028 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2028
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	8.5%
Percent All VMT from EVs at Full Buildout[2]	%	8.5%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,197	--	24,597	--	700	325	--	3	1,008,480	1,007,370
		Weekday Day	Passenger	2,239	--	24,682	--	700	326	--	3	345,546	345,038
		Weekend	Passenger	--	2,299	--	27,396	700	--	362	3	739,693	738,914
	Other Events	Concerts	Passenger	2,273		21,544		700	284		3	193,893	193,234
		Other	Passenger	509		4,919		700	65		3	172,179	171,990
		Corporate/Community	Passenger	127		1,187		700	15		3	118,744	113,400
		Plaza	Passenger	246		2,290		700	30		3	36,641	36,288
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	3	--	29	--	700	0	--	3	7,676	--
	Sports Team Management		Passenger	15	--	138	--	700	1	--	3	36,078	19,732
Residential			All	517	483	6,206	5,799	450	300	300	0.8	2,222,792	2,222,792
Office[9]			All	662	102	7,933	1,219	300	39	6	8	2,197,224	2,177,885
Retail			All	390	407	4,682	4,885	71	18	19	10	1,729,965	1,681,848
Restaurant			All	441	509	5,291	6,104	71	20	24	10	2,015,847	1,944,432
Hotel			All	178	144	2,133	1,727	30	30	30	2	736,446	551,880
Performance Venue		Attendees	Passenger	204		2,400		700	31		3	240,033	234,360
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**11,439,162**

2028 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2029 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2029
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	10.0%
Percent All VMT from EVs at Full Buildout[2]	%	10.0%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	2,601	--	29,118	--	700	385	--	3	1,193,846	1,193,346
		Weekday Day	Passenger	2,651	--	29,219	--	700	386	--	3	409,060	408,542
		Weekend	Passenger	--	2,721	--	32,432	700	--	428	3	875,654	873,634
	Other Events	Concerts	Passenger	2,691		25,504		700	337		3	229,532	229,295
		Other	Passenger	602		5,824		700	77		3	203,827	203,742
		Corporate/Community	Passenger	151		1,406		700	18		3	140,571	136,080
		Plaza	Passenger	291		2,711		700	35		3	43,376	42,336
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	35	--	700	0	--	3	9,087	--
	Sports Team Management		Passenger	17	--	164	--	700	2	--	3	42,709	39,463
Residential			All	612	572	7,346	6,865	450	300	300	1.0	2,631,179	2,631,179
Office[9]			All	783	120	9,390	1,443	300	46	7	8	2,600,914	2,567,174
Retail			All	462	482	5,542	5,782	71	21	22	10	2,047,806	1,957,788
Restaurant			All	522	602	6,263	7,226	71	24	28	10	2,386,213	2,312,352
Hotel			All	211	171	2,525	2,044	30	30	30	2	871,752	551,880
Performance Venue		Attendees	Passenger	241		2,842		700	37		3	284,153	279,720
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**13,426,531**

2029 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2030 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2030
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	11.8%
Percent All VMT from EVs at Full Buildout[2]	%	11.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	3,045	--	34,096	--	700	451	--	3	1,397,928	1,397,920
		Weekday Day	Passenger	3,104	--	34,213	--	700	452	--	3	478,987	478,397
		Weekend	Passenger	--	3,186	--	37,976	700	--	502	3	1,025,343	1,024,682
	Other Events	Concerts	Passenger	3,151		29,863		700	395		3	268,769	268,758
		Other	Passenger	705		6,819		700	90		3	238,671	238,140
		Corporate/Community	Passenger	176		1,646		700	21		3	164,600	158,760
		Plaza	Passenger	341		3,174		700	41		3	50,791	49,594
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	4	--	41	--	700	0	--	3	10,640	--
	Sports Team Management		Passenger	20	--	192	--	700	2	--	3	50,010	39,463
Residential			All	717	670	8,604	8,041	450	300	300	1.1	3,081,917	3,081,917
Office[9]			All	917	141	10,999	1,690	300	54	8	8	3,046,468	3,009,082
Retail			All	541	564	6,491	6,773	71	25	26	10	2,398,609	2,325,708
Restaurant			All	611	705	7,336	8,463	71	29	33	10	2,794,987	2,772,252
Hotel			All	247	200	2,958	2,395	30	30	30	2	1,021,088	551,880
Performance Venue		Attendees	Passenger	282		3,327		700	44		3	332,728	332,640
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**15,729,193**

2030 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2031 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2031
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	13.7%
Percent All VMT from EVs at Full Buildout[2]	%	13.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	3,543	--	39,672	--	700	524	--	3	1,626,550	1,624,190
		Weekday Day	Passenger	3,612	--	39,809	--	700	526	--	3	557,323	556,718
		Weekend	Passenger	--	3,707	--	44,186	700	--	584	3	1,193,031	1,192,061
	Other Events	Concerts	Passenger	3,666		34,747		700	459		3	312,724	312,304
		Other	Passenger	821		7,934		700	104		3	277,704	275,184
		Corporate/Community	Passenger	205		1,915		700	25		3	191,520	189,000
		Plaza	Passenger	397		3,694		700	48		3	59,098	58,061
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	5	--	47	--	700	0	--	3	12,381	--
	Sports Team Management		Passenger	23	--	223	--	700	2	--	3	58,189	39,463
Residential			All	834	780	10,013	9,357	450	300	300	1.3	3,586,543	3,586,543
Office[9]			All	1,067	164	12,800	1,967	300	63	9	8	3,545,289	3,503,606
Retail			All	629	657	7,554	7,882	71	29	31	10	2,791,352	2,719,836
Restaurant			All	711	821	8,538	9,849	71	33	39	10	3,252,632	3,192,588
Hotel			All	287	233	3,442	2,787	30	30	30	2	1,188,279	551,880
Performance Venue		Attendees	Passenger	328		3,871		700	51		3	387,144	385,560
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**18,186,995**

2031 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2032 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2032
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	15.7%
Percent All VMT from EVs at Full Buildout[2]	%	15.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	4,069	--	45,563	--	700	602	--	3	1,868,064	1,865,959
		Weekday Day	Passenger	4,148	--	45,720	--	700	604	--	3	640,075	639,274
		Weekend	Passenger	--	4,258	--	50,747	700	--	671	3	1,370,175	1,369,645
	Other Events	Concerts	Passenger	4,211		39,906		700	527		3	359,158	358,571
		Other	Passenger	943		9,113		700	120		3	318,938	317,520
		Corporate/Community	Passenger	236		2,200		700	29		3	219,957	219,240
		Plaza	Passenger	456		4,242		700	56		3	67,872	67,738
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	6	--	54	--	700	0	--	3	14,219	--
	Sports Team Management		Passenger	27	--	256	--	700	3	--	3	66,829	59,195
Residential			All	958	896	11,501	10,747	450	300	300	1.5	4,119,386	4,119,386
Office[9]			All	1,225	189	14,701	2,259	300	72	11	8	4,072,004	4,019,098
Retail			All	723	754	8,676	9,053	71	34	35	10	3,206,056	3,153,528
Restaurant			All	817	943	9,806	11,312	71	38	44	10	3,735,867	3,652,488
Hotel			All	330	267	3,954	3,201	30	30	30	2	1,364,819	551,880
Performance Venue		Attendees	Passenger	377		4,446		700	58		3	444,627	438,480
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**20,832,001**

2032 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

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9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2033 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2033
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	17.8%
Percent All VMT from EVs at Full Buildout[2]	%	17.8%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	4,620	--	51,726	--	700	684	--	3	2,120,766	2,120,126
		Weekday Day	Passenger	4,709	--	51,904	--	700	686	--	3	726,661	726,062
		Weekend	Passenger	--	4,834	--	57,612	700	--	700	3	1,555,526	1,428,840
	Other Events	Concerts	Passenger	4,780		45,305		700	599		3	407,744	407,560
		Other	Passenger	1,070		10,345		700	136		3	362,082	359,856
		Corporate/Community	Passenger	268		2,497		700	33		3	249,712	249,480
		Plaza	Passenger	517		4,816		700	63		3	77,054	76,205
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	7	--	62	--	700	0	--	3	16,142	--
	Sports Team Management		Passenger	31	--	291	--	700	3	--	3	75,869	59,195
Residential			All	1,088	1,017	13,057	12,202	450	300	300	1.7	4,676,784	4,676,784
Office[9]			All	1,391	214	16,691	2,565	300	82	12	8	4,622,990	4,566,240
Retail			All	820	856	9,850	10,278	71	39	40	10	3,639,870	3,613,428
Restaurant			All	928	1,070	11,133	12,843	71	44	50	10	4,241,370	4,204,368
Hotel			All	375	303	4,489	3,634	30	30	30	2	1,549,493	551,880
Performance Venue		Attendees	Passenger	428		5,048		700	66		3	504,775	498,960
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**23,538,984**

2033 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2034 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2034
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	20.0%
Percent All VMT from EVs at Full Buildout[2]	%	20.0%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	5,193	--	58,144	--	700	700	--	3	2,383,891	2,169,720
		Weekday Day	Passenger	5,293	--	58,344	--	700	700	--	3	816,818	740,880
		Weekend	Passenger	--	5,433	--	64,760	700	--	700	3	1,748,521	1,428,840
	Other Events	Concerts	Passenger	5,373		50,926		700	673		3	458,333	457,909
		Other	Passenger	1,203		11,629		700	153		3	407,006	404,838
		Corporate/Community	Passenger	301		2,807		700	37		3	280,694	279,720
		Plaza	Passenger	581		5,413		700	71		3	86,614	85,882
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	7	--	70	--	700	0	--	3	18,145	--
	Sports Team Management		Passenger	34	--	327	--	700	4	--	3	85,282	78,926
Residential			All	1,223	1,143	14,676	13,715	450	300	300	1.9	5,256,960	5,256,960
Office[9]			All	1,564	241	18,761	2,883	300	93	14	8	5,196,493	5,186,966
Retail			All	922	962	11,072	11,553	71	43	45	10	4,091,412	4,007,556
Restaurant			All	1,043	1,203	12,514	14,436	71	49	57	10	4,767,531	4,716,684
Hotel			All	421	341	5,046	4,085	30	30	30	2	1,741,715	551,880
Performance Venue		Attendees	Passenger	481		5,674		700	75		3	567,402	567,000
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**25,933,762**

2034 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2035 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2035
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	22.3%
Percent All VMT from EVs at Full Buildout[2]	%	22.3%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	5,786	--	64,790	--	700	700	--	3	2,656,376	2,169,720
		Weekday Day	Passenger	5,898	--	65,013	--	700	700	--	3	910,183	740,880
		Weekend	Passenger	--	6,054	--	72,162	700	--	700	3	1,948,382	1,428,840
	Other Events	Concerts	Passenger	5,987		56,747		700	700		3	510,721	476,280
		Other	Passenger	1,340		12,958		700	171		3	453,528	452,466
		Corporate/Community	Passenger	335		3,128		700	41		3	312,778	309,960
		Plaza	Passenger	648		6,032		700	79		3	96,514	95,558
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	8	--	77	--	700	1	--	3	20,219	19,732
	Sports Team Management		Passenger	38	--	364	--	700	4	--	3	95,030	78,926
Residential			All	1,363	1,273	16,353	15,282	450	300	300	2.1	5,857,586	5,857,586
Office[9]			All	1,743	268	20,905	3,213	300	103	15	8	5,790,209	5,734,109
Retail			All	1,028	1,072	12,337	12,873	71	48	51	10	4,558,870	4,493,664
Restaurant			All	1,162	1,340	13,944	16,086	71	55	63	10	5,312,238	5,268,564
Hotel			All	469	380	5,622	4,551	30	30	30	2	1,940,712	551,880
Performance Venue		Attendees	Passenger	536		6,323		700	83		3	632,258	627,480
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**28,305,645**

2035 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2036 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2036
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	24.7%
Percent All VMT from EVs at Full Buildout[2]	%	24.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	6,397	--	71,631	--	700	700	--	3	2,936,875	2,169,720
		Weekday Day	Passenger	6,521	--	71,878	--	700	700	--	3	1,006,294	740,880
		Weekend	Passenger	--	6,694	--	79,782	700	--	700	3	2,154,120	1,428,840
	Other Events	Concerts	Passenger	6,620		62,739		700	700		3	564,651	476,280
		Other	Passenger	1,482		14,326		700	189		3	501,418	500,094
		Corporate/Community	Passenger	371		3,458		700	45		3	345,805	340,200
		Plaza	Passenger	716		6,669		700	88		3	106,706	106,445
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	9	--	86	--	700	1	--	3	22,354	19,732
	Sports Team Management		Passenger	42	--	403	--	700	5	--	3	105,065	98,658
Residential			All	1,507	1,408	18,079	16,895	450	300	300	2.3	6,475,647	6,475,647
Office[9]			All	1,927	296	23,110	3,552	300	114	17	8	6,401,161	6,354,835
Retail			All	1,136	1,186	13,639	14,231	71	54	56	10	5,039,897	5,019,336
Restaurant			All	1,284	1,482	15,415	17,783	71	61	71	10	5,872,756	5,859,756
Hotel			All	519	420	6,215	5,031	30	30	30	2	2,145,485	551,880
Performance Venue		Attendees	Passenger	593		6,990		700	92		3	699,021	695,520
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**30,837,822**

2036 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2037 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2037
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	27.1%
Percent All VMT from EVs at Full Buildout[2]	%	27.1%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	7,023	--	78,640	--	700	700	--	3	3,224,229	2,169,720
		Weekday Day	Passenger	7,159	--	78,911	--	700	700	--	3	1,104,753	740,880
		Weekend	Passenger	--	7,349	--	87,588	700	--	700	3	2,364,886	1,428,840
	Other Events	Concerts	Passenger	7,267		68,878		700	700		3	619,898	476,280
		Other	Passenger	1,627		15,728		700	208		3	550,478	550,368
		Corporate/Community	Passenger	407		3,796		700	50		3	379,640	378,000
		Plaza	Passenger	786		7,322		700	96		3	117,146	116,122
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	10	--	94	--	700	1	--	3	24,541	19,732
	Sports Team Management		Passenger	47	--	442	--	700	5	--	3	115,345	98,658
Residential			All	1,654	1,546	19,846	18,546	450	300	300	2.6	7,108,603	7,108,603
Office[9]			All	2,115	325	25,369	3,899	300	125	19	8	7,026,836	6,975,562
Retail			All	1,247	1,302	14,972	15,622	71	59	61	10	5,532,517	5,479,236
Restaurant			All	1,410	1,627	16,922	19,521	71	67	71	10	6,446,783	6,254,388
Hotel			All	569	461	6,823	5,523	30	30	30	2	2,355,193	551,880
Performance Venue		Attendees	Passenger	651		7,674		700	101		3	767,415	763,560
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**33,111,827**

2037 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2038 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2038
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	29.6%
Percent All VMT from EVs at Full Buildout[2]	%	29.5%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	7,663	--	85,800	--	700	700	--	3	3,517,792	2,169,720
		Weekday Day	Passenger	7,811	--	86,096	--	700	700	--	3	1,205,339	740,880
		Weekend	Passenger	--	8,018	--	95,563	700	--	700	3	2,580,207	1,428,840
	Other Events	Concerts	Passenger	7,929		75,149		700	700		3	676,339	476,280
		Other	Passenger	1,775		17,160		700	226		3	600,599	597,996
		Corporate/Community	Passenger	444		4,142		700	54		3	414,206	408,240
		Plaza	Passenger	858		7,988		700	105		3	127,812	127,008
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	11	--	103	--	700	1	--	3	26,776	19,732
	Sports Team Management		Passenger	51	--	482	--	700	6	--	3	125,847	118,390
Residential			All	1,805	1,686	21,651	20,233	450	300	300	2.8	7,754,985	7,754,985
Office[9]			All	2,308	355	27,676	4,253	300	137	21	8	7,665,784	7,648,906
Retail			All	1,361	1,420	16,334	17,043	71	64	67	10	6,035,587	5,965,344
Restaurant			All	1,538	1,775	18,461	21,296	71	71	71	10	7,032,987	6,484,590
Hotel			All	621	503	7,443	6,026	30	30	30	2	2,569,350	551,880
Performance Venue		Attendees	Passenger	710		8,373		700	110		3	837,288	831,600
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**35,324,390**

2038 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2039 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2039
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	32.1%
Percent All VMT from EVs at Full Buildout[2]	%	32.0%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	8,314	--	93,089	--	700	700	--	3	3,816,643	2,169,720
		Weekday Day	Passenger	8,474	--	93,410	--	700	700	--	3	1,307,738	740,880
		Weekend	Passenger	--	8,699	--	103,682	700	--	700	3	2,799,406	1,428,840
	Other Events	Concerts	Passenger	8,603		81,533		700	700		3	733,797	476,280
		Other	Passenger	1,926		18,618		700	246		3	651,622	650,916
		Corporate/Community	Passenger	481		4,494		700	59		3	449,394	446,040
		Plaza	Passenger	931		8,667		700	114		3	138,670	137,894
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	12	--	111	--	700	1	--	3	29,051	19,732
	Sports Team Management		Passenger	55	--	523	--	700	6	--	3	136,538	118,390
Residential			All	1,958	1,830	23,487	21,949	450	300	300	3.0	8,412,843	8,412,843
Office[9]			All	2,504	385	30,024	4,614	300	148	22	8	8,316,075	8,248,666
Retail			All	1,477	1,541	17,719	18,488	71	70	71	10	6,547,588	6,451,704
Restaurant			All	1,669	1,926	20,027	23,103	71	71	71	10	7,629,598	6,484,590
Hotel			All	674	546	8,075	6,537	30	30	30	2	2,787,309	551,880
Performance Venue		Attendees	Passenger	770		9,084		700	120		3	908,419	907,200
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**37,245,575**

2039 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

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   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2040 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2040
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	34.7%
Percent All VMT from EVs at Full Buildout[2]	%	34.6%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	8,975	--	100,492	--	700	700	--	3	4,120,152	2,169,720
		Weekday Day	Passenger	9,148	--	100,838	--	700	700	--	3	1,411,732	740,880
		Weekend	Passenger	--	9,391	--	111,927	700	--	700	3	3,022,022	1,428,840
	Other Events	Concerts	Passenger	9,287		88,017		700	700		3	792,150	476,280
		Other	Passenger	2,079		20,098		700	265		3	703,441	701,190
		Corporate/Community	Passenger	520		4,851		700	64		3	485,131	483,840
		Plaza	Passenger	1,005		9,356		700	123		3	149,698	148,781
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	13	--	120	--	700	1	--	3	31,361	19,732
	Sports Team Management		Passenger	59	--	565	--	700	7	--	3	147,396	138,121
Residential			All	2,114	1,975	25,352	23,692	450	300	300	3.3	9,080,732	9,080,732
Office[9]			All	2,703	416	32,407	4,980	300	160	24	8	8,976,282	8,922,010
Retail			All	1,594	1,663	19,126	19,956	71	71	71	10	7,067,395	6,484,590
Restaurant			All	1,802	2,079	21,616	24,937	71	71	71	10	8,235,305	6,484,590
Hotel			All	728	589	8,716	7,056	30	30	30	2	3,008,592	551,880
Performance Venue		Attendees	Passenger	832		9,807		700	129		3	980,658	975,240
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**38,806,425**

2040 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2041 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2041
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	37.2%
Percent All VMT from EVs at Full Buildout[2]	%	37.2%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	9,643	--	107,977	--	700	700	--	3	4,427,037	2,169,720
		Weekday Day	Passenger	9,830	--	108,349	--	700	700	--	3	1,516,884	740,880
		Weekend	Passenger	--	10,090	--	120,263	700	--	700	3	3,247,114	1,428,840
	Other Events	Concerts	Passenger	9,979		94,573		700	700		3	851,153	476,280
		Other	Passenger	2,234		21,595		700	285		3	755,836	754,110
		Corporate/Community	Passenger	558		5,213		700	68		3	521,266	514,080
		Plaza	Passenger	1,080		10,053		700	132		3	160,848	159,667
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	14	--	129	--	700	1	--	3	33,697	19,732
	Sports Team Management		Passenger	64	--	607	--	700	8	--	3	158,375	157,853
Residential			All	2,271	2,122	27,237	25,453	450	300	300	3.5	9,755,866	9,755,866
Office[9]			All	2,904	447	34,817	5,351	300	172	26	8	9,643,650	9,595,354
Retail			All	1,713	1,787	20,548	21,440	71	71	71	10	7,592,842	6,484,590
Restaurant			All	1,936	2,234	23,224	26,791	71	71	71	10	8,847,583	6,484,590
Hotel			All	782	633	9,364	7,580	30	30	30	2	3,232,274	551,880
Performance Venue		Attendees	Passenger	894		10,537		700	139		3	1,053,702	1,050,840
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**40,344,282**

2041 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2042 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2042
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	39.8%
Percent All VMT from EVs at Full Buildout[2]	%	39.8%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	10,319	--	115,540	--	700	700	--	3	4,737,149	2,169,720
		Weekday Day	Passenger	10,518	--	115,939	--	700	700	--	3	1,623,141	740,880
		Weekend	Passenger	--	10,797	--	128,688	700	--	700	3	3,474,573	1,428,840
	Other Events	Concerts	Passenger	10,678		101,197		700	700		3	910,776	476,280
		Other	Passenger	2,390		23,108		700	305		3	808,782	807,030
		Corporate/Community	Passenger	598		5,578		700	73		3	557,780	551,880
		Plaza	Passenger	1,155		10,757		700	142		3	172,115	171,763
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	15	--	138	--	700	1	--	3	36,057	19,732
	Sports Team Management		Passenger	68	--	649	--	700	8	--	3	169,469	157,853
Residential			All	2,430	2,271	29,141	27,233	450	300	300	3.8	10,438,034	10,438,034
Office[9]			All	3,108	478	37,251	5,725	300	184	28	8	10,317,971	10,268,698
Retail			All	1,833	1,912	21,985	22,939	71	71	71	10	8,123,763	6,484,590
Restaurant			All	2,072	2,390	24,847	28,664	71	71	71	10	9,466,241	6,484,590
Hotel			All	837	677	10,018	8,110	30	30	30	2	3,458,287	551,880
Performance Venue		Attendees	Passenger	956		11,275		700	149		3	1,127,513	1,126,440
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**41,878,209**

2042 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2043 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2043
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	42.5%
Percent All VMT from EVs at Full Buildout[2]	%	42.4%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	11,000	--	123,168	--	700	700	--	3	5,049,870	2,169,720
		Weekday Day	Passenger	11,212	--	123,592	--	700	700	--	3	1,730,292	740,880
		Weekend	Passenger	--	11,510	--	137,183	700	--	700	3	3,703,946	1,428,840
	Other Events	Concerts	Passenger	11,382		107,878		700	700		3	970,900	476,280
		Other	Passenger	2,548		24,634		700	325		3	862,173	859,950
		Corporate/Community	Passenger	637		5,946		700	78		3	594,602	589,680
		Plaza	Passenger	1,232		11,467		700	151		3	183,477	182,650
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	16	--	147	--	700	1	--	3	38,438	19,732
	Sports Team Management		Passenger	73	--	692	--	700	9	--	3	180,656	177,584
Residential			All	2,591	2,421	31,061	29,027	450	300	300	4.0	11,125,781	11,125,781
Office[9]			All	3,313	510	39,706	6,102	300	196	30	8	10,997,807	10,942,042
Retail			All	1,954	2,039	23,434	24,451	71	71	71	10	8,659,026	6,484,590
Restaurant			All	2,209	2,548	26,485	30,553	71	71	71	10	10,089,957	6,484,590
Hotel			All	892	722	10,679	8,645	30	30	30	2	3,686,149	551,880
Performance Venue		Attendees	Passenger	1,019		12,019		700	158		3	1,201,945	1,194,480
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**43,428,678**

2043 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

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5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

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   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2044 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2044
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	45.1%
Percent All VMT from EVs at Full Buildout[2]	%	45.0%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	11,687	--	130,853	--	700	700	--	3	5,364,993	2,169,720
		Weekday Day	Passenger	11,912	--	131,305	--	700	700	--	3	1,838,266	740,880
		Weekend	Passenger	--	12,228	--	145,744	700	--	700	3	3,935,080	1,428,840
	Other Events	Concerts	Passenger	12,093		114,610		700	700		3	1,031,486	476,280
		Other	Passenger	2,707		26,171		700	346		3	915,974	915,516
		Corporate/Community	Passenger	677		6,317		700	83		3	631,706	627,480
		Plaza	Passenger	1,309		12,183		700	161		3	194,927	194,746
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	16	--	156	--	700	2	--	3	40,836	39,463
	Sports Team Management		Passenger	77	--	735	--	700	9	--	3	191,930	177,584
Residential			All	2,752	2,572	32,995	30,834	450	300	300	4.3	11,818,512	11,818,512
Office[9]			All	3,520	541	42,178	6,482	300	209	32	8	11,682,570	11,668,003
Retail			All	2,076	2,166	24,893	25,973	71	71	71	10	9,198,168	6,484,590
Restaurant			All	2,346	2,707	28,134	32,455	71	71	71	10	10,718,194	6,484,590
Hotel			All	948	767	11,343	9,183	30	30	30	2	3,915,662	551,880
Performance Venue		Attendees	Passenger	1,083		12,769		700	168		3	1,276,950	1,270,080
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**45,048,165**

2044 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2045 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2045
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	47.8%
Percent All VMT from EVs at Full Buildout[2]	%	47.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	12,377	--	138,588	--	700	700	--	3	5,682,090	2,169,720
		Weekday Day	Passenger	12,616	--	139,065	--	700	700	--	3	1,946,916	740,880
		Weekend	Passenger	--	12,951	--	154,358	700	--	700	3	4,167,663	1,428,840
	Other Events	Concerts	Passenger	12,807		121,384		700	700		3	1,092,452	476,280
		Other	Passenger	2,867		27,718		700	366		3	970,113	968,436
		Corporate/Community	Passenger	717		6,690		700	88		3	669,043	665,280
		Plaza	Passenger	1,386		12,903		700	170		3	206,448	205,632
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	17	--	166	--	700	2	--	3	43,250	39,463
	Sports Team Management		Passenger	82	--	779	--	700	10	--	3	203,274	197,316
Residential			All	2,915	2,724	34,941	32,653	450	300	300	4.5	12,515,522	12,515,522
Office[9]			All	3,728	573	44,665	6,864	300	221	34	8	12,371,563	12,341,347
Retail			All	2,198	2,294	26,361	27,505	71	71	71	10	9,740,640	6,484,590
Restaurant			All	2,485	2,867	29,793	34,369	71	71	71	10	11,350,312	6,484,590
Hotel			All	1,004	812	12,012	9,724	30	30	30	2	4,146,592	551,880
Performance Venue		Attendees	Passenger	1,147		13,524		700	178		3	1,352,424	1,345,680
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**46,615,457**

2045 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2046 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2046
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	50.5%
Percent All VMT from EVs at Full Buildout[2]	%	50.3%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	13,071	--	146,357	--	700	700	--	3	6,000,621	2,169,720
		Weekday Day	Passenger	13,323	--	146,861	--	700	700	--	3	2,056,058	740,880
		Weekend	Passenger	--	13,677	--	163,011	700	--	700	3	4,401,296	1,428,840
	Other Events	Concerts	Passenger	13,525		128,188		700	700		3	1,153,694	476,280
		Other	Passenger	3,028		29,271		700	387		3	1,024,496	1,024,002
		Corporate/Community	Passenger	757		7,065		700	93		3	706,549	703,080
		Plaza	Passenger	1,464		13,626		700	180		3	218,021	217,728
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	18	--	175	--	700	2	--	3	45,674	39,463
	Sports Team Management		Passenger	87	--	822	--	700	10	--	3	214,669	197,316
Residential			All	3,079	2,877	36,895	34,479	450	300	300	4.8	13,215,472	13,215,472
Office[9]			All	3,936	606	47,163	7,248	300	233	35	8	13,063,462	12,993,725
Retail			All	2,322	2,422	27,835	29,043	71	71	71	10	10,285,401	6,484,590
Restaurant			All	2,624	3,028	31,459	36,291	71	71	71	10	11,985,096	6,484,590
Hotel			All	1,060	858	12,684	10,268	30	30	30	2	4,378,497	551,880
Performance Venue		Attendees	Passenger	1,211		14,282		700	188		3	1,428,239	1,421,280
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**48,148,846**

2046 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2047 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2047
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	53.2%
Percent All VMT from EVs at Full Buildout[2]	%	53.0%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	13,768	--	154,155	--	700	700	--	3	6,320,340	2,169,720
		Weekday Day	Passenger	14,033	--	154,686	--	700	700	--	3	2,165,607	740,880
		Weekend	Passenger	--	14,405	--	171,696	700	--	700	3	4,635,802	1,428,840
	Other Events	Concerts	Passenger	14,246		135,018		700	700		3	1,215,164	476,280
		Other	Passenger	3,189		30,831		700	407		3	1,079,082	1,076,922
		Corporate/Community	Passenger	797		7,442		700	98		3	744,195	740,880
		Plaza	Passenger	1,542		14,352		700	189		3	229,637	228,614
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	19	--	184	--	700	2	--	3	48,108	39,463
	Sports Team Management		Passenger	91	--	866	--	700	11	--	3	226,107	217,048
Residential			All	3,243	3,030	38,856	36,312	450	300	300	5.0	13,917,885	13,917,885
Office[9]			All	4,146	638	49,670	7,633	300	246	37	8	13,757,796	13,719,686
Retail			All	2,445	2,552	29,314	30,587	71	71	71	10	10,832,078	6,484,590
Restaurant			All	2,764	3,189	33,131	38,220	71	71	71	10	12,622,114	6,484,590
Hotel			All	1,116	904	13,358	10,814	30	30	30	2	4,611,218	551,880
Performance Venue		Attendees	Passenger	1,276		15,043		700	198		3	1,504,337	1,496,880
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**49,774,159**

2047 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2048 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2048
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	55.9%
Percent All VMT from EVs at Full Buildout[2]	%	55.7%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	14,466	--	161,973	--	700	700	--	3	6,640,900	2,169,720
		Weekday Day	Passenger	14,745	--	162,532	--	700	700	--	3	2,275,444	740,880
		Weekend	Passenger	--	15,136	--	180,405	700	--	700	3	4,870,924	1,428,840
	Other Events	Concerts	Passenger	14,969		141,866		700	700		3	1,276,795	476,280
		Other	Passenger	3,351		32,395		700	428		3	1,133,812	1,132,488
		Corporate/Community	Passenger	838		7,819		700	103		3	781,939	778,680
		Plaza	Passenger	1,620		15,080		700	199		3	241,284	240,710
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	20	--	194	--	700	2	--	3	50,548	39,463
	Sports Team Management		Passenger	96	--	910	--	700	12	--	3	237,575	236,779
Residential			All	3,407	3,184	40,822	38,149	450	300	300	5.3	14,622,063	14,622,063
Office[9]			All	4,357	670	52,183	8,020	300	258	39	8	14,453,873	14,393,030
Retail			All	2,569	2,681	30,798	32,134	71	71	71	10	11,380,129	6,484,590
Restaurant			All	2,904	3,351	34,807	40,154	71	71	71	10	13,260,731	6,484,590
Hotel			All	1,173	949	14,034	11,361	30	30	30	2	4,844,523	551,880
Performance Venue		Attendees	Passenger	1,340		15,806		700	209		3	1,580,635	1,580,040
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**51,360,034**

2048 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2049 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2049
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	58.6%
Percent All VMT from EVs at Full Buildout[2]	%	58.4%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	15,166	--	169,816	--	700	700	--	3	6,962,444	2,169,720
		Weekday Day	Passenger	15,459	--	170,401	--	700	700	--	3	2,385,618	740,880
		Weekend	Passenger	--	15,869	--	189,140	700	--	700	3	5,106,768	1,428,840
	Other Events	Concerts	Passenger	15,693		148,735		700	700		3	1,338,616	476,280
		Other	Passenger	3,513		33,963		700	449		3	1,188,710	1,188,054
		Corporate/Community	Passenger	878		8,198		700	108		3	819,800	816,480
		Plaza	Passenger	1,698		15,810		700	209		3	252,967	252,806
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	21	--	203	--	700	2	--	3	52,995	39,463
	Sports Team Management		Passenger	100	--	954	--	700	12	--	3	249,078	236,779
Residential			All	3,572	3,338	42,793	39,991	450	300	300	5.6	15,328,126	15,328,126
Office[9]			All	4,567	703	54,703	8,407	300	271	41	8	15,151,815	15,118,992
Retail			All	2,694	2,811	32,285	33,686	71	71	71	10	11,929,647	6,484,590
Restaurant			All	3,045	3,513	36,488	42,093	71	71	71	10	13,901,059	6,484,590
Hotel			All	1,230	995	14,712	11,910	30	30	30	2	5,078,453	551,880
Performance Venue		Attendees	Passenger	1,405		16,572		700	219		3	1,657,167	1,655,640
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**52,973,121**

2049 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

3. Land use and scenario assumptions for overall activity, trip generation, and VMT are summarized in Table 24.

4. EV trips and VMT per activity represent the estimated vehicle trips and vehicle miles traveled by an EV for each activity. These were estimated by scaling total trips or VMT per activity per land use provided by Fehr & Peers by the percent of VMT from EV assumed for each fleet type.

5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

2050 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

EV Assumptions

Description	Units	Input
Miles Charged per Hour Charged[1]	(miles/hr)	25
Year	-	2050
Scenario	-	CTF
Percent Passenger VMT from EVs at Full Buildout[2]	%	61.3%
Percent All VMT from EVs at Full Buildout[2]	%	61.1%
Project Chargers Commitment	%	>10

Full Project Buildout, With TDM Plan

Land Use and Scenario[3]			Fleet Type	EV Trips per Activity[4]		EV VMT per Activity[4]		Number of EV Chargers Available[5]	Number of EV Chargers Used per Activity[6]		Hours for Charging per Charger[7]	EV Miles per Year[8]	Miles Charged by Project Chargers per Year[8]
				Weekday	Weekend	Weekday	Weekend		Weekday	Weekend			
Ballpark Stadium	A's Games	Weekday Evening	Passenger	15,869	--	177,678	--	700	700	--	3	7,284,816	2,169,720
		Weekday Day	Passenger	16,175	--	178,291	--	700	700	--	3	2,496,076	740,880
		Weekend	Passenger	--	16,604	--	197,897	700	--	700	3	5,343,219	1,428,840
	Other Events	Concerts	Passenger	16,420		155,622		700	700		3	1,400,596	476,280
		Other	Passenger	3,676		35,536		700	470		3	1,243,749	1,243,620
		Corporate/Community	Passenger	919		8,578		700	113		3	857,758	854,280
		Plaza	Passenger	1,777		16,542		700	218		3	264,680	263,693
	A's Games Deliveries		Bus	--	--	--	--	700	--	--	--	--	--
			Truck	--	--	--	--	700	--	--	--	--	--
	Event Deliveries		Truck	--	--	--	--	700	--	--	--	--	--
	Arena Management		Passenger	22	--	212	--	700	2	--	3	55,449	39,463
	Sports Team Management		Passenger	105	--	999	--	700	13	--	3	260,610	256,511
Residential			All	3,737	3,492	44,769	41,837	450	300	300	5.8	16,035,837	16,035,837
Office[9]			All	4,779	735	57,229	8,795	300	283	43	8	15,851,386	15,792,336
Retail			All	2,818	2,941	33,775	35,241	71	71	71	10	12,480,448	6,484,590
Restaurant			All	3,186	3,676	38,173	44,036	71	71	71	10	14,542,882	6,484,590
Hotel			All	1,287	1,042	15,391	12,460	30	30	30	2	5,312,929	551,880
Performance Venue		Attendees	Passenger	1,470		17,339		700	229		3	1,733,896	1,731,240
		Deliveries	Truck	--	--	--	--	700	--	--	--	--	--
			Bus	--	--	--	--	700	--	--	--	--	--
Total Full Buildout Miles Charged by Project Chargers Per Year													**54,553,760**

2050 CTF with Project Charger Commitment of >10%
Electric Vehicle Charging Mileage from Project Operations
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. This is representative of a typical charge rate for an EV of 6.25 kWh per hour and a fuel economy of 0.25 kWh per mile. The charge rate is based on capability of existing battery-electric vehicles and Level 2 charging stations. Reference: Chargepoint. 2017. Level Up Your EV Charging Knowledge. Available at: https://www.chargepoint.com/blog/level-your-ev-charging-knowledge/. The fuel economy is based on National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf.

2. As derived in Table 1 from the ARB VISION 2.1 Scenarios modeling for the MTC region. Note these percentages do not exactly match the projections for Alameda County using EMFAC2017 as provided in the Project CEQA analysis; however, this methodology allows for CTF projections for years after 2030 so are appropriate for the year-by-year analysis.

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5. Per Project sponsor, this assumes that more than 10 percent of parking spaces are serviced by Level 2 (208/240V 40-amp) EV charging stations, as follows: 15% for residential, 10% office, 20% restaurant/retail, 15% hotel, 35% ballpark. The percent was applied to the parking spaces associated with each individual landuse. Additionally, this analysis assumes that there are no EV chargers installed in the Interim Parking Lot associated with the ballpark after Phase 1 buildout since these are temporary and will not be part of Full Buildout.

6. EV charging at residential land uses assumes that all available chargers are consistently used on a daily basis, consistent with the general practice that most owners charge during off peak hours while at home.

   EV charging at non-residential is different in that sometimes there is a surplus of chargers relative to EVs coming to the site. For land uses or events with lower trip generation relative to available chargers (smaller concerts at ballpark, office), only a fraction of chargers will be used as the number of EVs coming to the site are fewer than the total number of charger capacity. For land uses or events with high trip generation relative to available chargers (baseball games, hotel retail), the site is charger limited and all chargers will be used.

   For example, at 3-hour ball games, each of the 200 available chargers could feasibly charge 6 vehicles each for 30 minutes (12.5 miles/charge x 6 vehicles = 75 miles of EV range), or equivalent scenarios such as 3 vehicles each for 60 minutes (25 miles/charge x 3 vehicles = 75 miles of EV range), resulting in a maximum of 75 x 200 = 15,000 miles of EV range and around 1,200 cars to charge per ballgame in total. With EV VMT of over 50,000 miles and over 5,000 EV trips per ballgame, on average, the ballgame chargers are thus fully utilized. However, if the EV VMT is less than the capacity of the chargers, the EV VMT to be charged is calculated based on the number of chargers to be used; for the office land use, if chargers are used 8 hours per day, only 78 of the 300 chargers would be used in this scenario (for a total of 624 hours/day charging). This is equivalent to using all 300 chargers at 2.08 hours/day. If EV penetration increases beyond the assumed percentages, these chargers would be used more.

7. The hours of charging per activity assume realistic time windows during which a car could feasibly be charged for each non-residential activity. For ballpark land uses, it is assumed that vehicles can be charged throughout the duration of a ballgame (approximately 3 hours). For the ancillary non-residential land uses, it is assumed that charging can occur at the office for a standard 8-hour workday, at the retail and restaurant land uses for 10 hours, and at the hotel for 2 hours. The performance venue was assumed to share EV chargers with the ballpark and charge for a 3-hour performance. The residential land use charging duration was back-calculated to assume that residential chargers are used to supply all of the residential EV charging needs. If EV penetration increases beyond the assumed percentages, the residential chargers could be used much more.

8. The EV miles per year reported represent all miles driven to and from the Project site that are anticipated to be from EVs, whereas the miles charged by project chargers per year represents the subset of these miles that are charged by Project EV chargers.

9. Additional incentives for EV charging at the office land use (e.g., partially or fully subsidizing the parking, providing a valet service) would increase EV charger usage beyond what is reported here.

Abbreviations:

EV - electric vehicle (includes battery electric or plug-in hybrid technology)
Hr - hour
TDM - Transportation Demand Management
VMT - vehicle miles travelled

APPENDIX G
EDR OFFSITE RECEPTOR REPORT

15th and Brush
15th Street and Brush Street
Oakland, CA 94612

Inquiry Number: 5560692.1s
February 12, 2019

EDR Offsite Receptor Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available records was conducted by Environmental Data Resources, Inc. (EDR). The EDR Offsite Receptor Report provides information which may be used to comply with the Clean Air Act Risk Management Program 112-R. *"The rule requires that you estimate in the RMP residential populations within the circle defined by the endpoint for your worst-case and alternative release scenarios (i.e., the center of the circle is the point of release and the radius is the distance to the endpoint). In addition, you must report in the RMP whether certain types of public receptors and environmental receptors are within the circles."*

The address of the subject property, for which the search was intended, is:

15TH AND BRUSH
15TH STREET AND BRUSH STREET
OAKLAND, CA 94612

Distance Searched: 2.000 miles from subject property

RECEPTOR SUMMARY
An X indicates the presence of the receptor within the search radius.

Residential Population
Estimated population within search radius: 104231 persons.

Other Public Receptors

Type	Within Search Radius	Sites Total
Day Care Centers:	X	168
Medical Centers:		
Nursing Homes:	X	11
Schools:	X	48
Hospitals:	X	271
Colleges:	X	8
Arena:		
Prison:		

Environmental Receptors

Type	Within Search Radius	Sites Total
Federal Land:	X	2

CENSUS MAP - 5560692.1s

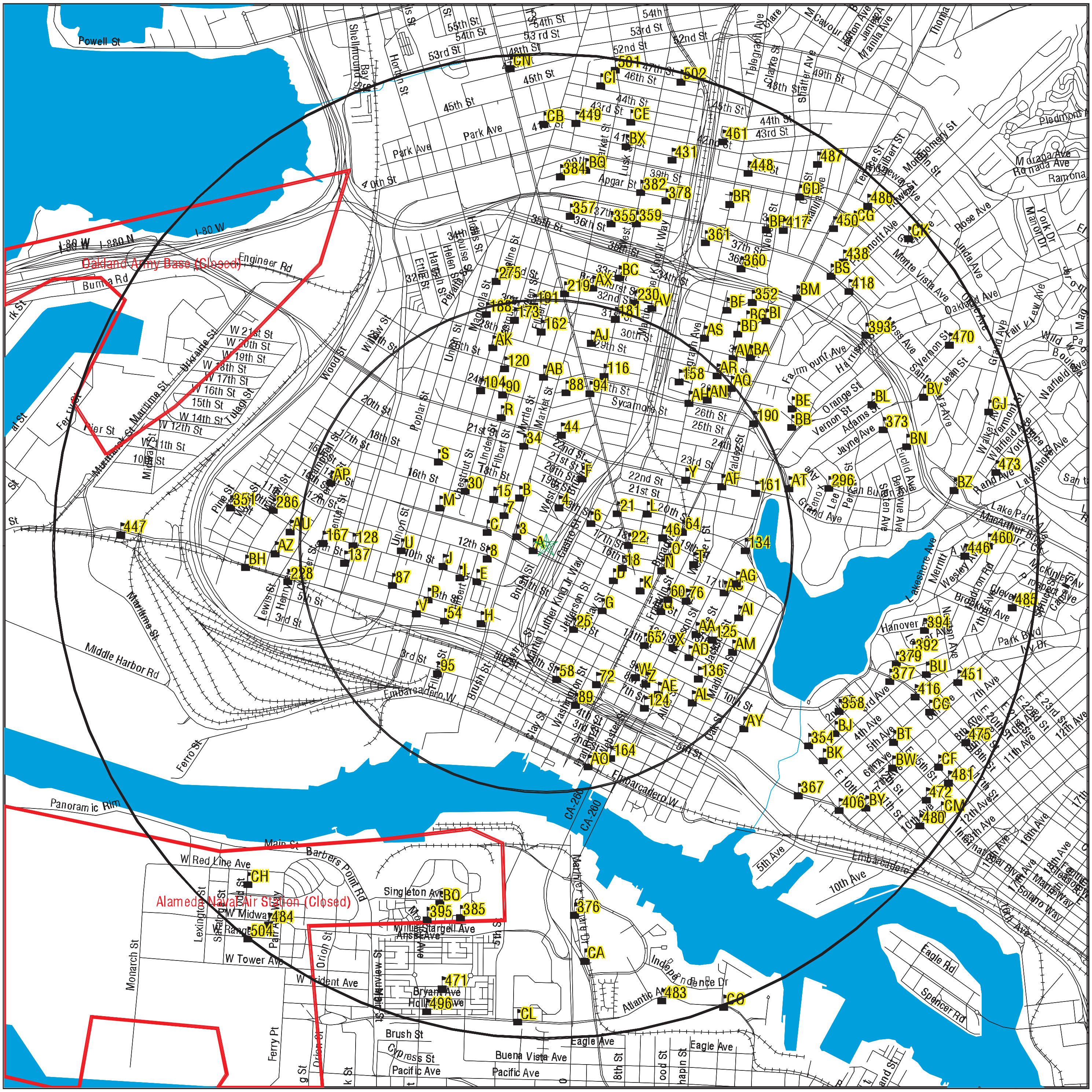
★ Target Property
Roads
Waterways
Census Tracts

TARGET PROPERTY:	15th and Brush	CUSTOMER:	Ramboll
ADDRESS:	15th Street and Brush Street	CONTACT:	Malini Nambiar
CITY/STATE/ZIP:	Oakland CA 94612	INQUIRY #:	5560692.1s
LAT/LONG:	37.8077 / 122.2784	DATE:	February 12, 2019 5:28 pm

CENSUS FINDINGS

Map ID	Tract Number	Total Population	Population in Radius	Total Area(sq.mi.)	Area in Radius(sq.mi.)
T1	4251.03	2502	7.5	0.34	0.00
T2	4251.02	2807	389.6	0.28	0.04
T3	4251.01	1596	8.4	0.88	0.00
T4	4007.00	4206	7.1	0.34	0.00
T5	4017.00	2667	1052.8	4.61	1.82
T6	4011.00	4156	3152.3	0.34	0.26
T7	4010.00	5678	5204.0	0.45	0.41
T8	4251.04	3175	3038.6	0.42	0.40
T9	4012.00	2416	1256.9	0.26	0.13
T10	4041.01	2929	320.6	0.22	0.02
T11	4262.00	4745	162.6	0.52	0.02
T12	4041.02	2283	1466.8	0.09	0.06
T13	4015.00	2630	2630.0	0.18	0.18
T14	4040.00	2819	2819.0	0.14	0.14
T15	4014.00	4314	4314.0	0.29	0.29
T16	4035.01	4374	4374.0	0.26	0.26
T17	4013.00	3528	3528.0	0.33	0.33
T18	4039.00	3584	3574.6	0.19	0.19
T19	4016.00	2163	2163.0	0.25	0.25
T20	4038.00	3461	1391.8	0.25	0.10
T21	4035.02	1991	1991.0	0.07	0.07
T22	4036.00	4482	4482.0	0.15	0.15
T23	4105.00	2193	2193.0	0.28	0.28
T24	4022.00	2385	2385.0	0.27	0.27
T25	4051.00	4197	23.6	0.49	0.00
T26	4024.00	2351	2351.0	0.13	0.13
T27	4027.00	1569	1569.0	0.15	0.15
T28	4037.01	2587	2587.0	0.07	0.07
T29	4050.00	3136	235.2	0.31	0.02
T30	4018.00	1703	1703.0	0.12	0.12
T31	4037.02	1724	1724.0	0.08	0.08
T32	4028.00	3345	3345.0	0.15	0.15
T33	4029.00	1434	1434.0	0.15	0.15
T34	9819.00	38	13.6	2.01	0.72
T35	4034.00	4146	4146.0	0.49	0.49
T36	4052.00	4597	2913.4	0.33	0.21
T37	4025.00	1784	1784.0	0.14	0.14
T38	4026.00	1151	1151.0	0.12	0.12
T39	4031.00	2238	2238.0	0.13	0.13
T40	4053.01	2603	2603.0	0.09	0.09
T41	4030.00	2788	2788.0	0.14	0.14
T42	9820.00	71	69.8	0.59	0.58
T43	4055.00	3643	1512.2	0.16	0.07
T44	4033.00	4054	4054.0	0.39	0.39
T45	4287.00	4119	1138.8	4.71	1.30
T46	4053.02	2530	2530.0	0.08	0.08
T47	9832.00	540	540.0	0.25	0.25
T48	4054.01	3957	3957.0	0.12	0.12
T49	4060.00	3450	1747.9	1.03	0.52
T50	4054.02	3114	1086.0	0.11	0.04
T51	4273.00	4896	2318.2	1.08	0.51
T52	4272.00	4107	51.0	0.73	0.01
T53	4276.00	4722	704.7	0.22	0.03

RECEPTOR MAP - 5560692.1s



- Target Property
- Roads
- Waterways
- Environmental or Public Receptor
- Federal Lands Linear Features
- Federal Lands Area

0 — 1/2 — 1 — 2 Miles

TARGET PROPERTY:	15th and Brush	CUSTOMER:	Ramboll
ADDRESS:	15th Street and Brush Street	CONTACT:	Malini Nambiar
CITY/STATE/ZIP:	Oakland CA 94612	INQUIRY #:	5560692.1s
LAT/LONG:	37.8077 / 122.2784	DATE:	February 12, 2019 5:29 pm

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

A1
WSW
0-1/8 mi
258
Higher

SRDCCA200710456
Daycare

EDR ID:	SRDCCA200710456
Facility number:	13412570
Facility name:	"HICKS, MARJORIE "
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	788 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	788 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"HICKS, MARJORIE "
Licensee type:	A
License effective date:	980313
License expiration date:	Not Reported
License issue date:	980313
Program type:	"MAXIMUM CAPACITY:12 CHILDREN WITH NO MORE THAN 4 INFANTS OR CAPACITY 14 WHEN 2 CHILDREN ARE AT LEAST 6 YRS, WITH A MAXIMUM OF 3 INFANTS PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED. "
Original app. received date:	971021
Facility closed date:	Not Reported
Mailing address:	788 14TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"HICKS, MARJORIE "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5108363150

A2
West
0-1/8 mi
305
Higher

SRDCCA200708624
Daycare

EDR ID:	SRDCCA200708624
Facility number:	13411239
Facility name:	"GUINN, CHARLOTTE "
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1407A WEST STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	1407A WEST STREET
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"GUINN, CHARLOTTE "

Licensee type: A
License effective date: 951228
License expiration date: Not Reported
License issue date: 951228
Program type: "MAXIMUM CAPACITY: 12 CHILDREN, INCLUDING LICENSEE'S CHILDREN UNDER 10 YEARS OF AGE WHO RESIDE IN THE HOME, WITH NO MORE THAN 4 INFANTS. (INFANT MEANS A CHILD UNDER 2 YEARS OLD). "
Original app. received date: 951013
Facility closed date: Not Reported
Mailing address: 1407A WEST STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94612
Contact person: "GUINN, CHARLOTTE "
Facility capacity: 12
Type of clients served: 960
Facility phone: 5107632439

---

3 SRDCCA200742476
WNW EDR ID: SRDCCA200742476 Daycare
1/8-1/4 mi Facility number: 13419213
680 Facility name: "PHELON, JESSICA "
Higher Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1416 MARKET ST #B
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1416 MARKET ST #B
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "PHELON, JESSICA "
Licensee type: A
License effective date: 70404
License expiration date: Not Reported
License issue date: 070404
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 070313
Facility closed date: Not Reported
Mailing address: 1416 MARKET ST #B
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "PHELON, JESSICA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5108155414

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

4 SRDCCA200717777
NNE EDR ID: SRDCCA200717777 Daycare
1/8-1/4 mi Facility number: 13416518
927 Facility name: "HARRISON, ANITA "
Higher Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 824 18TH STREET
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 824 18TH STREET
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "HARRISON, ANITA "
Licensee type: A
License effective date: 31006
License expiration date: Not Reported
License issue date: 031006
Program type: USUAL & THE FOLLOWING: BACKYARD WILL BE USED FOR CHILDREN BETWEEN THE HOURS OF 11-11:30 A.M. & 3:30-3:55P.M.: CHILDREN MUST BE UNDER THE DIRECT VISUAL SUPERVISION BY THE LICENSEE & WILL NOT BE COMMINGLEDWITH OTHER DAYCARE CHILDREN OF LICENSED PROVIDER RESIDING DOWNSTAIRS.
Original app. received date: 020719
Facility closed date: Not Reported
Mailing address: 824 18TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "HARRISON, ANITA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5108346524

B5 SRPU20071013355
NNW Ncessch: 062805004285 Public Schools
1/8-1/4 mi Schname05: LAFAYETTE ELEMENTARY
1076 Mstreet05: 1700 MARKET ST.
Higher Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94607
Mzip405: 3330
Member05: 359
Phone05: (510) 879-1290
Locale05: 1
Type05: 1
Level05: 1
Gslo05: KG
Gshi05: 05
Edr id: SRPU20071013355

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation — **Site** — **EDR ID / Database**

6 — SRDCCA200744957 — Daycare
ENE 1/8-1/4 mi 1107 Higher

EDR ID:	SRDCCA200744957
Facility number:	10206160
Facility name:	PCDCI - LITTLE LEARNERS
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	690 18TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	2619 BROADWAY
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"PARENT-CHILD DEVELOPMENT CENTER, INC. "
Licensee type:	C
License effective date:	940526
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	AGES 2 TO FIRST GRADE ENROLLMENT. NO MORE THAN 15 CHILDREN ON THE PLAYGROUND AT ANY ONE TIME. HOURS: 7 A.M. TO 5:30 P.M. MONDAY THROUGH FRIDAY.
Original app. received date:	840215
Facility closed date:	Not Reported
Mailing address:	2619 BROADWAY STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"MENDONZA, ZENAIDA "
Facility capacity:	24
Type of clients served:	950
Facility phone:	5104518459

7 — SRDCCA200702911 — Daycare
NW 1/8-1/4 mi 1155 Higher

EDR ID:	SRDCCA200702911
Facility number:	10209023
Facility name:	"YOUNG, ALYCIA AND CHEATEM, EVELYN "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1515 MYRTLE STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1515 MYRTLE STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"YOUNG, ALYCIA AND CHEATEM, EVELYN "
Licensee type:	A

License effective date: 940326
License expiration date: Not Reported
License issue date: Not Reported
Program type: "MAXIMUM CAPACITY: 12 CHILDREN, INCLUDING LICENSEE'S CHILDREN UNDER 10 YEARS OF AGE WHO RESIDE IN THE HOME, WITH NO MORE THAN 4 INFANTS. (INFANT MEANS A CHILD UNDER 2 YEARS OLD). "
Original app. received date: 841102
Facility closed date: Not Reported
Mailing address: 1515 MYRTLE STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "YOUNG, ALYCIA & CHEATEM, E"
Facility capacity: 12
Type of clients served: 950
Facility phone: 5108347465

---

8 SRPU20071013396
West Ncessch: 062805007939 Public Schools
1/8-1/4 mi Schname05: WEST OAKLAND COMMUNITY CHARTER
1279 Mstreet05: 955 12TH ST.
Higher Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94607
Mzip405: Not Reported
Member05: 36
Phone05: (510) 465-9627
Locale05: 1
Type05: 1
Level05: 2
Gslo05: 06
Gshi05: 06
Edr id: SRPU20071013396

C9 SRPU20071013361
WNW Ncessch: 062805004292 Public Schools
1/8-1/4 mi Schname05: LOWELL MIDDLE
1308 Mstreet05: 991 14TH ST.
Higher Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94607
Mzip405: 3230
Member05: 85
Phone05: (510) 879-2090
Locale05: 1
Type05: 1
Level05: 4
Gslo05: 08
Gshi05: 08
Edr id: SRPU20071013361

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

C10
WNW
1/8-1/4 mi
1308
Higher

SRPU20071013412
Public Schools

Ncessch:	062805010464
Schname05:	KIPP BRIDGE COLLEGE PREPARATORY
Mstreet05:	991 14TH ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94607
Mzip405:	Not Reported
Member05:	221
Phone05:	(510) 879-2421
Locale05:	1
Type05:	1
Level05:	2
Gslo05:	05
Gshi05:	08
Edr id:	SRPU20071013412

B11
NNW
1/4-1/2 mi
1404
Higher

SRDCCA200730970
Daycare

EDR ID:	SRDCCA200730970
Facility number:	13418459
Facility name:	"COLE, CAROL F "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1724 MYRTLE ST
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1724 MYRTLE ST
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"COLE, CAROL F "
Licensee type:	A
License effective date:	51014
License expiration date:	Not Reported
License issue date:	051014
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050901
Facility closed date:	Not Reported
Mailing address:	1724 MYRTLE ST
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"COLE, CAROL F "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5102683916

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
D12			SRHO20070152580
ESE	Hospital type:	01	AHA Hospitals
1/4-1/2 mi	Num of times COO:	00	
1502	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	20060307	
	Medicare/Medicaid:	1	
	Facility name:	WEST COAST FEMINIST HEALTH PROJECT INC	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	20000128	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0969872	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	570 14TH STREET #3	
	Phone num:	5108365676	
	Termination reason:	00	
	Term Date:	20080501	
	Purpose of action:	2	
	Provider control:	03	
	Zip:	94612	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070152580	

E13			SRDCCA200751175
WSW	EDR ID:	SRDCCA200751175	Daycare
1/4-1/2 mi	Facility number:	13415181	
1541	Facility name:	O.U.S.D. - MARTIN LUTHER KING CHILD DEV. CENTER	
Higher	Facility eval. code:	0203	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	850	
	Facility status code:	03	
	Address:	960-A TENTH STREET	
	City:	OAKLAND	

State:	CA
Zip:	94607
Alt. address:	960-A TENTH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	OAKLAND UNIFIED SCHOOL DISTRICT
Licensee type:	F
License effective date:	518
License expiration date:	Not Reported
License issue date:	000518
Program type:	"AGES 2 YEARS TO FIRST GRADE ENTRY. HOURS OF OPERATION: 7:001.M. - 6:00P.M., MONDAY - FRIDAY, CAPACITY 75 IN PORTABLE BUILDING WITH 3 CLASSSROOMS. "
Original app. received date:	000515
Facility closed date:	Not Reported
Mailing address:	495 JONES AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94603
Contact person:	SLOCUM(AM)/HAIRSTON(PM)
Facility capacity:	75
Type of clients served:	950
Facility phone:	5108790822

E14 SRPU20071013364
WSW Ncessch: 062805004297 Public Schools
1/4-1/2 mi Schname05: MARTIN LUTHER KING JR. ELEMENTARY
1541 Mstreet05: 960 TENTH ST.
Higher Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94607
Mzip405: 3106
Member05: 379
Phone05: (510) 879-1820
Locale05: 1
Type05: 1
Level05: 1
Gslo05: KG
Gshi05: 05
Edr id: SRPU20071013364

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15 SRDCCA200700265
NW EDR ID: SRDCCA200700265 Daycare
1/4-1/2 mi Facility number: 15600316
1554 Facility name: FILBERT HOUSE
Lower Facility eval. code: 1507
Facility office number: 14
Facility county number: 01
Facility type code: 730
Facility status code: 03
Address: 1625 FILBERT
City: OAKLAND

State:	CA
Zip:	94607
Alt. address:	1624 GRAFF COURT
City:	SAN LEANDRO
State:	CA
Zip:	94577
Facility investor:	GREATER NEW BEGINNINGS
Licensee type:	C
License effective date:	981027
License expiration date:	Not Reported
License issue date:	981027
Program type:	AGE RANGE 6 THROUGH 17 YEARS. AMBULATORY ONLY.
Original app. received date:	980720
Facility closed date:	Not Reported
Mailing address:	1624 GRAFF COURT
Mailing city:	SAN LEANDRO
Mailing state:	CA
Mailing zip:	94577
Contact person:	"PORTER, KENNETH "
Facility capacity:	12
Type of clients served:	950
Facility phone:	9255600961

D16 SRDCCA200744490
ESE EDR ID: SRDCCA200744490 Daycare
1/4-1/2 mi Facility number: 13418195
1642 Facility name: BRIGHT FUTURE EARLY LEARNING CENTER
Higher

Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	1515 CLAY STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	"22351 CITY CENTER DRIVE, #150 "
City:	HAYWARD
State:	CA
Zip:	94541
Facility investor:	COMMUNITY CHILD CARE COORDINATION COUNCIL-ALA CTY
Licensee type:	C
License effective date:	60901
License expiration date:	Not Reported
License issue date:	060901
Program type:	"AGES BIRTH TO TWO YEARS, INCLUDING A MAXIMUM OF 9 CRIB AGE CHILDREN. INFANT COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT IS PRESCHOOL, CAPACITY 32. TOTAL CAPACITY OF CENTER IS 52. OPERATING MON ""- FRI, 7:30AM - 5:30PM IN ONE ROOM. "
Original app. received date:	060728
Facility closed date:	Not Reported
Mailing address:	"22351 CITY CENTER DRIVE, #150 "
Mailing city:	HAYWARD
Mailing state:	CA

Mailing zip:	94541
Contact person:	"MCNAIR, LAURA "
Facility capacity:	20
Type of clients served:	955
Facility phone:	5108354012

D17 SRDCCA200755219
ESE EDR ID: SRDCCA200755219 Daycare
1/4-1/2 mi Facility number: 13418194
1642 Facility name: BRIGHT FUTURE EARLY LEARNING CENTER
Higher Facility eval. code: 0105

Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	1515 CLAY STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	"22351 CITY CENTER DRIVE, #150 "
City:	HAYWARD
State:	CA
Zip:	94541
Facility investor:	COMMUNITY CHILD CARE COORDINATING COUNCIL-ALA CTY
Licensee type:	C
License effective date:	60901
License expiration date:	Not Reported
License issue date:	060901
Program type:	"AGES TWO YEARS TO FIRST GRADE ENTRY. PRESCHOOL COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT IS INFANT, CAPACITY 20. TOTAL CAPACITY OF CENTER IS 52. OPERATING MONDAY THROUGH FRIDAY, 7:30AM - "5:30 PM IN ONE ROOM.
Original app. received date:	060728
Facility closed date:	Not Reported
Mailing address:	"22351 CITY CENTER DRIVE, #150 "
Mailing city:	HAYWARD
Mailing state:	CA
Mailing zip:	94541
Contact person:	"MCNAIR, LAURA "
Facility capacity:	32
Type of clients served:	950
Facility phone:	5108354012

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18 SRCL20051000282
ESE Unitid: 108269 Colleges
1/4-1/2 mi Instnm: ACADEMY OF CHINESE CULTURE AND HEALTH SCIENCES
1683 Addr: 1601 CLAY ST
Higher City: OAKLAND

Stabbr:	CA
Zip:	94612
Zip4:	Not Reported
Unk:	Not Reported
Fips:	094612
Oberge:	8

Chfnm:	WEI TSUEI
Chftitle:	PRESIDENT
Gentele:	5107637787
Fintele:	5107637787
Admtele:	5107637787
Ein:	942881684
Duns:	801852732
Opeid:	3288300
Opeflag:	1
Webaddr:	www.acchs.edu
Sector:	2
Iclevel:	1
Control:	2
Hloffer:	7
Ugoffer:	2
Groffer:	1
Fpoffer:	2
Hdegoffer:	20
Deggrant:	1
Hbcu:	2
Hospital:	2
Medical:	2
Tribal:	2
Carnegie:	53
Locale:	1
Openpubl:	1
Act:	A
Newid:	-2
Deathyr:	-2
Closedat:	-2
Cyactive:	1
Postsec:	1
Pseflag:	1
Pset4flg:	1
Rptmth:	1
Fte:	159
Enrtot:	179
Edr id:	SRCL20051000282

F19
NNE
1/4-1/2 mi
1690
Higher

SRDCCA200742104
Daycare

EDR ID:	SRDCCA200742104
Facility number:	10213266
Facility name:	FOUR C'S CHILD DEVELOPMENT CENTER
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	756 - 21ST STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	22351 CITY CENTER DR. STE.200
City:	HAYWARD
State:	CA

Zip: 94541
Facility investor: COMMUNITY CHILD CARE COORDINATING COUNCIL-ALA. CO.
Licensee type: C
License effective date: 930920
License expiration date: Not Reported
License issue date: 900920
Program type: "AGES 4 MONTHS THRU 30 MONTHS. COMBINATION CENTER: INFANT, CAPACITY 41;DAY CARE, CAPACITY 103. TOTAL CAPACITY 144. HOURS: 7:00 A.M. TO 6:00 P.M., MONDAY THROUGH FRIDAY.
"
Original app. received date: 900724
Facility closed date: Not Reported
Mailing address: 22351 CITY CENTER DR. STE 200
Mailing city: HAYWARD
Mailing state: CA
Mailing zip: 94541
Contact person: SHERRY BURRELL
Facility capacity: 41
Type of clients served: 955
Facility phone: 5102720669

F20 SRDCCA200749822
NNE EDR ID: SRDCCA200749822 Daycare
1/4-1/2 mi Facility number: 10213265
1690 Facility name: FOUR C'S CHILD DEVELOPMENT CENTER
Higher Facility eval. code: 0105
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 756 - 21ST STREET
City: OAKLAND
State: CA
Zip: 94612
Alt. address: "22351 CITY CENTER DR,SUITE 200"
City: HAYWARD
State: CA
Zip: 94541
Facility investor: COMMUNITY CHILD CARE COORDINATING COUNCIL-ALA. CO.
Licensee type: C
License effective date: 930920
License expiration date: Not Reported
License issue date: 900920
Program type: "AGES 2.5 THRU 5 YEARS. COMBINATION CENTER: DAY CARE, CAPACITY 103; INFANT, CAPACITY 41. TOTAL CAPACITY 144. HOURS: 7:00 A.M. TO 6:00 P.M., MONDAY THROUGH FRIDAY.
"
Original app. received date: 900724
Facility closed date: Not Reported
Mailing address: 22351 CITY CENTER DR. STE. 200
Mailing city: HAYWARD
Mailing state: CA
Mailing zip: 94541
Contact person: SHERRY BURRELL
Facility capacity: 103

Type of clients served:	950	
Facility phone:	5102720669	

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21 SRHO20070159886
ENE Hospital type: 01 AHA Hospitals
1/4-1/2 mi Num of times COO: 00
1702 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: Not Reported
Compliance status: Not Reported
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: Not Reported
Medicare/Medicaid: Not Reported
Facility name: CENTER FOR ELDERS INDEPENDENCE SAN PAB
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported
Partcipation date: 20050315
Prior COO date: Not Reported
Prior carrier: Not Reported
Provider ID: 05D1038279
Record Status: A
Region code: 09
Is Partial Record: Y
state abbrev: CA
ssa state: 05
state region cd: M2
street address: 1955 SAN PABLO AVE 1ST FLOOR
Phone num: 5104331160
Termination reason: 00
Term Date: 20070314
Purpose of action: Not Reported
Provider control: 02
Zip: 94612
Fips state: 06
Fips cnty: 001
SSA MSA: 418
SSA MSA size code: B
Date accredited: Not Reported
Accred expire date: Not Reported
Accred Org: Not Reported
Num beds: 0000
Num cert beds: 0000
Source: US_HOSPITAL_POSCLIA
Edr id: SRHO20070159886

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22 SRPU20071013409
East Ncessch: 062805010461 Public Schools
1/4-1/2 mi Schname05: OAKLAND SCHOOL FOR THE ARTS
1770 Mstreet05: 1800 SAN PABLO AVE.
Higher Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94612

Mzip405:	Not Reported	
Member05:	421	
Phone05:	(510) 873-8800	
Locale05:	1	
Type05:	1	
Level05:	4	
Gslo05:	06	
Gshi05:	12	
Edr id:	SRPU20071013409	

G23 SRHO20070147054
SE Hospital type: 01 AHA Hospitals
1/4-1/2 mi Num of times COO: 00
1788 Owner date: Not Reported
Higher City: OAKLAND

Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19960513
Medicare/Medicaid:	1
Facility name:	BARBARA HOLMES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930723
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0873399
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	1200 CLAY ST STE 210
Phone num:	5109878616
Termination reason:	08
Term Date:	19980816
Purpose of action:	2
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147054

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
G24			SRHO20070143583
SE	Hospital type:	01	AHA Hospitals
1/4-1/2 mi	Num of times COO:	00	
1788	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	MEDICAL GROUP AT CITY CENTER INC	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930329	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0866278	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	1200 CLAY ST STE 310	
	Phone num:	5109878611	
	Termination reason:	08	
	Term Date:	20020831	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94612	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070143583	

25			SRHO20070136975
SSE	Hospital type:	01	AHA Hospitals
1/4-1/2 mi	Num of times COO:	00	
1822	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	PETER QUON MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930330
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0666755
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1010 JEFFERSON
Phone num:	5108361473
Termination reason:	01
Term Date:	19950630
Purpose of action:	Not Reported
Provider control:	10
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070136975

E26
WSW
1/4-1/2 mi
1839
Higher

SRDCCA200739279
Daycare

EDR ID:	SRDCCA200739279
Facility number:	13419190
Facility name:	"MOORE, KELLYE "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1051 10TH ST
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1051 10TH ST
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"MOORE, KELLYE "
Licensee type:	A
License effective date:	70326
License expiration date:	Not Reported
License issue date:	070326

Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	070130
Facility closed date:	Not Reported
Mailing address:	1051 10TH ST
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"MOORE, KELLYE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5104723288

H27 SRDCCA200713882
SW EDR ID: SRDCCA200713882 Daycare
1/4-1/2 mi Facility number: 13414960
1934 Facility name: "HARRIS, JULIA "
Higher

Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	825 MARKET STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	825 MARKET STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"HARRIS, JULIA "
Licensee type:	A
License effective date:	315
License expiration date:	Not Reported
License issue date:	000315
Program type:	"MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	000207
Facility closed date:	Not Reported
Mailing address:	825 MARKET STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"HARRIS, JULIA "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5102389472

I28 SRDCCA200742263
WSW EDR ID: SRDCCA200742263 Daycare
1/4-1/2 mi Facility number: 13414174
1948 Facility name: S.S.U.C.-THURGOOD MARSHALL EARLY HEADSTART
Higher

Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	1117 - 10TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1117 10TH ST
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	SPANISH SPEAKING UNITY COUNCIL
Licensee type:	C
License effective date:	990208
License expiration date:	Not Reported
License issue date:	990208
Program type:	"AGES BIRTH TO 2 YEARS, NO MORE THAN 6 OF WHOM MAY BE YOUNGER THAN 12 MONTHS. INFANT COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT: PRESCHOOL, CAP. 10 TOTAL CAPACITY: 26. ""HOURS OF OPERATION: MON. - FRI., 8:00A.M. - 5:00P.M. IN 2 CLASSROOMS. "
Original app. received date:	981109
Facility closed date:	Not Reported
Mailing address:	1900 FRUITVALE AVE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94601
Contact person:	"AHMED, KEDIJA "
Facility capacity:	16
Type of clients served:	955
Facility phone:	5108360543

I29
WSW
1/4-1/2 mi
1948
Higher

SRDCCA200745181
Daycare

EDR ID:	SRDCCA200745181
Facility number:	13414173
Facility name:	S.S.U.C. - THURGOOD MARSHALL EARLY HEADSTART
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	1117 - 10TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1117 10TH ST
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	SPANISH SPEAKING UNITY COUNCIL
Licensee type:	C
License effective date:	990208
License expiration date:	Not Reported

License issue date: 990208
Program type: "AGES 2 YRS TO 1ST GRADE ENTRY. PRESCHOOL COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT IS INFANT, CAPACITY 16. PRESCHOOL CAPACITY MAY INCREASE TO 36 WHEN INFANTS ARE NOT PRESENT. OPERATING MON-FRI, "8AM-5PM. LICENSE SUBJECT TO ONE WAIVER TO BE POSTED.
Original app. received date: 981109
Facility closed date: Not Reported
Mailing address: "1900 FRUITVALE AVE., STE. 2A "
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94601
Contact person: "TURNER-MUECKE, LEE "
Facility capacity: 10
Type of clients served: 950
Facility phone: 5108360543

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30 SRDCCA200739078
NW EDR ID: SRDCCA200739078 Daycare
1/4-1/2 mi Facility number: 13418830
2133 Facility name: "RICE, MARTHA "
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1615 CHESTNUT STREET
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1615 CHESTNUT STREET
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "RICE, MARTHA "
Licensee type: A
License effective date: 60912
License expiration date: Not Reported
License issue date: 060912
Program type: MAX. CAP (WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN 4 INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.
Original app. received date: 060815
Facility closed date: Not Reported
Mailing address: 1615 CHESTNUT STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "RICE, MARTHA "
Facility capacity: 14
Type of clients served: 960
Facility phone: 5104651244

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

J31
West
1/4-1/2 mi
2147
Lower

SRDCCA200709167
Daycare

EDR ID:	SRDCCA200709167
Facility number:	13414171
Facility name:	"LEVIAS, VIVIEN "
Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1038 CHESTNUT
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	1038 CHESTNUT
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"LEVIAS, VIVIEN "
Licensee type:	A
License effective date:	991116
License expiration date:	Not Reported
License issue date:	991116
Program type:	"MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	981125
Facility closed date:	Not Reported
Mailing address:	1038 CHESTNUT
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"LEVIAS, VIVIEN "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5107637535

K32
ESE
1/4-1/2 mi
2209
Higher

SRHO20070157287
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	EAST BAY ENDOSURGERY INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20031126
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1019728

Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	300 FRANK OGAWA PLAZA SUITE 135
Phone num:	5104443297
Termination reason:	00
Term Date:	20071125
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157287

K33 SRHO20070007666
ESE AHA Hospitals
1/4-1/2 mi
2209
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20031223
Medicare/Medicaid:	1
Facility name:	EAST BAY ENDOSCOPY CENTER
Intermediary/Carrier:	00542
Medicaid number:	Not Reported
Partcipation date:	20040120
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05C0001641
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	300 FRANK OGAWA PLAZA, SUITE 135
Phone num:	5108931600
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1

Provider control:	01
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070007666

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34 SRDCCA200732096
NNW Daycare
1/4-1/2 mi
2260
Lower

EDR ID:	SRDCCA200732096
Facility number:	13418409
Facility name:	"ROUSSELL, BARBARA J "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	2107 MYRTLE ST
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	2107 MYRTLE ST
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"ROUSSELL, BARBARA J "
Licensee type:	A
License effective date:	60317
License expiration date:	Not Reported
License issue date:	060317
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050729
Facility closed date:	Not Reported
Mailing address:	2107 MYRTLE ST
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"ROUSSELL, BARBARA J "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108321823

L35 SRHO20070146477
ENE AHA Hospitals
1/4-1/2 mi
2299
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported

City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20020304
Medicare/Medicaid:	1
Facility name:	AVENTIS BIO-SERVICES INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19961022
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0921216
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	536 20TH STREET
Phone num:	5108341641
Termination reason:	01
Term Date:	20040421
Purpose of action:	2
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070146477

L36 SRHO20070134374
ENE AHA Hospitals
1/4-1/2 mi
2299
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19951010
Medicare/Medicaid:	1
Facility name:	MILES INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported

Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602725
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	536 20TH STREET
Phone num:	5108344625
Termination reason:	12
Term Date:	19961208
Purpose of action:	2
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134374

H37 SRDCCA200740508
SW EDR ID: SRDCCA200740508 Daycare
1/4-1/2 mi Facility number: 13419153
2307 Facility name: "MOM, SOEUN "
Lower Facility eval. code: 0203

Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	956 7TH ST
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	956 7TH ST
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"MOM, SOEUN "
Licensee type:	A
License effective date:	70306
License expiration date:	Not Reported
License issue date:	070306
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	070112

Facility closed date:	Not Reported
Mailing address:	956 7TH ST
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"MOM, SOEUN "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5104851889

M38 SRDCCA200729291
WNW EDR ID: SRDCCA200729291 Daycare
1/4-1/2 mi Facility number: 13418303
2307 Facility name: "HENDERSON, SONIA "
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1476 ADELINE ST
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1476 ADELINE ST
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "HNDERSON, SONIA "
Licensee type: A
License effective date: 50726
License expiration date: Not Reported
License issue date: 050726
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 050511
Facility closed date: Not Reported
Mailing address: 1476 ADELINE ST
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "HENDERSON, SONIA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5108360527

J39 SRDCCA200727037
West EDR ID: SRDCCA200727037 Daycare
1/4-1/2 mi Facility number: 13417674
2327 Facility name: "STROUD, JONTANIKA "
Higher Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810

Facility status code:	03	
Address:	1106 10TH STREET	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Alt. address:	1106 10TH STREET	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Facility investor:	"STROUD, JONTANIKA "	
Licensee type:	A	
License effective date:	40830	
License expiration date:	Not Reported	
License issue date:	040830	
Program type:	MAX. CAP (WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.	4
Original app. received date:	040621	
Facility closed date:	Not Reported	
Mailing address:	1106 10TH STREET	
Mailing city:	OAKLAND	
Mailing state:	CA	
Mailing zip:	94607	
Contact person:	"STROUD, JONTANIKA "	
Facility capacity:	14	
Type of clients served:	960	
Facility phone:	5104658270	

M40 SRDCCA200711989
WNW EDR ID: SRDCCA200711989 Daycare
1/4-1/2 mi Facility number: 13414282
2333 Facility name: "BROWN, CARLA & NEWSOME, TORIN "
Lower Facility eval. code: 0203

Facility office number:	02	
Facility county number:	01	
Facility type code:	810	
Facility status code:	03	
Address:	1536 ADELINE STREET	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Alt. address:	1536 ADELINE STREET	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Facility investor:	"BROWN, CARLA & NEWSOME, TORIN "	
Licensee type:	A	
License effective date:	990402	
License expiration date:	Not Reported	
License issue date:	990402	
Program type:	MAX. CAP (WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.	4
Original app. received date:	990209	
Facility closed date:	Not Reported	

Mailing address:	1536 ADELINE STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"BROWN, CARLA "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5104445589

N41 SRHO20070151599
East AHA Hospitals
1/4-1/2 mi
2367
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	05D0601957
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SIN-MAN MICHELLE TAM MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990217
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0957254
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1629 TELEGRAPH AVENUE 2ND FLOOR
Phone num:	5108934030
Termination reason:	01
Term Date:	20001213
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070151599

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
N42			SRHO20070134362
East	Hospital type:	01	AHA Hospitals
1/4-1/2 mi	Num of times COO:	00	
2367	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	LEW H LEE MD	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19921215	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0602679	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	1629 TELEGRAPH AVE SECOND FLOOR	
	Phone num:	5108934030	
	Termination reason:	04	
	Term Date:	19981231	
	Purpose of action:	Not Reported	
	Provider control:	02	
	Zip:	94612	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070134362	

N43			SRHO20070147365
ESE	Hospital type:	01	AHA Hospitals
1/4-1/2 mi	Num of times COO:	00	
2368	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	NURSES IN ACTION
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960926
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0920242
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1611 TELEGRAPH AVE, STE #305
Phone num:	5108346817
Termination reason:	08
Term Date:	19980925
Purpose of action:	Not Reported
Provider control:	02
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147365

44
North
1/4-1/2 mi
2470
Lower

SRDCCA200710469
Daycare

EDR ID:	SRDCCA200710469	
Facility number:	13412576	
Facility name:	"HUDSON, PATRICIA	"
Facility eval. code:	0203	
Facility office number:	02	
Facility county number:	01	
Facility type code:	810	
Facility status code:	03	
Address:	880 ISABELLA ST.	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Alt. address:	880 ISABELLA ST.	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Facility investor:	"HUDSON, PATRICIA	"
Licensee type:	A	
License effective date:	971217	
License expiration date:	Not Reported	
License issue date:	971217	

Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 971031
Facility closed date: Not Reported
Mailing address: 880 ISABELLA ST.
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "HUDSON, PATRICIA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5108395032

M45 SRDCCA200738339
WNW EDR ID: SRDCCA200738339 Daycare
1/4-1/2 mi Facility number: 13419069
2487 Facility name: "CAMPBELL, IRMA & KERRY "
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1176 14TH STREET
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1176 14TH STREET
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "CAMPBELL, IRMA & KERRY "
Licensee type: A
License effective date: 61227
License expiration date: Not Reported
License issue date: 061227
Program type: "MAX. CAPACITY 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTS ONLY, OR CAP. 8 WITH NO MORE THAN TWO INFANTS, ONE CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND ONE AT LEAST AGE 6, LANDLORD "CONSENT IS REQUIRED
Original app. received date: 061010
Facility closed date: Not Reported
Mailing address: 1176 14TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "CAMPBELL, IRMA & KERRY "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5104521195

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
46 East 1/4-1/2 mi 2512 Higher	Ncessch: Schname05: Mstreet05: Mcity05: Mstate05: Mzip05: Mzip405: Member05: Phone05: Locale05: Type05: Level05: Gslo05: Gshi05: Edr id:	062805010720 BAY AREA TECHNOLOGY 1920 TELEGRAPH AVE. OAKLAND CA 94612 Not Reported 146 (510) 645-9932 1 1 2 06 07 SRPU20071009647	SRPU20071009647 Public Schools
O47 East 1/4-1/2 mi 2620 Higher	Hospital type: Num of times COO: Owner date: City: Has plan of corr: Compliance status: SSA county code: Cross ref number: FMS survey date: Current survey date: Medicare/Medicaid: Facility name: Intermediary/Carrier: Medicaid number: Partcipation date: Prior COO date: Prior carrier: Provider ID: Record Status: Region code: Is Partial Record: state abbrev: ssa state: state region cd: street address: Phone num: Termination reason: Term Date: Purpose of action: Provider control: Zip: Fips state: Fips cnty: SSA MSA: SSA MSA size code: Date accredited: Accred expire date:	01 00 Not Reported OAKLAND Not Reported Not Reported 000 Not Reported Not Reported Not Reported Not Reported A P E B WELLNESS CENTER Not Reported Not Reported 20020219 Not Reported Not Reported 05D0996461 A 09 Y CA 05 LAB 1755 BROADWAY 2ND FLOOR 5104574022 08 20020219 Not Reported 03 94612 06 001 418 B Not Reported Not Reported	SRHO20070154918 AHA Hospitals

Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070154918	

O48 SRHO20070153599
East AHA Hospitals
1/4-1/2 mi
2620
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20030903
Medicare/Medicaid:	1
Facility name:	CAL-PEP/MOBILE VAN
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20001128
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0980628
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	1755 BROADWAY, SUITE 501
Phone num:	5108747850
Termination reason:	00
Term Date:	20070902
Purpose of action:	1
Provider control:	03
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070153599

O49 SRHO20070155055
East AHA Hospitals
1/4-1/2 mi
2620
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported

City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	A P E B WELLNESS CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20020507
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0999210
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M1
street address:	1755 BROADWAY 2ND FLOOR
Phone num:	5104574022
Termination reason:	00
Term Date:	20080506
Purpose of action:	Not Reported
Provider control:	08
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070155055

P50
WSW
1/2-1 mi
2652
Higher

SRDCCA200749911
Daycare

EDR ID:	SRDCCA200749911
Facility number:	10206027
Facility name:	ST. VINCENT'S DAY HOME
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	1086 8TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1086 8TH STREET
City:	OAKLAND

State: CA
Zip: 94607
Facility investor: "SAINT VINCENT'S DAY HOME, INC. "
Licensee type: C
License effective date: 930927
License expiration date: Not Reported
License issue date: Not Reported
Program type: "AGES:2YRS. TO 1ST GRADE ENTRY. PRESCHOOL COMPONENT OF A COMBO CTR. OTHER COMPONENT SCHOOLAGE-CAP.46. HOURS: MON-FRI 7AM-5:30PM. CAPACITY OF PRESCHOOL AND SCHOOLAGE MAY VARY, BUT TOTAL CAPACITY OF CENTER "MAY NOT EXCEED 307 CHILDREN AT ANY TIME.
Original app. received date: 831020
Facility closed date: Not Reported
Mailing address: 1086 8TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "MOHRMANN, SR.CORINNE "
Facility capacity: 261
Type of clients served: 950
Facility phone: 5108328324

P51
WSW
1/2-1 mi
2652
Higher

SRDCCA200743446
Daycare

EDR ID: SRDCCA200743446
Facility number: 10213211
Facility name: ST. VINCENT'S DAY HOME
Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 840
Facility status code: 03
Address: 1086 - 8TH STREET
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1086 - 8TH STREET
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "SAINT VINCENT'S DAY HOME, INC. "
Licensee type: C
License effective date: 10517
License expiration date: Not Reported
License issue date: 010517
Program type: "AGES: KDGTN. ENROLLMENT TO 18YRS. SCHOOLAGE COMPONENT OF A COMBO CTR. OTHER COMP. PRESCH. CAPACITY 261. HOURS: MON-FRI, 7AM-5:30PM. CAPACITYOF SCHOOLAGE AND PRESCHOOL MAY VARY BUT MAY NEVER EXCEED 307 CHILDREN "AT ANY TIME.
Original app. received date: 900607
Facility closed date: Not Reported
Mailing address: 1086 - 8TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "MOHRMANN, CORINNE MARIE "

Facility capacity:	46
Type of clients served:	950
Facility phone:	5108328324

P52 SRPR20051027626
WSW Private Schools
1/2-1 mi

Pss school id:	K9300837
Pss inst:	ST VINCENT'S DAY HOME
2652 Lograde:	PK
Higher Higrade:	K
Pss address:	1086 8TH STREET
Pss city:	OAKLAND
Pss county no:	001
Pss county fips:	06001
Pss stabb:	CA
Pss fips:	06
Pss zip5:	94607
Pss phone:	5108328324
Pss sch days:	246
Pss stu day hrs:	4
Pss library:	Yes
Pss enroll ug:	Not Reported
Pss enroll pk:	104
Pss enroll k:	48
Pss enroll 1:	Not Reported
Pss enroll 2:	Not Reported
Pss enroll 3:	Not Reported
Pss enroll 4:	Not Reported
Pss enroll 5:	Not Reported
Pss enroll 6:	Not Reported
Pss enroll 7:	Not Reported
Pss enroll 8:	Not Reported
Pss enroll 9:	Not Reported
Pss enroll 10:	Not Reported
Pss enroll 11:	Not Reported
Pss enroll 12:	Not Reported
Pss enroll t:	152
Pss enroll tk12:	48
Pss race ai:	0
Pss race as:	2
Pss race h:	19
Pss race b:	27
Pss race w:	0
Pss fte teach:	27
Pss locale:	1
Pss coed:	1
Pss type:	7
Pss level:	1
Pss relig:	3
Pss comm type:	1
Pss indian pct:	0
Pss asian pct:	4.17
Pss hisp pct:	39.58
Pss black pct:	56.25
Pss white pct:	0
Pss stdtch rt:	1.78

Pss orient:	29
Pss county name:	ALAMEDA
Pss assoc 1:	National Association for the Education of Young Children (NAEYC)
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051027626

M53 SRDCCA200722445
WNW
1/2-1 mi
2662
Lower

EDR ID:	SRDCCA200722445
Facility number:	13417217
Facility name:	"MACKEY, NANCY "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1419 MAGNOLIA STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1419 MAGNOLIA STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"MACKEY, NANCY "
Licensee type:	A
License effective date:	40315
License expiration date:	Not Reported
License issue date:	040315
Program type:	"MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	030818
Facility closed date:	Not Reported
Mailing address:	1419 MAGNOLIA STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"MACKEY, NANCY "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5104525547

Daycare

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54 SRDCCA200755728
SW
1/2-1 mi
2669
Lower

EDR ID:	SRDCCA200755728
Facility number:	13418178
Facility name:	OAKLAND HEAD START - CITY TOWERS CENTER
Facility eval. code:	0203
Facility office number:	02

Daycare

Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	1050 SEVENTH ST.
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	150 FRANK OGAWA PLAZA
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	CITY OF OAKLAND
Licensee type:	F
License effective date:	51230
License expiration date:	Not Reported
License issue date:	051230
Program type:	AGES TWO TO FIRST GRADE ENTRY. OPERATING 7 AM TO 6 PM IN 3 ROOMS.
Original app. received date:	051213
Facility closed date:	Not Reported
Mailing address:	150 FRANK OGAWA PLAZA
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"ASHLEY, SUSIE "
Facility capacity:	60
Type of clients served:	950
Facility phone:	5102385230

N55
East
1/2-1 mi
2754
Higher

SRPU20071007214
Public Schools

Ncessch:	060813011809
Schname05:	SUMMIT CHARTER ACADEMY
Mstreet05:	426 17TH ST. STE. 200
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	95351
Mzip405:	Not Reported
Member05:	-2
Phone05:	M
Locale05:	2
Type05:	1
Level05:	4
Gslo05:	N
Gshi05:	N
Edr id:	SRPU20071007214

N56
East
1/2-1 mi
2754
Higher

SRPU20071009651
Public Schools

Ncessch:	062805010724
Schname05:	MILLSMONT ACADEMY
Mstreet05:	426 17TH ST. STE. 200
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94612
Mzip405:	2820
Member05:	271

Phone05:	(510) 638-9445	
Locale05:	1	
Type05:	1	
Level05:	1	
Gslo05:	KG	
Gshi05:	08	
Edr id:	SRPU20071009651	

Q57 SRHO20070397346
ESE AHA Hospitals
1/2-1 mi
2794
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	QUALITY HOME HEALTH CARE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950615
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	45D0902240
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	405 14TH STREET SUITE 508
Phone num:	5102680413
Termination reason:	08
Term Date:	20010614
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070397346

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
58			SRHO20070147452
South	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
2802	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	NORTH COUNTY JAIL PRISON HEALTH	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930708	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0872847	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	550 6TH STREET	
	Phone num:	5102682754	
	Termination reason:	08	
	Term Date:	20030707	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94607	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070147452	

Q59			SRHO20070010035
ESE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
2808	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	19850129	

Medicare/Medicaid:	1
Facility name:	ROUNESVILLE HOME HLTH SERV INC
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19850129
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	057692
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	1441 FRANKLIN ST,MEZZANINE
Phone num:	4157636612
Termination reason:	01
Term Date:	19870915
Purpose of action:	1
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010035

60
ESE
1/2-1 mi
2825
Higher

SRCL20051000527
Colleges

Unitid:	117557
Instnm:	LINCOLN UNIVERSITY
Addr:	401 15TH STREET
City:	OAKLAND
Stabbr:	CA
Zip:	94612
Zip4:	2801
Unk:	Not Reported
Fips:	094612
Oberge:	8
Chfnm:	CLARENCE W. RIPPEL
Chftitle:	DEAN OF STUDENTS
Gentele:	5106288010
Fintele:	5106288010
Admtele:	5106288010
Ein:	941347042
Duns:	-1
Opeid:	697500
Opeflag:	1
Webaddr:	www.lincolnuca.edu
Sector:	2

Iclevel:	1
Control:	2
Hloffer:	7
Ugoffer:	1
Groffer:	1
Fpoffer:	2
Hdegoffer:	20
Deggrant:	1
Hbcu:	2
Hospital:	2
Medical:	2
Tribal:	2
Carnegie:	55
Locale:	1
Openpubl:	1
Act:	A
Newid:	-2
Deathyr:	-2
Closedat:	-2
Cyactive:	1
Postsec:	1
Pseflag:	1
Pset4flg:	1
Rptmth:	1
Fte:	102
Enrtot:	104
Edr id:	SRCL20051000527

P61
WSW
1/2-1 mi
2899
Higher

SRDCCA200714383
Daycare

EDR ID:	SRDCCA200714383
Facility number:	13415779
Facility name:	"JOHNSON, MARTICIA "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1104 8TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1104 8TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"JOHNSON, MARTICIA "
Licensee type:	A
License effective date:	10901
License expiration date:	Not Reported
License issue date:	010901
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	010611

Facility closed date:	Not Reported	
Mailing address:	1104 8TH STREET	
Mailing city:	OAKLAND	
Mailing state:	CA	
Mailing zip:	94607	
Contact person:	"JOHNSON, MARTICIA "	
Facility capacity:	8	
Type of clients served:	960	
Facility phone:	5108353233	

P62 SRDCCA200726189
WSW EDR ID: SRDCCA200726189 Daycare
1/2-1 mi Facility number: 13417861
2905 Facility name: "HARDAWAY, ERICA "
Higher Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1116 8TH STREET
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1116 8TH STREET
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "HARDAWAY, ERICA "
Licensee type: A
License effective date: 41007
License expiration date: Not Reported
License issue date: 041007
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 040825
Facility closed date: Not Reported
Mailing address: 1116 8TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "HARDAWAY, ERICA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5102688658

R63 SRDCCA200755793
NNW EDR ID: SRDCCA200755793 Daycare
1/2-1 mi Facility number: 13418170
2919 Facility name: OAKLAND HEAD START - WEST GRAND AVE. CTR
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01

Facility type code:	850
Facility status code:	03
Address:	1058 W. GRAND AVE.
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	150 FRANK OGAWA PLAZA
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	CITY OF OAKLAND
Licensee type:	F
License effective date:	51031
License expiration date:	Not Reported
License issue date:	051031
Program type:	"AGES 2 TO FIRST GRADE ENTRY. OPERATING IN 2 CLASSROOMS, MON-FRI, 7 AM-6PM. LICENSE SUBJECT TO ONE WAIVER TO BE POSTED. "
Original app. received date:	051004
Facility closed date:	Not Reported
Mailing address:	150 FRANK OGAWA PLAZA
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"COOPER, ARNETTA "
Facility capacity:	45
Type of clients served:	950
Facility phone:	5102382268

64
East
1/2-1 mi
2950
Lower

SRHO20070011753
AHA Hospitals

Hospital type:	01
Num of times COO:	02
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19950522
Medicare/Medicaid:	1
Facility name:	NSI HOME HLTH SERVICES
Intermediary/Carrier:	00140
Medicaid number:	Not Reported
Partcipation date:	19831221
Prior COO date:	19921229
Prior carrier:	00040
Provider ID:	057585
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	1970 BROADWAY, SUITE 307

Phone num:	5107632350
Termination reason:	01
Term Date:	19980531
Purpose of action:	2
Provider control:	03
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070011753

65
SE
1/2-1 mi
2950
Higher

SRCL20051000705
Colleges

Unitid:	124557
Instnm:	UNIVERSITY OF CALIFORNIA SYSTEM ADMIN CENTRAL OFF
Addr:	1111 FRANKLIN ST
City:	OAKLAND
Stabbr:	CA
Zip:	94607
Zip4:	5200
Unk:	Not Reported
Fips:	094607
Oberge:	8
Chfnm:	ROBERT C DYNES
Chftitle:	PRESIDENT
Gentele:	5109870700
Fintele:	5109879531
Admtele:	5109879557
Ein:	-1
Duns:	3985512
Opeid:	131100
Opeflag:	2
Webaddr:	www.ucop.edu
Sector:	0
Iclevel:	1
Control:	1
Hloffer:	9
Ugoffer:	1
Groffer:	1
Fpoffer:	1
Hdegoffer:	11
Deggrant:	1
Hbcu:	2
Hospital:	2
Medical:	-2
Tribal:	2
Carnegie:	-3
Locale:	1
Openpubl:	1

Act:	A	
Newid:	-2	
Deathyr:	-2	
Closedat:	-2	
Cyactive:	1	
Postsec:	1	
Pseflag:	1	
Pset4flg:	1	
Rptmth:	-2	
Fte:	Not Reported	
Enrtot:	Not Reported	
Edr id:	SRCL20051000705	

S66 SRPU20071012619
NW Public Schools
1/2-1 mi
2977
Lower

Ncessch:	062805004244
Schname05:	BUNCHE
Mstreet05:	1240 18TH ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94607
Mzip405:	2223
Member05:	23
Phone05:	(510) 879-1730
Locale05:	1
Type05:	2
Level05:	4
Gslo05:	06
Gshi05:	12
Edr id:	SRPU20071012619

S67 SRPU20071013413
NW Public Schools
1/2-1 mi
2977
Lower

Ncessch:	062805010465
Schname05:	RALPH BUNCHE ACADEMY
Mstreet05:	1240 18TH ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94607
Mzip405:	Not Reported
Member05:	234
Phone05:	(510) 879-1730
Locale05:	1
Type05:	4
Level05:	4
Gslo05:	09
Gshi05:	11
Edr id:	SRPU20071013413

T68 SRHO20070134376
East AHA Hospitals
1/2-1 mi
3026
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported

Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PACIFIC OCCUPATIONAL MEDICAL GROUP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19931020
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602747
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1814 FRANKLIN STREET #500
Phone num:	5104514840
Termination reason:	15
Term Date:	19940831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134376

R69
NNW
1/2-1 mi
3047
Lower

SRDCCA200737217
Daycare

EDR ID:	SRDCCA200737217
Facility number:	13418812
Facility name:	"COLLINS, SONNI "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	2224 LINDEN ST
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	2224 LINDEN ST
City:	OAKLAND
State:	CA
Zip:	94607

Facility investor: "COLLINS, SONNI "
Licensee type: A
License effective date: 60721
License expiration date: Not Reported
License issue date: 060721
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 060703
Facility closed date: Not Reported
Mailing address: 2224 LINDEN ST
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "COLLINS, SONNI "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106897917

U70 SRDCCA200719966
West EDR ID: SRDCCA200719966 Daycare
1/2-1 mi Facility number: 13416609
3082 Facility name: "PERSONS, ALMETA "
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1032 UNION STREET
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1032 UNION STREET
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "PERSONS, ALMETA "
Licensee type: A
License effective date: 21119
License expiration date: Not Reported
License issue date: 021119
Program type: INACTIVE STATUS - BEGINNING 10/28/05 TO 11/19/06
Original app. received date: 020912
Facility closed date: Not Reported
Mailing address: 1032 UNION STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "PERSONS, ALMETA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106637113

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

U71
West
1/2-1 mi
3086
Lower

SRDCCA200703561
Daycare

EDR ID:	SRDCCA200703561
Facility number:	10210989
Facility name:	"HUMPHREY, VIRGINIA "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1022 UNION STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1022 UNION STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"HUMPHREY, VIRGINIA "
Licensee type:	A
License effective date:	940205
License expiration date:	Not Reported
License issue date:	880205
Program type:	LICENSE INACTIVE FROM 5/20/07 TO 5/20/09
Original app. received date:	870922
Facility closed date:	Not Reported
Mailing address:	1022 UNION STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"HUMPHREY, VIRGINIA "
Facility capacity:	12
Type of clients served:	950
Facility phone:	5104440532

72
SSE
1/2-1 mi
3104
Higher

SRHO20070164528
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	VOLUNTEERS OF AMERICA BAY AREA
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20060209
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1050707
Record Status:	A
Region code:	09

Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	472 7TH STREET
Phone num:	5104730500
Termination reason:	00
Term Date:	20080208
Purpose of action:	Not Reported
Provider control:	01
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070164528

V73 SRHO20070134789
WSW AHA Hospitals
1/2-1 mi
3111
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20020926
Medicare/Medicaid:	1
Facility name:	WEST OAKLAND HEALTH CTR
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601961
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	700 ADELINE
Phone num:	5108359610
Termination reason:	00
Term Date:	20070314
Purpose of action:	2
Provider control:	02
Zip:	94607

Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134789

V74 SRHO20070008726
WSW AHA Hospitals
1/2-1 mi
3111
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	WEST OAKLAND HEALTH COUNCIL, INC
Intermediary/Carrier:	00450
Medicaid number:	Not Reported
Partcipation date:	19911001
Prior COO date:	Not Reported
Prior carrier:	51140
Provider ID:	051801
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	700 ADELINE ST
Phone num:	5108359610
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	03
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008726

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
U75 West 1/2-1 mi 3133 Lower	Ncessch: Schname05: Mstreet05: Mcity05: Mstate05: Mzip05: Mzip405: Member05: Phone05: Locale05: Type05: Level05: Gslo05: Gshi05: Edr id:	062805004252 COLE MIDDLE 1011 UNION ST. OAKLAND CA 94607 2236 294 (510) 879-1090 1 1 2 06 08 SRPU20071012626	SRPU20071012626 Public Schools
76 ESE 1/2-1 mi 3202 Higher	Hospital type: Num of times COO: Owner date: City: Has plan of corr: Compliance status: SSA county code: Cross ref number: FMS survey date: Current survey date: Medicare/Medicaid: Facility name: Intermediary/Carrier: Medicaid number: Partcipation date: Prior COO date: Prior carrier: Provider ID: Record Status: Region code: Is Partial Record: state abbrev: ssa state: state region cd: street address: Phone num: Termination reason: Term Date: Purpose of action: Provider control: Zip: Fips state: Fips cnty: SSA MSA: SSA MSA size code: Date accredited: Accred expire date:	01 00 Not Reported OAKLAND 1 A 000 Not Reported Not Reported 19941215 1 YWCA HEALTH SERVICES Not Reported Not Reported 19920901 Not Reported Not Reported 05D0680625 A 09 Not Reported CA 05 M2 1515 WEBSTER ST 5104444326 12 19970329 1 02 94612 06 001 418 B Not Reported Not Reported	SRHO20070139583 AHA Hospitals

Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070139583	

W77 SRHO20070141070
SSE AHA Hospitals
1/2-1 mi
3300
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	CUONG TAT VU MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19951102
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0704244
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	412 8TH ST, SUITE B
Phone num:	5104524690
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141070

X78 SRPU20071009653
SE Public Schools
1/2-1 mi
3336
Higher

Ncessch:	062805010726
Schname05:	LIGHTHOUSE COMMUNITY CHARTER HIGH
Mstreet05:	345 12TH ST.

Mcity05:	OAKLAND	
Mstate05:	CA	
Mzip05:	94607	
Mzip405:	Not Reported	
Member05:	51	
Phone05:	(510) 271-8801	
Locale05:	1	
Type05:	1	
Level05:	4	
Gslo05:	09	
Gshi05:	09	
Edr id:	SRPU20071009653	

X79 SRPU20071013407
SE Ncessch: 062805010408 Public Schools
1/2-1 mi Schname05: LIGHTHOUSE COMMUNITY CHARTER
3336 Mstreet05: 345 12TH ST.
Higher Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94607
Mzip405: Not Reported
Member05: 314
Phone05: (510) 271-8801
Locale05: 1
Type05: 1
Level05: 1
Gslo05: KG
Gshi05: 08
Edr id: SRPU20071013407

Y80 SRDCCA200750555
ENE EDR ID: SRDCCA200750555 Daycare
1/2-1 mi Facility number: 10212175
3344 Facility name: "NEW DAY PRESCHOOL & LEARNING CTR., METROPOLITAN "
Lower Facility eval. code: 0105
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 460 WEST GRAND AVENUE
City: OAKLAND
State: CA
Zip: 94612
Alt. address: 460 WEST GRAND AVENUE
City: OAKLAND
State: CA
Zip: 94612
Facility investor: "TILLMAN, GLORIA AND COTTEN, HENRY & LEILANI "
Licensee type: B
License effective date: 930823
License expiration date: Not Reported
License issue date: 890823
Program type: AGE RANGES FROM 2 YEARS TO 6 YEARS OLD. FOR ONE YEAR ONLY
HOURS OF OPERATION: 7:00 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY.

Original app. received date:	890411
Facility closed date:	Not Reported
Mailing address:	1985 TUNNEL ROAD
Mailing city:	BERKELEY
Mailing state:	CA
Mailing zip:	94705
Contact person:	"COTTEN, LEILANI "
Facility capacity:	37
Type of clients served:	950
Facility phone:	5104658591

Y81 SRPR20051022473
ENE Private Schools
1/2-1 mi
3344
Lower

Pss school id:	K9501108
Pss inst:	NEW DAY PRESCHOOL LEARNING
Lograde:	K
Higrade:	K
Pss address:	460 WEST GRAND AVE
Pss city:	OAKLAND
Pss county no:	001
Pss county fips:	06001
Pss stabb:	CA
Pss fips:	06
Pss zip5:	94612
Pss phone:	5104658591
Pss sch days:	200
Pss stu day hrs:	10
Pss library:	No
Pss enroll ug:	Not Reported
Pss enroll pk:	0
Pss enroll k:	6
Pss enroll 1:	Not Reported
Pss enroll 2:	Not Reported
Pss enroll 3:	Not Reported
Pss enroll 4:	Not Reported
Pss enroll 5:	Not Reported
Pss enroll 6:	Not Reported
Pss enroll 7:	Not Reported
Pss enroll 8:	Not Reported
Pss enroll 9:	Not Reported
Pss enroll 10:	Not Reported
Pss enroll 11:	Not Reported
Pss enroll 12:	Not Reported
Pss enroll t:	6
Pss enroll tk12:	6
Pss race ai:	Not Reported
Pss race as:	Not Reported
Pss race h:	Not Reported
Pss race b:	Not Reported
Pss race w:	Not Reported
Pss fte teach:	Not Reported
Pss locale:	1
Pss coed:	1
Pss type:	7
Pss level:	1
Pss relig:	3

Pss comm type:	1
Pss indian pct:	Not Reported
Pss asian pct:	Not Reported
Pss hisp pct:	Not Reported
Pss black pct:	Not Reported
Pss white pct:	Not Reported
Pss stdtch rt:	Not Reported
Pss orient:	29
Pss county name:	ALAMEDA
Pss assoc 1:	No Membership Association
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051022473

T82 SRHO20070134377
East AHA Hospitals
1/2-1 mi
3341
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	OAKLAND FOOT CLINIC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950616
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602757
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	361 19TH STREET
Phone num:	5107630296
Termination reason:	08
Term Date:	19980831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B

Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134377

W83 SRHO20070134373
SE AHA Hospitals
1/2-1 mi
3376
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	L LEON LEE MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930108
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601918
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	388 9TH STREET STE 218 A
Phone num:	5108323944
Termination reason:	08
Term Date:	19980831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134373

W84 SRHO20070150753
SE AHA Hospitals
1/2-1 mi
3376
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SUTTER EAST BAY MEDICAL FOUNDATION
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990409
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0959383
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	388 9TH STREET SUITE 218
Phone num:	5108397115
Termination reason:	00
Term Date:	20070821
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070150753

W85 SRHO20070154275
SE AHA Hospitals
1/2-1 mi
3376
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	EAST BAY PERINATAL MEDICAL ASSOCIATES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19980313
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0942636
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	388 9TH STREET, STE 218
Phone num:	5108322388
Termination reason:	00
Term Date:	20081231
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070154275

W86 SRHO20070151310
SE AHA Hospitals
1/2-1 mi
3376
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	KAM Y CHEUNG MD A PROFESSIONAL CORP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990604
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0961375
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	388 9TH STREET SUITE 218A
Phone num:	5102689888
Termination reason:	00
Term Date:	20070603
Purpose of action:	Not Reported
Provider control:	02
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070151310

87
WSW
1/2-1 mi
3382
Lower

SRDCCA200712287
Daycare

EDR ID:	SRDCCA200712287
Facility number:	13415278
Facility name:	"DAVIS, SARAH D. "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	830 UNION STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	830 UNION STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"DAVIS, SARAH D. "
Licensee type:	A
License effective date:	815
License expiration date:	Not Reported
License issue date:	000815
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	000719
Facility closed date:	Not Reported
Mailing address:	830 UNION STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"DAVIS, SARAH D. "

Facility capacity:	8	
Type of clients served:	960	
Facility phone:	5108368707	

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88 SRDCCA200723042
North EDR ID: SRDCCA200723042 Daycare
1/2-1 mi Facility number: 13417226
3382 Facility name: "MCDOWELL, RUTHIE "
Higher Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 868 MILTON STREET
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 868 MILTON STREET
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "MCDOWELL, RUTHIE "
Licensee type: A
License effective date: 30922
License expiration date: Not Reported
License issue date: 030922
Program type: LICENSE INACTIVE FROM 12/01/06 TO 2/28/07
Original app. received date: 030827
Facility closed date: Not Reported
Mailing address: 868 MILTON STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "MCDOWELL, RUTHIE "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5105024741

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89 SRHO20070134386
South Hospital type: 01 AHA Hospitals
1/2-1 mi Num of times COO: 00
3404 Owner date: Not Reported
Lower City: OAKLAND
Has plan of corr: 1
Compliance status: A
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: 20050715
Medicare/Medicaid: 1
Facility name: ALAMEDA COUNTY PUBLIC
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported
Partcipation date: 19920901

Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601931
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	499 FIFTH STREET ROOM 403
Phone num:	5102682700
Termination reason:	00
Term Date:	20070929
Purpose of action:	2
Provider control:	06
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134386

90
NNW
1/2-1 mi
3439
Lower

SRDCCA200712761
Daycare

EDR ID:	SRDCCA200712761
Facility number:	13415210
Facility name:	"FITZPATRICK, JOETTA "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1070 - 24TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1070 - 24TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"FITZPATRICK, JOETTA "
Licensee type:	A
License effective date:	809
License expiration date:	Not Reported
License issue date:	000809
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN, WITH NO MORE THAN 3 INFANTS,OR4 INFANTS ONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITHA MAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	000620

Facility closed date:	Not Reported
Mailing address:	1070 - 24TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"FITZPATRICK, JOETTA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108321699

X91 SRHO20070146148
ESE AHA Hospitals
1/2-1 mi
3445
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DE HIEU LE, MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950629
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0902774
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	312 13TH STREET
Phone num:	5108392758
Termination reason:	00
Term Date:	20070628
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070146148

Z92 SRHO20070147859
SE AHA Hospitals
1/2-1 mi
3463
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	HUA CHEN, MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19970317
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0926189
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	373 9TH STREET, SUITE 303
Phone num:	5102510688
Termination reason:	00
Term Date:	20070316
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147859

Z93 SRHO20070134385
SE AHA Hospitals
1/2-1 mi
3463
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	EAST BAY PRIMARY CARE MEDICAL GRP INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930115
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601926
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	373 NINTH STREET STE 403
Phone num:	5104653588
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134385

94
NNE
1/2-1 mi
3467
Higher

SRHO20070158716
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	HEALTHY OAKLAND SAVE A LIFE WELLNESS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20041217
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1034988
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA	
ssa state:	05	
state region cd:	M2	
street address:	2580 SAN PABLO AVE	
Phone num:	5104449155	
Termination reason:	08	
Term Date:	20061216	
Purpose of action:	Not Reported	
Provider control:	02	
Zip:	94612	
Fips state:	06	
Fips cnty:	001	
SSA MSA:	418	
SSA MSA size code:	B	
Date accredited:	Not Reported	
Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070158716	

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95 SRPU20071013390
SW Public Schools
1/2-1 mi
3547
Lower

Ncessch:	062805005632
Schname05:	EAST BAY CONSERVATION CORPS CHARTER
Mstreet05:	1021 THIRD ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94607
Mzip405:	2223
Member05:	238
Phone05:	(510) 992-7855
Locale05:	1
Type05:	1
Level05:	4
Gslo05:	KG
Gshi05:	12
Edr id:	SRPU20071013390

Z96 SRHO20070151878
SE AHA Hospitals
1/2-1 mi
3613
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	XIAO GUANG HUANG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported

Partcipation date:	19990329
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0958893
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	345 9TH STREET SUITE 203
Phone num:	5106639518
Termination reason:	00
Term Date:	20070328
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070151878

Z97
SE
1/2-1 mi
3613
Higher

SRHO20070141350
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PEDIATRIC MED ASSOCIATES OF EAST BAY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930111
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0712664
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	345 NINTH ST SUITE 204

Phone num:	5108391072
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141350

AA98 SRHO20070154152
ESE AHA Hospitals
1/2-1 mi
3613
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	HONG FOOK CENTER-HARRISON STREET
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20010413
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0985299
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1388 HARRISON ST
Phone num:	5103020460
Termination reason:	00
Term Date:	20070412
Purpose of action:	Not Reported
Provider control:	02
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported

Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070154152	

Z99 SRHO20070134788
SE AHA Hospitals
1/2-1 mi
3650
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	LUYEN TA MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930202
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601959
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	341 A 9TH STREET
Phone num:	5108361095
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134788

Z100 SRHO20070008977
SE AHA Hospitals
1/2-1 mi
3656
Higher

Hospital type:	01
Num of times COO:	00

Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ASIAN HEALTH SERVICES
Intermediary/Carrier:	00450
Medicaid number:	Not Reported
Partcipation date:	19920701
Prior COO date:	Not Reported
Prior carrier:	51140
Provider ID:	051816
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	818 WEBSTER STREET
Phone num:	5109866830
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	03
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008977

Z101 SRHO20070138324
SE
1/2-1 mi
3656
Higher

AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ASIAN HEALTH SERVICES
Intermediary/Carrier:	Not Reported

Medicaid number:	Not Reported
Partcipation date:	19930524
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0698796
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	818 WEBSTER
Phone num:	5107634411
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138324

Z102
SE
1/2-1 mi
3656
Higher

SRHO20070107543
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ADULT MEDICAL SERVICES AT HOTEL OAKLAN
Intermediary/Carrier:	00450
Medicaid number:	Not Reported
Partcipation date:	19960701
Prior COO date:	Not Reported
Prior carrier:	51051
Provider ID:	551800
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	BK

street address:	818 WEBSTER STREET
Phone num:	5107637815
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	02
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070107543

X103 SRDCCA200751762
SE Daycare
1/2-1 mi

EDR ID:	SRDCCA200751762
Facility number:	10216658
Facility name:	LAKE MERRITT CHILD CARE CENTER II
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	301 - 12TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	301 12TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"LIANG, NG & LU, INCORPORATED "
Licensee type:	D
License effective date:	950712
License expiration date:	Not Reported
License issue date:	950712
Program type:	"AGES 2YRS. TO 1ST GRADE ENTRY. HOURS: 7:30AM - 6PM, M - F. WAIVER FOR SCHEDULED USE OF PLAY YARD. "
Original app. received date:	950206
Facility closed date:	Not Reported
Mailing address:	2834 LAKESHORE AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"LU, LUCY "
Facility capacity:	170
Type of clients served:	950
Facility phone:	5108343399

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

104
NNW
1/2-1 mi
3678
Lower

SRDCCA200742609
Daycare

EDR ID:	SRDCCA200742609
Facility number:	13419261
Facility name:	"VAUGHN, LA VACRES "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1131 24TH ST #213
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1131 24TH ST #213
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"VAUGHN, LA VACRES "
Licensee type:	A
License effective date:	70507
License expiration date:	Not Reported
License issue date:	070507
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	070413
Facility closed date:	Not Reported
Mailing address:	1131 24TH ST #213
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"VAUGHN, LA VACRES "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5102681416

AB105
North
1/2-1 mi
3686
Lower

SRHO20070160685
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	CHAPPELL-HAYES SCHOOL BASED HEALTH CTR
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20050823
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1044543

Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	2607 MYRTLE ST
Phone num:	5108351393
Termination reason:	00
Term Date:	20070822
Purpose of action:	Not Reported
Provider control:	03
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070160685

AB106 — SRPU20071009667
North — Public Schools
1/2-1 mi
3686
Lower

Ncessch:	062805011553
Schname05:	KIZMET ACADEMY MIDDLE
Mstreet05:	2607 MYRTLE ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94607
Mzip405:	Not Reported
Member05:	97
Phone05:	(510) 879-3030
Locale05:	1
Type05:	1
Level05:	2
Gslo05:	06
Gshi05:	08
Edr id:	SRPU20071009667

AB107 — SRPU20071009669
North — Public Schools
1/2-1 mi
3686
Lower

Ncessch:	062805011555
Schname05:	EXPRESSION, EXCELLENCE, COMMUNITY, EMPOWERMENT & L
Mstreet05:	2607 MYRTLE ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94607
Mzip405:	Not Reported
Member05:	350
Phone05:	(510) 879-3030
Locale05:	1
Type05:	1

Level05:	4	
Gslo05:	KG	
Gshi05:	12	
Edr id:	SRPU20071009669	

AB108 SRPU20071013367
North Ncessch: 062805004300 Public Schools
1/2-1 mi Schname05: MCCLYMONDS SENIOR HIGH
3686 Mstreet05: 2607 MYRTLE ST.
Lower Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94607
Mzip405: 3415
Member05: -1
Phone05: (510) 879-3030
Locale05: 1
Type05: 1
Level05: 3
Gslo05: 09
Gshi05: 12
Edr id: SRPU20071013367

AB109 SRPU20071009668
North Ncessch: 062805011554 Public Schools
1/2-1 mi Schname05: BUSINESS, ENTREPRENEURIAL SCHOOL OF TECHNOLOGY HIG
3686 Mstreet05: 2607 MYRTLE ST.
Lower Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94607
Mzip405: Not Reported
Member05: 314
Phone05: (510) 879-3030
Locale05: 1
Type05: 1
Level05: 3
Gslo05: 09
Gshi05: 12
Edr id: SRPU20071009668

AA110 SRHO20070145815
ESE Hospital type: 01 AHA Hospitals
1/2-1 mi Num of times COO: 00
3784 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: Not Reported
Compliance status: Not Reported
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: Not Reported
Medicare/Medicaid: Not Reported
Facility name: HONG FOOK ADHC
Intermediary/Carrier: Not Reported

Medicaid number:	Not Reported
Partcipation date:	19940601
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0886964
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	275 14TH STREET
Phone num:	5108399673
Termination reason:	00
Term Date:	20080531
Purpose of action:	Not Reported
Provider control:	03
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070145815

AC111 SRPU20071009648
ESE Public Schools
1/2-1 mi
3795
Higher

Ncessch:	062805010721
Schname05:	OASIS HIGH
Mstreet05:	285 17TH ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94612
Mzip405:	Not Reported
Member05:	109
Phone05:	(510) 251-8103
Locale05:	1
Type05:	1
Level05:	3
Gslo05:	09
Gshi05:	12
Edr id:	SRPU20071009648

AD112 SRDCCA200741843
SE Daycare
1/2-1 mi
3845
Higher

EDR ID:	SRDCCA200741843
Facility number:	10216231
Facility name:	"PCDCI - FRANK G. MAR CNTR,BARBARA E. SHAW I&T ROOM"
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01

Facility type code:	830
Facility status code:	03
Address:	274 - 12TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	2619 BROADWAY
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"PARENT-CHILD DEVELOPMENT CENTERS, INC. "
Licensee type:	C
License effective date:	941110
License expiration date:	Not Reported
License issue date:	941110
Program type:	"AGES BIRTH - 3YRS. NO MORE THAN 6 OF WHOM MAY BE UNDER 12 MOS. HOURS OF OPERATION: MON. - FRI., 7:00AM-5:30PM IN 2 CLASSROOM AREAS. SUBJECT TO CONDITIONS OF 3 WAIVERS TO BE POSTED. "
Original app. received date:	940721
Facility closed date:	Not Reported
Mailing address:	2619 BROADWAY
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"WHITE, BONITA "
Facility capacity:	24
Type of clients served:	955
Facility phone:	5108359236

AD113
SE
1/2-1 mi
3845
Higher

SRDCCA200748899
Daycare

EDR ID:	SRDCCA200748899
Facility number:	10215002
Facility name:	OAKLAND HEAD START - FRANK MAR
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	274 12TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	"150 FRANK H OGAWA PLAZA, #5352"
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	CITY OF OAKLAND
Licensee type:	F
License effective date:	931215
License expiration date:	Not Reported
License issue date:	931215
Program type:	"AGES 2 YRS. TO FIRST GRADE ENTRY. HOURS OF OPERATION: MON-FRI, 8:30 A.M. - 4:30 P.M. SUBJECT TO CONDITIONS OF 3 WAIVERS TO BE POSTED. "

Original app. received date:	920807
Facility closed date:	Not Reported
Mailing address:	"150 FRANK H OGAWA PLAZA, #5352"
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"LAI, THERESA "
Facility capacity:	21
Type of clients served:	950
Facility phone:	5102383165

AE114
SE
1/2-1 mi
3875
Higher

SRHO20070148405
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ANH T DO, MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19971119
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0936323
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	919 HARRISON STREET, SUITE A
Phone num:	5102718028
Termination reason:	00
Term Date:	20071118
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070148405

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

AE115
SE
1/2-1 mi
3888
Higher

SRDCCA200744942
Daycare

EDR ID:	SRDCCA200744942
Facility number:	10206127
Facility name:	OUSD - YUK YAU
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	291 - 10TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	495 JONES AVE
City:	OAKLAND
State:	CA
Zip:	94603
Facility investor:	OAKLAND UNIFIED SCHOOL DISTRICT
Licensee type:	F
License effective date:	940217
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"AGES 2 TO 1ST GRADE ENTRY. OVERALL HOURS OF OPERATION: MON-FRI, 7:30 AM-5:30 PM. CAP. OF 83 7:30 AM -2:30 PM IN RMS 1 & 3. CAPACITY REDUCEDTO 43 2:30 PM -5:30 PM IN RM 1. "
Original app. received date:	840202
Facility closed date:	Not Reported
Mailing address:	1025 SECOND AVENUE- ROOM 320
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"CHINN, BETSY "
Facility capacity:	82
Type of clients served:	950
Facility phone:	5108931659

116
NNE
1/2-1 mi
3905
Higher

SRDCCA200738980
Daycare

EDR ID:	SRDCCA200738980
Facility number:	13418828
Facility name:	"SABRY, AISHA "
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	2719 WEST ST.
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	2719 WEST ST.
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"SABRY, AISHA "

Licensee type:	A	
License effective date:	60831	
License expiration date:	Not Reported	
License issue date:	060831	
Program type:	MAX. CAP(WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.	4
Original app. received date:	060815	
Facility closed date:	Not Reported	
Mailing address:	2719 WEST ST.	
Mailing city:	OAKLAND	
Mailing state:	CA	
Mailing zip:	94612	
Contact person:	"SABRY, AISHA "	
Facility capacity:	14	
Type of clients served:	960	
Facility phone:	5108123029	

AE117
SE
1/2-1 mi
3916
Higher

SRHO20070147130
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	LIM MEDICAL CLINIC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960426
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0914363
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	320 8TH STREET SUITE 1D
Phone num:	5108328819
Termination reason:	00
Term Date:	20080425
Purpose of action:	Not Reported
Provider control:	02
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported

Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147130

AE118 SRDCCA200744993
SE Daycare
1/2-1 mi
3936
Higher

EDR ID:	SRDCCA200744993
Facility number:	10209421
Facility name:	CCUMC NURSERY SCHOOL
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	321 8TH. STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	321 8TH. STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	OAKLAND CHINESE COMMUNITY UNITED METHODIST CHURCH.
Licensee type:	C
License effective date:	960731
License expiration date:	Not Reported
License issue date:	960731
Program type:	AGES 2 YEARS TO FIRST GRADE ENTRY. HOURS OF OPERATION. MONDAY - FRIDAY8:00 A.M. - 5:30 P.M. IN ONE CLASSROOM (FELLOWSHIP HALL). SUBJECT TO CONDITIONS OF WAIVER TO BE POSTED.
Original app. received date:	850520
Facility closed date:	Not Reported
Mailing address:	321 8TH. STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	NESANNA LEE
Facility capacity:	30
Type of clients served:	950
Facility phone:	5102688210

AF119 SRHO20070158349
ENE AHA Hospitals
1/2-1 mi
3935
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	WEBSTER ORTHOPAEDIC MEDICAL GROUP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20031112
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1019173
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	80 GRAND AVENUE SUITE 400
Phone num:	5102381200
Termination reason:	00
Term Date:	20071111
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070158349

120
NNW
1/2-1 mi
3970
Lower

SRDCCA200730533
Daycare

EDR ID:	SRDCCA200730533
Facility number:	13418264
Facility name:	"YIMER, TENAGNE "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1089 26TH STREET #208
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1089 26TH STREET #208
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"YIMER, TENAGNE "
Licensee type:	A
License effective date:	50622
License expiration date:	Not Reported
License issue date:	050622

Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050405
Facility closed date:	Not Reported
Mailing address:	1089 26TH STREET #208
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"YIMER, TENAGNE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108349894

AE121
SE
1/2-1 mi
3970
Higher

SRHO20070141540
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	BETTY ANNE SHEN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950710
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0718851
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	310 8TH STREET SUITE 103
Phone num:	5104513900
Termination reason:	08
Term Date:	20060831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000

	Source:	US_HOSPITAL_POSCLIA
	Edr id:	SRHO20070141540

AE122 SRHO20070009827
SE AHA Hospitals
1/2-1 mi
3992
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19941213
Medicare/Medicaid:	1
Facility name:	ASIAN NETWORK PHYSICAL THERAPY & REHAB
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19941213
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	054526
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	821 HARRISON STREET
Phone num:	5102680222
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	01
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070009827

AE123 SRHO20070134387
SE AHA Hospitals
1/2-1 mi
3997
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported

SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PRIME MEDICAL ASSOCIATES INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950713
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601957
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	817 HARRISON STREET
Phone num:	5104518088
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134387

124
SSE
1/2-1 mi
4013
Higher

SRHO20070108648
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20041008
Medicare/Medicaid:	1
Facility name:	ASIAN AMERICAN HOME CARE
Intermediary/Carrier:	00040
Medicaid number:	HHA57754F
Partcipation date:	19961104
Prior COO date:	Not Reported
Prior carrier:	Not Reported

Provider ID:	557754
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	328 7TH ST 2F
Phone num:	5108353268
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070108648

125
ESE
1/2-1 mi
4058
Higher

SRDCCA200754385
Daycare

EDR ID:	SRDCCA200754385
Facility number:	13415276
Facility name:	STARLITE CHILD DEVELOPMENT CENTER II
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	246 - 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	246 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"WONG, MARGARIDA AND JOHN "
Licensee type:	A
License effective date:	911
License expiration date:	Not Reported
License issue date:	000911
Program type:	"AGES 2 TO 18 YEARS. NO MORE THAN 6 SCHOOL AGE CHILDREN. HOURS OF OPERATION: 7:30 AM - 6:00 PM, MONDAY - FRIDAY. OPERATING IN 4 ROOMS. LICENSE SUBJECT TO 2 WAIVERS TO BE POSTED. "
Original app. received date:	000731
Facility closed date:	Not Reported
Mailing address:	4306 SAINT CLOUD COURT

Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94619
Contact person:	"WONG, JOHN "
Facility capacity:	77
Type of clients served:	950
Facility phone:	5102388809

AC126 SRDCCA200752595
ESE
1/2-1 mi
4060
Higher

EDR ID:	SRDCCA200752595
Facility number:	13410076
Facility name:	OUSD - ALICE
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	250 17TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	495 JONES AVE
City:	OAKLAND
State:	CA
Zip:	94603
Facility investor:	OAKLAND UNIFIED SCHOOL DISTRICT
Licensee type:	F
License effective date:	950720
License expiration date:	Not Reported
License issue date:	950720
Program type:	AGES 2YRS TO FIRST GRADE ENTRY. HOURS OF OPERATION: MON. - FRI. 7AM - 6PM IN 3 CLASSROOMS. SUBJECT TO CONDITIONS OF 3 WAIVERS TO BE POSTED.
Original app. received date:	950421
Facility closed date:	Not Reported
Mailing address:	1025 SECOND AVENUE RM #320B
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"KIRTMAN, DIANNE "
Facility capacity:	72
Type of clients served:	950
Facility phone:	5108790856

Daycare

AF127 SRDCCA200741829
ENE
1/2-1 mi
4061
Higher

EDR ID:	SRDCCA200741829
Facility number:	13412676
Facility name:	SMALL TRANS DEPOT - HONEYBEE
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	111 GRAND AVENUE

Daycare

City:	OAKLAND	
State:	CA	
Zip:	94612	
Alt. address:	111 GRAND AVENUE	
City:	OAKLAND	
State:	CA	
Zip:	94612	
Facility investor:	"SPENCER, JUELEAH E./HAMILTON MARY "	
Licensee type:	B	
License effective date:	980430	
License expiration date:	Not Reported	
License issue date:	980430	
Program type:	"AGES BIRTH TO 2 YEARS. HOURS OF OPERATION: MONDAY - FRIDAY, 7:00A.M. - 5:30P.M. IN CLASSROOMS. "	2
Original app. received date:	980116	
Facility closed date:	Not Reported	
Mailing address:	"484 LAKEPARK AVENUE, # 192 "	
Mailing city:	OAKLAND	
Mailing state:	CA	
Mailing zip:	94610	
Contact person:	"JONES, VANESSA "	
Facility capacity:	36	
Type of clients served:	955	
Facility phone:	5102865130	

128
West
1/2-1 mi
4139
Lower

SRDCCA200713687
Daycare

EDR ID:	SRDCCA200713687
Facility number:	13415015
Facility name:	"LEROY, LINDA "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1404 - 10TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1404 - 10TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"LEROY, LINDA "
Licensee type:	A
License effective date:	821
License expiration date:	Not Reported
License issue date:	000821
Program type:	LICENSE INACTIVE FROM 5/16/07 TO 5/16/08
Original app. received date:	000310
Facility closed date:	Not Reported
Mailing address:	1404 - 10TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607

Contact person:	"LEROY, LINDA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108392324

AG129 SRHO20070134375
East AHA Hospitals
1/2-1 mi
4149
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	LAKE PARK RETIREMENT RESIDENCE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930113
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602742
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1850 ALICE
Phone num:	5108355511
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	03
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134375

AG130 SRHO20070110389
East AHA Hospitals
1/2-1 mi
4149
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND

Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	20060202
Current survey date:	20051222
Medicare/Medicaid:	1
Facility name:	LAKE PARK RET RESIDENCE
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19790701
Prior COO date:	Not Reported
Prior carrier:	00041
Provider ID:	555113
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	1850 ALICE STREET
Phone num:	5108355511
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	05
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0035
Num cert beds:	0035
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070110389

AG131
East
1/2-1 mi
4149
Higher

SRNH20060915730
Nursing Homes

Provnum:	555113
Nursinghomename:	LAKE PARK RET RESIDENCE
Street:	1850 ALICE STREET
City:	OAKLAND
State:	CA
Zipcode:	94612
Phonenumber:	5108355511
Dateoflastinspection:	20051207
Certifiednumberofbeds:	35
Totalnumberofresidents:	28
Percofoccupiedbeds:	80
Categorydescription:	Participating in Medicare Only
Typeofownership:	Non profit - Corporation
Locatedwithinahospital:	NO
Multinursinghomeownership:	YES

	Residentandfamilycouncils:	RESIDENT
	Edr id:	SRNH20060915730

AH132 SRHO20070008233
NE AHA Hospitals
1/2-1 mi
4177
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19980310
Medicare/Medicaid:	1
Facility name:	OAKLAND PERITONEAL DIALYSIS CENTER
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19980310
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	052822
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	2633 TELEGRAPH AVENUE, SUITE 115
Phone num:	5102670819
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008233

AH133 SRHO20070154357
NE AHA Hospitals
1/2-1 mi
4177
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported

SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	OAKLAND PERITONEAL DIALYSIS CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19980407
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0944000
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2633 TELEGRAPH AVE, SUITE 115
Phone num:	5102670203
Termination reason:	00
Term Date:	20080406
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070154357

134
East
1/2-1 mi
4269
Lower

SRHO20070138433
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	EMPLOYEE HEALTH SERVICES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930119
Prior COO date:	Not Reported
Prior carrier:	Not Reported

Provider ID:	05D0696022
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	300 LAKESIDE DR
Phone num:	5102712351
Termination reason:	01
Term Date:	19930430
Purpose of action:	Not Reported
Provider control:	02
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138433

AH135
NE
1/2-1 mi
4274
Higher

SRHO20070151600
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DIANA SYLVESTRE MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990218
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0957305
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	520 27TH STREET
Phone num:	5108345442
Termination reason:	00
Term Date:	20070217

Purpose of action:	Not Reported	
Provider control:	04	
Zip:	94612	
Fips state:	06	
Fips cnty:	001	
SSA MSA:	418	
SSA MSA size code:	B	
Date accredited:	Not Reported	
Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070151600	

136
SE
1/2-1 mi
4288
Higher

SRPU20071013359
Public Schools

Ncessch:	062805004289	
Schname05:	LINCOLN ELEMENTARY	
Mstreet05:	225 11TH ST.	
Mcity05:	OAKLAND	
Mstate05:	CA	
Mzip05:	94607	
Mzip405:	4409	
Member05:	606	
Phone05:	(510) 879-1330	
Locale05:	1	
Type05:	1	
Level05:	1	
Gslo05:	KG	
Gshi05:	05	
Edr id:	SRPU20071013359	

137
West
1/2-1 mi
4330
Lower

SRDCCA200735715
Daycare

EDR ID:	SRDCCA200735715	
Facility number:	13418665	
Facility name:	"NEWSON, ELICIA	"
Facility eval. code:	0203	
Facility office number:	02	
Facility county number:	01	
Facility type code:	810	
Facility status code:	03	
Address:	1415 9TH ST	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Alt. address:	1415 9TH ST	
City:	OAKLAND	
State:	CA	
Zip:	94607	
Facility investor:	"NEWSON, ELICIA	"
Licensee type:	A	
License effective date:	60616	
License expiration date:	Not Reported	
License issue date:	060616	

Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP. 8 - NO MORE THAN 2 INFANTS,1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 060216
Facility closed date: Not Reported
Mailing address: 1415 9TH ST
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "NEWSON, ELICIA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5108930377

AI138 SRDCCA200731785
ESE EDR ID: SRDCCA200731785 Daycare
1/2-1 mi Facility number: 13418387
4347 Facility name: "MORRISON, MARILYN N "
Higher Facility eval. code: 0105
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1525 JACKSON STREET #215
City: OAKLAND
State: CA
Zip: 94612
Alt. address: 1525 JACKSON STREET #215
City: OAKLAND
State: CA
Zip: 94612
Facility investor: "MORRISON, MARILYN N "
Licensee type: A
License effective date: 50829
License expiration date: Not Reported
License issue date: 050829
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 050711
Facility closed date: Not Reported
Mailing address: 1525 JACKSON STREET #215
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94612
Contact person: "MORRISON, MARILYN N "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5104443835

AJ139 SRDCCA200730610
NNE EDR ID: SRDCCA200730610 Daycare
1/2-1 mi Facility number: 13418216
4356 Facility name: "WILLIAMS,TINA "
Higher

Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	844 29TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	844 29TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"WILLIAMS, TINA "
Licensee type:	A
License effective date:	50324
License expiration date:	Not Reported
License issue date:	050324
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050302
Facility closed date:	Not Reported
Mailing address:	844 29TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	A
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108323851

AH140
NE
1/2-1 mi
4380
Higher

SRHO20070141418
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	RAI CARE CENTERS OF NORTHERN CALIFORNIA II, LLC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930119
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0718196
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA

ssa state:	05
state region cd:	M2
street address:	2710 TELEGRAPH AVENUE, SUITE #200
Phone num:	5104281188
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141418

AH141
NE
1/2-1 mi
4380
Higher

SRHO20070008381
AHA Hospitals

Hospital type:	01
Num of times COO:	02
Owner date:	20051001
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20040326
Medicare/Medicaid:	1
Facility name:	RAI - 2710 TELEGRAPH - OAKLAND
Intermediary/Carrier:	00454
Medicaid number:	Not Reported
Partcipation date:	19850114
Prior COO date:	19960801
Prior carrier:	00542
Provider ID:	052610
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	2710 TELEGRAPH AVENUE
Phone num:	4158348494
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001

SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008381

AI142 SRDCCA200707583
ESE 1/2-1 mi 4396 Higher Daycare

EDR ID:	SRDCCA200707583
Facility number:	13412230
Facility name:	"FRIEND, GWENDOLYN "
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1540 JACKSON STREET #310
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	1540 JACKSON STREET #310
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"FRIEND, GWENDOLYN "
Licensee type:	A
License effective date:	970722
License expiration date:	Not Reported
License issue date:	970722
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	970508
Facility closed date:	Not Reported
Mailing address:	1540 JACKSON STREET #310
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"FRIEND, GWENDOLYN "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5107637836

AI143 SRDCCA200708796
ESE 1/2-1 mi 4423 Higher Daycare

EDR ID:	SRDCCA200708796
Facility number:	13412876
Facility name:	"JONES-JACKSON, TERRY "
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01

Facility type code:	810
Facility status code:	03
Address:	1570 JACKSON STREET #207
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	1570 JACKSON STREET #207
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"JONES-JACKSON, TERRY "
Licensee type:	A
License effective date:	980803
License expiration date:	Not Reported
License issue date:	980803
Program type:	"INACTIVE APRIL 7, 2007- APRIL 7, 2008 "
Original app. received date:	980527
Facility closed date:	Not Reported
Mailing address:	1570 JACKSON STREET #207
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"JONES-JACKSON, TERRY "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5102720261

AK144 — SRPU20071009679
NNW — Public Schools
1/2-1 mi
4471
Lower

Ncessch:	062805011565
Schname05:	SPACE EXPLORARION ACADEMY
Mstreet05:	2722 ADELINE ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94709
Mzip405:	Not Reported
Member05:	-2
Phone05:	M
Locale05:	1
Type05:	1
Level05:	4
Gslo05:	N
Gshi05:	N
Edr id:	SRPU20071009679

AK145 — SRPU20071009678
NNW — Public Schools
1/2-1 mi
4471
Lower

Ncessch:	062805011564
Schname05:	JUNIOR SPACE EXPLORATION ACADEMY
Mstreet05:	2722 ADELINE ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94709
Mzip405:	Not Reported
Member05:	-2

	Phone05:	M
	Locale05:	1
	Type05:	1
	Level05:	4
	Gslo05:	N
	Gshi05:	N
	Edr id:	SRPU20071009678

AH146 SRHO20070152805
NE AHA Hospitals
1/2-1 mi
4482
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	HEART MEDICINE AND CHEST PAIN CLINIC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20010801
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0989656
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	471 27TH STREET STE A
Phone num:	5104657382
Termination reason:	00
Term Date:	20070731
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070152805

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AH147			SRHO20070141403
NE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
4486	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	RAI CARE CENTERS OF NORTHERN CALIFORNIA II, LLC	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930120	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0718174	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	2757 TELEGRAPH AVENUE	
	Phone num:	5108350154	
	Termination reason:	00	
	Term Date:	20080831	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94612	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070141403	

AH148			SRHO20070010579
NE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
4486	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	1	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	19851203	

Medicare/Medicaid:	1
Facility name:	EASTER SEAL SOCIETY OF ALAMEDA COUNTY
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19740101
Prior COO date:	Not Reported
Prior carrier:	00041
Provider ID:	056505
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	2757 TELEGRAPH AVENUE
Phone num:	8055435145
Termination reason:	05
Term Date:	19861001
Purpose of action:	2
Provider control:	01
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010579

AH149
NE
1/2-1 mi
4486
Higher

SRHO20070008361
AHA Hospitals

Hospital type:	01
Num of times COO:	02
Owner date:	20051001
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20031010
Medicare/Medicaid:	1
Facility name:	RAI-2757 TELEGRAPH-OAKLAND
Intermediary/Carrier:	00454
Medicaid number:	Not Reported
Partcipation date:	19920212
Prior COO date:	19960801
Prior carrier:	00040
Provider ID:	052721
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported

state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	2757 TELEGRAPH AVENUE
Phone num:	5108350154
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	01
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008361

AH150
NE
1/2-1 mi
4486
Higher

SRHO20070008412
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19880726
Medicare/Medicaid:	1
Facility name:	EASTER SEAL SOCIETY OF ALAMEDA CO
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19861001
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	054508
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	2757 TELEGRAPH AVE
Phone num:	5108352131
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	03
Zip:	94612
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008412

AL151 SRHO20070146448
SE AHA Hospitals
1/2-1 mi
4549
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PACIFIC HOME CARE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960426
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0914349
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	212 9TH STREET SUITE 205
Phone num:	5102681118
Termination reason:	00
Term Date:	20080425
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070146448

AL152 SRHO20070107388
SE Hospital type: 01 AHA Hospitals
1/2-1 mi Num of times COO: 02
4549 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: 1
Compliance status: A
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: 20050520
Medicare/Medicaid: 1
Facility name: ASIAN NETWORK PACIFIC HOME CARE, INC
Intermediary/Carrier: 00040
Medicaid number: HHA57747G
Partcipation date: 19961002
Prior COO date: 19971221
Prior carrier: Not Reported
Provider ID: 557747
Record Status: A
Region code: 09
Is Partial Record: Not Reported
state abbrev: CA
ssa state: 05
state region cd: BK
street address: 212 9TH STREET, SUITE 205
Phone num: 5102681118
Termination reason: 00
Term Date: Not Reported
Purpose of action: 2
Provider control: 04
Zip: 94607
Fips state: 06
Fips cnty: 001
SSA MSA: 418
SSA MSA size code: B
Date accredited: Not Reported
Accred expire date: Not Reported
Accred Org: 0
Num beds: 0000
Num cert beds: 0000
Source: US_HOSPITAL_POSOTHER
Edr id: SRHO20070107388

AL153 SRHO20070008748
SE Hospital type: 01 AHA Hospitals
1/2-1 mi Num of times COO: 00
4549 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: 1
Compliance status: A
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: 20020523

Medicare/Medicaid:	1
Facility name:	ASIAN NETWORK HOSPICE, INC
Intermediary/Carrier:	00454
Medicaid number:	Not Reported
Partcipation date:	20020523
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	051749
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	SJ
street address:	212 9TH STREET, SUITE 204
Phone num:	5102681118
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	06
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008748

AM154
ESE
1/2-1 mi
4565
Higher

SRDCCA200746545
Daycare

EDR ID:	SRDCCA200746545
Facility number:	13412489
Facility name:	LITTLE STARS PRESCHOOL
Facility eval. code:	0105
Facility office number:	02
Facility county number:	01
Facility type code:	840
Facility status code:	03
Address:	169 - 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	169 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	SEVEN STARS INVESTMENT CORPORATION
Licensee type:	D
License effective date:	971103
License expiration date:	Not Reported
License issue date:	971103

Program type: "AGES KINDERGARTEN ENROLLMENT TO 18 YEARS. SCHOOL AGE COMPONENT OF A COMBINATION CENTER. PRESCHOOL COMPONENT - CAPACITY 48, INFANT COMPONENT, CAPACITY 8. OPERATING MON-FRI, 7AM-7PM IN ONE ROOM. "
Original app. received date: 970910
Facility closed date: Not Reported
Mailing address: 299 - 13TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94612
Contact person: "SAIO, SHARON "
Facility capacity: 12
Type of clients served: 950
Facility phone: 5102869800

AM155 SRDCCA200741486
ESE EDR ID: SRDCCA200741486 Daycare
1/2-1 mi Facility number: 13416021
4565 Facility name: LITTLE STARS PRESCHOOL
Higher Facility eval. code: 0105
Facility office number: 02
Facility county number: 01
Facility type code: 830
Facility status code: 03
Address: 169 - 14TH STREET
City: OAKLAND
State: CA
Zip: 94612
Alt. address: 169 - 14TH STREET
City: OAKLAND
State: CA
Zip: 94612
Facility investor: LITTLE STARS PRESCHOOL
Licensee type: D
License effective date: 20607
License expiration date: Not Reported
License issue date: 020607
Program type: "AGES BIRTH TO 2 YRS. INFANT COMPONENT OF A COMBINATION CTR. PRESCHOOL COMPONENT, CAPACITY 48. SCHOOLAGE COMPONENT, CAPACITY 12. TOTAL CAP OF CTR IS 68. OPERATING MON-FRI, 8:30AM-5:30PM IN 2 ROOMS. MAXIMUM "CAP OF EACH ROOM IS 4 CHILDREN. 4 CRIB AGE CHILDREN ONLY.
Original app. received date: 011029
Facility closed date: Not Reported
Mailing address: 169 - 14TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94612
Contact person: "LEE, WILLIAM "
Facility capacity: 8
Type of clients served: 955
Facility phone: 5102869800

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

AM156 SRDCCA200751714
ESE EDR ID: SRDCCA200751714 Daycare
1/2-1 mi Facility number: 13412488
4565 Facility name: LITTLE STARS PRESCHOOL
Higher Facility eval. code: 0105
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 169 - 14TH STREET
City: OAKLAND
State: CA
Zip: 94612
Alt. address: 169 14TH STREET
City: OAKLAND
State: CA
Zip: 94612
Facility investor: SEVEN STARS INVESTMENT CORPORATION
Licensee type: D
License effective date: 971103
License expiration date: Not Reported
License issue date: 971103
Program type: "AGES 2 TO 1ST GRADE ENTRY. PRESCHOOL COMPONENT OF A COMBINATION CENTER. INFANT COMPONENT - CAPACITY 8, SCHOOLAGE COMPONENT - CAPACITY 12. TOTAL CAPACITY OF CENTER IS 68. OPERATING MON-FRI, 7AM-7PM. "
Original app. received date: 970910
Facility closed date: Not Reported
Mailing address: 299 - 13TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94612
Contact person: "SIAO, SHARON "
Facility capacity: 48
Type of clients served: 950
Facility phone: 5108399600

AN157 SRHO20070136111
NE Hospital type: 01 AHA Hospitals
1/2-1 mi Num of times COO: 00
4573 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: 1
Compliance status: A
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: 19960429
Medicare/Medicaid: 1
Facility name: CENTRAL HEALTH CENTER ALAMEDA CO HCS
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported
Partcipation date: 19920901
Prior COO date: Not Reported
Prior carrier: Not Reported

Provider ID:	05D0643844
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	470 27TH STREET
Phone num:	5102714272
Termination reason:	08
Term Date:	20050109
Purpose of action:	2
Provider control:	06
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070136111

158
NE
1/2-1 mi
4585
Higher

SRDCCA200700284
Daycare

EDR ID:	SRDCCA200700284
Facility number:	11440708
Facility name:	TWENTY-EIGHTH STREET RESIDENCE
Facility eval. code:	1507
Facility office number:	14
Facility county number:	01
Facility type code:	730
Facility status code:	03
Address:	524 - 28TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	522 - 28TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"WEBB, DORTHY R. "
Licensee type:	A
License effective date:	930802
License expiration date:	Not Reported
License issue date:	900802
Program type:	AGE RANGE 6-17 YEARS. TWO (2) MAY BE NON-AMBULATORY. PREFERS DEVELOPMENTALLY DISABLED CHILDREN AGED 6-17 YEARS OLD.
Original app. received date:	900102
Facility closed date:	Not Reported
Mailing address:	522 - 28TH STREET
Mailing city:	OAKLAND
Mailing state:	CA

Mailing zip:	94609
Contact person:	"WEBB, DORTHY R. "
Facility capacity:	6
Type of clients served:	910
Facility phone:	5108931050

AN159 SRHO20070005027
NE AHA Hospitals
1/2-1 mi
4632
Higher

Hospital type:	02
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	B
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20000825
Medicare/Medicaid:	2
Facility name:	DOWLING CONV HOSP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19740401
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05A072
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	451 28TH ST
Phone num:	5108934066
Termination reason:	06
Term Date:	20000916
Purpose of action:	3
Provider control:	03
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0030
Num cert beds:	0030
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070005027

AN160 SRHO20070149019
NE AHA Hospitals
1/2-1 mi
4632
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported

City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DOWLING CONVALESCENT HOSPITAL
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19951115
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0908829
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	451-28TH STREET
Phone num:	5108934066
Termination reason:	08
Term Date:	19991114
Purpose of action:	Not Reported
Provider control:	10
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070149019

161
ENE
1/2-1 mi
4648
Lower

SRHO20070133514
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19940311
Medicare/Medicaid:	1
Facility name:	DANIEL H NEUSTEIN MD PC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported

Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0594529
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	180 GRAND AVENUE SUITE 100
Phone num:	5102084700
Termination reason:	00
Term Date:	20080516
Purpose of action:	1
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133514

162
North
1/2-1 mi
4658
Higher

SRDCCA200727876
Daycare

EDR ID:	SRDCCA200727876
Facility number:	13418125
Facility name:	"EVANS,BRENDA "
Facility eval. code:	0406
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	2817 FILBERT STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	2817 FILBERT STREET
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"EVANS,BRENDA "
Licensee type:	A
License effective date:	50308
License expiration date:	Not Reported
License issue date:	050308
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050204

Facility closed date:	Not Reported
Mailing address:	2817 FILBERT STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	A
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108322970

AJ163 SRDCCA200744936
North
1/2-1 mi
4692
Higher

Daycare

EDR ID:	SRDCCA200744936
Facility number:	10206032
Facility name:	SUPPORTING FUTURE GROWTH #2
Facility eval. code:	0207
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	860 - 30TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	5909 CAMDEN STREET
City:	OAKLAND
State:	CA
Zip:	94605
Facility investor:	"SUPPORTING FUTURE GROWTH C.D.C., INC. "
Licensee type:	C
License effective date:	940602
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"AGES 2 YEARS TO FIRST GRADE ENTRY. HOURS OF OPERATION: 7:00 A.M. TO 6:00 P.M., MONDAY -- FRIDAY "
Original app. received date:	831020
Facility closed date:	Not Reported
Mailing address:	"519 - 17TH STREET, SUITE 130 "
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94612
Contact person:	"AGODON, MARILYN "
Facility capacity:	40
Type of clients served:	950
Facility phone:	5108345267

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164 SRHO20070138152
SSE
1/2-1 mi
4696
Lower

AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000

Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20050209
Medicare/Medicaid:	1
Facility name:	FAMILY PLANNING SPECIALISTS MEDICAL GROUP, INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0695915
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	200 WEBSTER ST,SUITE 100
Phone num:	5102683720
Termination reason:	00
Term Date:	20070808
Purpose of action:	2
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138152

AO165
South
1/2-1 mi
4757
Lower

SRHO20070143311
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	OCCUPATIONAL MED ASSOC/AMHEALTH
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930325
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0865800

Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	384 EMBARCADERO WEST
Phone num:	5104659565
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070143311

AO166
South
1/2-1 mi
4757
Lower

SRHO20070143181
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	AM HEALTH
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930325
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0865799
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	384 EMBARCADERO WEST
Phone num:	5104659565
Termination reason:	15
Term Date:	19940831
Purpose of action:	Not Reported

Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070143181

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167 SRDCCA200752837
West EDR ID: SRDCCA200752837 Daycare
1/2-1 mi Facility number: 13416981
4784 Facility name: EARLY BIRDS KINDERGARTEN PREPARATORY SCHOOL
Lower Facility eval. code: 0202

Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	934 CHESTER STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1512 LINDEN STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"KING, TOLANI "
Licensee type:	A
License effective date:	30521
License expiration date:	Not Reported
License issue date:	030521
Program type:	"AGES 2 TO 17 YEARS. NO MORE THAN 10 CHILDREN BEYOND FIRST GRADE ENTRY. OPERATING IN 2 ROOMS, MON-FRI, 6AM-8PM. LICENSE SUBJECT TO ONE WAIVER TO BE POSTED WITH LICENSE. "
Original app. received date:	030421
Facility closed date:	Not Reported
Mailing address:	1512 LINDEN STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"KING, TOLANI "
Facility capacity:	29
Type of clients served:	950
Facility phone:	5108343636

AN168 SRHO20070133121
NE Hospital type: 01 AHA Hospitals
1/2-1 mi Num of times COO: 00
4790
Higher

Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DELBERT F WICHELMAN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921221
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602067
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	425 28TH
Phone num:	5104513700
Termination reason:	01
Term Date:	19940801
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133121

AN169
NE
1/2-1 mi
4790
Higher

SRHO20070133273
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JOSEPH ROSS MD
Intermediary/Carrier:	Not Reported

Medicaid number:	Not Reported
Partcipation date:	19930114
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602183
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	425 28TH
Phone num:	5108395730
Termination reason:	01
Term Date:	19970701
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133273

AP170 SRDCCA200724391
WNW Daycare
1/2-1 mi
4809
Lower

EDR ID:	SRDCCA200724391
Facility number:	13417589
Facility name:	"MAKINI, TITILAYO "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1614 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1614 14TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"MAKINI, TITILAYO "
Licensee type:	A
License effective date:	40913
License expiration date:	Not Reported
License issue date:	040913
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "

Original app. received date:	040416
Facility closed date:	060830
Mailing address:	1614 14TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"MAKINI, TITILAYO "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108935939

AN171 SRHO20070133668
NE AHA Hospitals
1/2-1 mi
4838
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	OAKLAND MEDICAL GROUP INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930611
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602385
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	424 28TH
Phone num:	5104524824
Termination reason:	00
Term Date:	20071222
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133668

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

AP172 SRDCCA200736810
WNW EDR ID: SRDCCA200736810 Daycare
1/2-1 mi Facility number: 13418902
4850 Facility name: "AUBRY, DENISE "
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1620 14TH ST
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 1620 14TH ST
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "AUBRY, DENISE "
Licensee type: A
License effective date: 60706
License expiration date: Not Reported
License issue date: 060706
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 060615
Facility closed date: Not Reported
Mailing address: 1620 14TH ST
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "AUBRY, DENISE "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106451837

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173 SRDCCA200702834
North EDR ID: SRDCCA200702834 Daycare
1/2-1 mi Facility number: 10211145
4958 Facility name: "SILAS, PAMELA "
Lower Facility eval. code: 0202
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 2909 CHESTNUT STREET
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 2909 CHESTNUT STREET
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "SILAS, PAMELA "
Licensee type: A

License effective date: 931229
License expiration date: Not Reported
License issue date: 871229
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP. 8 - NO MORE THAN 2 INFANTS,1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 871130
Facility closed date: Not Reported
Mailing address: 2909 CHESTNUT STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "SILAS, PAMELA "
Facility capacity: 8
Type of clients served: 950
Facility phone: 5108393968

AQ174
NE
1/2-1 mi
5078
Higher

SRDCCA200749753
Daycare

EDR ID: SRDCCA200749753
Facility number: 10214770
Facility name: TEMPLE SINAI PRESCHOOL
Facility eval. code: AU03
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 06
Address: 2808 SUMMIT STREET
City: OAKLAND
State: CA
Zip: 94609
Alt. address: 2808 SUMMIT STREET
City: OAKLAND
State: CA
Zip: 94609
Facility investor: FIRST HEBREW CONGREGATION OF OAKLAND
Licensee type: C
License effective date: 950916
License expiration date: Not Reported
License issue date: 920916
Program type: "AGES 2 YEARS TO FIRST GRADE ENTRY. OPERATING IN ROOMS 1 THROUGH 6, 8, 8A, 10 & 11, MON-FRI, 8AM TO 3:30PM. CAPACITY WILL REDUCE TO 63 WHEN ROOMS 10 & 11 (MULTI PURPOSE ROOM) ARE NOT IN USE. LICENSE SUBJECT TO "ONE WAIVER TO BE POSTED.
Original app. received date: 920609
Facility closed date: Not Reported
Mailing address: 2808 SUMMIT STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: MELANIE SANDBERG
Facility capacity: 89
Type of clients served: 950
Facility phone: 5104512821

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AQ175			SRHO20070152663
NE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
5092	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	ROBERT C SCOTT MD	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	20010316	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0984246	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	368-28TH STREET	
	Phone num:	5108355000	
	Termination reason:	00	
	Term Date:	20070315	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070152663	

AQ176			SRHO20070146929
NE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
5092	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	ALTA BATES MEDICAL GROUP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930707
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0872825
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	368 28TH ST
Phone num:	5108341950
Termination reason:	01
Term Date:	19941001
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070146929

AR177
NE
1/2-1 mi
5116
Higher

SRHO20070109974
AHA Hospitals

Hospital type:	03
Num of times COO:	05
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	20040730
Current survey date:	20060623
Medicare/Medicaid:	1
Facility name:	MEDICAL HILL REHABILITATION CENTER
Intermediary/Carrier:	52280
Medicaid number:	LTC55254J
Partcipation date:	19870203
Prior COO date:	19940524
Prior carrier:	Not Reported
Provider ID:	555254
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported

state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	475 29TH ST
Phone num:	5108323222
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0124
Num cert beds:	0124
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070109974

AR178
NE
1/2-1 mi
5116
Higher

SRHO20070109737
AHA Hospitals

Hospital type:	03
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19841018
Medicare/Medicaid:	1
Facility name:	SHADOWBROOK MANOR
Intermediary/Carrier:	52280
Medicaid number:	000010290972
Partcipation date:	19830701
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	555155
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	475 29TH ST
Phone num:	4158323222
Termination reason:	01
Term Date:	19860221
Purpose of action:	2
Provider control:	03
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0135
Num cert beds:	0099
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070109737

AR179 SRHO20070136168
NE AHA Hospitals
1/2-1 mi
5116
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	MEDICAL HILL REHABILITATION CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930818
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0603397
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	475 29TH STREET
Phone num:	5108323222
Termination reason:	00
Term Date:	20080729
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070136168

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

AR180
NE
1/2-1 mi
5116
Higher

SRNH20060913741
Nursing Homes

Provnum:	555254
Nursinghomename:	MEDICAL HILL REHABILITATION CENTER
Street:	475 29TH ST
City:	OAKLAND
State:	CA
Zipcode:	94609
Phonenumber:	5108323222
Dateoflastinspection:	20060601
Certifiednumberofbeds:	124
Totalnumberofresidents:	106
Percofoccupiedbeds:	85
Categorydescription:	Participating in Medicare and Medicaid
Typeofownership:	For profit - Individual
Locatedwithinahospital:	NO
Multinursinghomeownership:	YES
Residentandfamilycouncils:	BOTH
Edr id:	SRNH20060913741

181
NNE
1/2-1 mi
5148
Higher

SRDCCA200726224
Daycare

EDR ID:	SRDCCA200726224
Facility number:	13417857
Facility name:	"COLLINS, YVETTE "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	3111 WEST STREET
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	3111 WEST STREET
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"COLLINS, YVETTE "
Licensee type:	A
License effective date:	40910
License expiration date:	Not Reported
License issue date:	040910
Program type:	MAX. CAP (WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN 4 INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.
Original app. received date:	040825
Facility closed date:	Not Reported
Mailing address:	3111 WEST STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94609
Contact person:	"COLLINS, YVETTE "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5106549588

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
AQ182			SRHO20070133681
NE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
5152	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	SUMMIT PODIATRY SERVICES	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19921229	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0602421	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	2820 SUMMIT STREET, SUIT #101	
	Phone num:	5108321818	
	Termination reason:	08	
	Term Date:	20040217	
	Purpose of action:	Not Reported	
	Provider control:	10	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070133681	

AR183			SRHO20070107789
NE	Hospital type:	03	AHA Hospitals
1/2-1 mi	Num of times COO:	01	
5159	Owner date:	20030731	
Higher	City:	OAKLAND	
	Has plan of corr:	1	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	20060330	
	Current survey date:	20060404	

Medicare/Medicaid:	1
Facility name:	MCCLURE CONVALESCENT HOSP & REHAB CENTER
Intermediary/Carrier:	00454
Medicaid number:	ZZR55067F
Partcipation date:	19770425
Prior COO date:	Not Reported
Prior carrier:	00400
Provider ID:	555067
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	2910 MCCLURE STREET
Phone num:	5108363677
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	03
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0060
Num cert beds:	0060
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070107789

AR184
NE
1/2-1 mi
5159
Higher

SRHO20070141452
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	MCCLURE CONVALESCENT HOSP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930907
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0722928
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA	
ssa state:	05	
state region cd:	LAB	
street address:	2910 MCCLURE ST	
Phone num:	5108363677	
Termination reason:	00	
Term Date:	20080831	
Purpose of action:	Not Reported	
Provider control:	04	
Zip:	94609	
Fips state:	06	
Fips cnty:	001	
SSA MSA:	418	
SSA MSA size code:	B	
Date accredited:	Not Reported	
Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070141452	

AR185 SRNH20060915590
NE
1/2-1 mi
5159
Higher
Nursing Homes

Provnum:	555067
Nursinghomename:	MCCLURE CONVALESCENT HOSP & REHAB CENTER
Street:	2910 MCCLURE STREET
City:	OAKLAND
State:	CA
Zipcode:	94609
Phonenumber:	5108363677
Dateoflastinspection:	20060330
Certifiednumberofbeds:	60
Totalnumberofresidents:	55
Percofoccupiedbeds:	92
Categorydescription:	Participating in Medicare and Medicaid
Typeofownership:	For profit - Corporation
Locatedwithinahospital:	NO
Multinursinghomeownership:	YES
Residentandfamilycouncils:	BOTH
Edr id:	SRNH20060915590

AR186 SRHO20070153835
NE
1/2-1 mi
5176
Higher
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	GORDON A LAKE MD

Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19980123
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0939360
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2921 MCCLURE
Phone num:	5107634083
Termination reason:	00
Term Date:	20080122
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070153835

AR187
NE
1/2-1 mi
5187
Higher

SRHO20070133525
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	WILLIAM ARTHUR MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930512
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602250
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05

state region cd:	LAB
street address:	447 29TH ST SUITE 106
Phone num:	5108399445
Termination reason:	08
Term Date:	20000831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133525

188
NNW
1/2-1 mi
5196
Lower

SRDCCA200708130
Daycare

EDR ID:	SRDCCA200708130
Facility number:	13411653
Facility name:	"TAYLOR, FAYE & STRINGER, SHONEE "
Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	2906 MAGNOLIA STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	2906 MAGNOLIA STREET
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"TAYLOR, FAYE & STRINGER, SHONEE "
Licensee type:	A
License effective date:	961001
License expiration date:	Not Reported
License issue date:	961001
Program type:	LICENSE INACTIVE UNTIL 06-01-07
Original app. received date:	960715
Facility closed date:	Not Reported
Mailing address:	2906 MAGNOLIA STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"TAYLOR, FAYE "
Facility capacity:	6
Type of clients served:	960
Facility phone:	5104513527

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AQ189			SRHO20070133551
NE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
5201	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	20020326	
	Medicare/Medicaid:	1	
	Facility name:	JAMES D JACOBITZ MD INC	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19920901	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0602352	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	2828 SUMMIT	
	Phone num:	5108392478	
	Termination reason:	01	
	Term Date:	20030603	
	Purpose of action:	2	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070133551	

190			SRHO20070148199
ENE	Hospital type:	01	AHA Hospitals
1/2-1 mi	Num of times COO:	00	
5202	Owner date:	Not Reported	
Lower	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	GEORGE M MARTINEZ, MD, INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960909
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0919413
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	314 27TH STREET
Phone num:	5107633005
Termination reason:	08
Term Date:	19960909
Purpose of action:	Not Reported
Provider control:	04
Zip:	94612
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070148199

191
North
1/2-1 mi
5222
Higher

SRDCCA200729721
Daycare

EDR ID:	SRDCCA200729721	
Facility number:	13418346	
Facility name:	"RODRIGUEZ, GLORIA	"
Facility eval. code:	0202	
Facility office number:	02	
Facility county number:	01	
Facility type code:	810	
Facility status code:	03	
Address:	3049 LINDEN ST	
City:	OAKLAND	
State:	CA	
Zip:	94608	
Alt. address:	3049 LINDEN ST	
City:	OAKLAND	
State:	CA	
Zip:	94608	
Facility investor:	"RODRIGUEZ, GLORIA	"
Licensee type:	A	
License effective date:	51024	
License expiration date:	Not Reported	
License issue date:	051024	

Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050610
Facility closed date:	Not Reported
Mailing address:	3049 LINDEN ST
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"RODRIGUEZ, GLORIA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5106549023

AQ192
NE
1/2-1 mi
5224
Higher

SRHO20070140479
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ALAN R COHEN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930514
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0725375
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2832 SUMMIT ST
Phone num:	5108930328
Termination reason:	08
Term Date:	20051031
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000

	Source:	US_HOSPITAL_POSCLIA
	Edr id:	SRHO20070140479

AR193 SRHO20070134791
NE AHA Hospitals
1/2-1 mi
5236
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20040408
Medicare/Medicaid:	1
Facility name:	INTERNISTS MEDICAL GROUP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602051
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	2930 MCCLURE STREET #5
Phone num:	5104442155
Termination reason:	00
Term Date:	20080824
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134791

AR194 SRPU20071013395
NE Public Schools
1/2-1 mi
5268
Higher

Ncessch:	062805007804
Schname05:	STREET ACADEMY (ALTERNATIVE)
Mstreet05:	417 29TH ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94609

Mzip405:	3510
Member05:	154
Phone05:	(510) 879-3130
Locale05:	1
Type05:	4
Level05:	3
Gslo05:	09
Gshi05:	12
Edr id:	SRPU20071013395

AQ195 SRHO20070133390
NE AHA Hospitals
1-2 mi
5300
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	NEIL H GOZAN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930317
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602190
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2844 SUMMIT ST SUITE 107
Phone num:	Not Reported
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133390

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

AQ196 SRHO20070133123
NE AHA Hospitals
1-2 mi
5300
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SAMUEL DONG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921215
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602087
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2844 SUMMIT
Phone num:	5104523342
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133123

AQ197 SRHO20070133246
NE AHA Hospitals
1-2 mi
5300
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	CHARLES W SNOOK MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930105
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602157
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2844 SUMMIT ST
Phone num:	5108344845
Termination reason:	17
Term Date:	19960831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133246

AQ198
NE
1-2 mi
5300
Higher

SRHO20070133404
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	LOUIS D ROCCA MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921217
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602199
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2844 SUMMIT
Phone num:	5108933955
Termination reason:	08
Term Date:	20000831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133404

AQ199 SRHO20070148040
NE AHA Hospitals
1-2 mi
5300
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	GEORGE M MARTINEZ, MD, INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960909
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0919411
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2844 SUMMIT STREET, #108
Phone num:	5107633005
Termination reason:	00
Term Date:	20080908
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070148040

AQ200 SRHO20070133128
NE AHA Hospitals
1-2 mi
5300
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JAMES O'SHEA MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930119
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602133
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2844 SUMMIT ST SUITE 212
Phone num:	5107633535
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	10
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133128

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AS201 NE 1-2 mi 5335 Higher			SRHO20070011136 AHA Hospitals
	Hospital type:	01	
	Num of times COO:	00	
	Owner date:	Not Reported	
	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	19860624	
	Medicare/Medicaid:	1	
	Facility name:	WALLACE G SCOTT	
	Intermediary/Carrier:	52280	
	Medicaid number:	Not Reported	
	Partcipation date:	19840723	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	056565	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	BK	
	street address:	3007 TELEGRAPH AVE	
	Phone num:	4152688721	
	Termination reason:	01	
	Term Date:	19870725	
	Purpose of action:	2	
	Provider control:	06	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSOTHER	
	Edr id:	SRHO20070011136	
AR202 NE 1-2 mi 5342 Higher			SRHO20070133522 AHA Hospitals
	Hospital type:	01	
	Num of times COO:	00	
	Owner date:	Not Reported	
	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	ROBERT B NICHOLSON MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930106
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602209
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 29TH SUITE 204
Phone num:	5108938426
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133522

AR203
NE
1-2 mi
5342
Higher

SRHO20070133523
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	J L TURNER MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921217
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602212
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 29TH
Phone num:	5108938771
Termination reason:	15
Term Date:	19940831
Purpose of action:	Not Reported
Provider control:	10
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133523

AR204
NE
1-2 mi
5342
Higher

SRHO20070148818
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	NURSING 2000, INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19971028
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0935372
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 29TH STREET, SUITE 105
Phone num:	5108031385
Termination reason:	08
Term Date:	19971028
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070148818

AR205 SRHO20070138044
NE AHA Hospitals
1-2 mi
5342
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	LESLIE A SOLOMON MD APC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921218
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0700479
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 29TH STREET SUITE 409
Phone num:	5108938611
Termination reason:	04
Term Date:	19940331
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138044

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AR206			SRHO20070142839
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5342	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	ALTA BATES MEDICAL ASSOCIATES	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19931029	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0878618	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	400 29TH STREET, SUITE 301	
	Phone num:	5108341950	
	Termination reason:	00	
	Term Date:	20070429	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070142839	

AR207			SRHO20070133113
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5342	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	WELDON G THYBERG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930514
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602064
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 29TH
Phone num:	5184511234
Termination reason:	08
Term Date:	19980831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133113

AQ208
NE
1-2 mi
5341
Higher

SRHO20070133406
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JOO SOCK YANG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930427
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602206
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	401 29TH STREET, SUITE 103
Phone num:	5108937008
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133406

AQ209 SRHO20070156336
NE AHA Hospitals
1-2 mi
5341
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20040810
Medicare/Medicaid:	1
Facility name:	KELLER DERMATOPATHOLOGY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20030122
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1008537
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	401 29TH STREET SUITE 109
Phone num:	5106636243
Termination reason:	00
Term Date:	20070520
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070156336

AQ210 SRHO20070145629
NE AHA Hospitals
1-2 mi
5341
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19960207
Medicare/Medicaid:	1
Facility name:	COMPREHENSIVE ALLERGY SERVICES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950718
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0903312
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	401 29TH STREET #201
Phone num:	5108344897
Termination reason:	00
Term Date:	20080206
Purpose of action:	1
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070145629

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AQ211			SRHO20070133274
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5341	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	EDWARD D KRUG MD	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930122	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0602187	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	401 29TH	
	Phone num:	5108397292	
	Termination reason:	08	
	Term Date:	20040831	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070133274	

AQ212			SRHO20070142390
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5341	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	DONG HA HWANG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930310
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0864196
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	401 29TH STREET SUITE 103
Phone num:	4152211811
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070142390

AT213
ENE
1-2 mi
5361
Lower

SRHO20070144687
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ST PAULS TOWERS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930526
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0870857
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	100 BAY PLACE
Phone num:	5108918524
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	01
Zip:	94610
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070144687

AT214
ENE
1-2 mi
5361
Lower

SRHO20070010076
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20060508
Medicare/Medicaid:	1
Facility name:	ST PAULS TOWERS
Intermediary/Carrier:	52280
Medicaid number:	Not Reported
Partcipation date:	19721109
Prior COO date:	Not Reported
Prior carrier:	00040
Provider ID:	055156
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	100 BAY PLACE
Phone num:	5108354700
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	05
Zip:	94610
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0043
Num cert beds:	0043
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010076

AT215 — SRNH20060900537
ENE — Nursing Homes
1-2 mi
5361
Lower

Provnum:	055156
Nursinghomename:	ST PAULS TOWERS
Street:	100 BAY PLACE
City:	OAKLAND
State:	CA
Zipcode:	94610
Phonenumber:	5108354700
Dateoflastinspection:	20060427
Certifiednumberofbeds:	43
Totalnumberofresidents:	41
Percofoccupiedbeds:	95
Categorydescription:	Participating in Medicare Only
Typeofownership:	Non profit - Corporation
Locatedwithinahospital:	NO
Multinursinghomeownership:	YES
Residentandfamilycouncils:	RESIDENT
Edr id:	SRNH20060900537

AU216 — SRPR20051022064
West — Private Schools
1-2 mi
5375
Lower

Pss school id:	A0101296
Pss inst:	ST MARTIN DE PORRES
Lograde:	6
Higrade:	8
Pss address:	1630 TENTH ST.
Pss city:	OAKLAND
Pss county no:	001
Pss county fips:	06001
Pss stabb:	CA
Pss fips:	06
Pss zip5:	94607
Pss phone:	5108321757
Pss sch days:	180
Pss stu day hrs:	7
Pss library:	No
Pss enroll ug:	Not Reported
Pss enroll pk:	Not Reported
Pss enroll k:	Not Reported
Pss enroll 1:	Not Reported
Pss enroll 2:	Not Reported
Pss enroll 3:	Not Reported
Pss enroll 4:	Not Reported
Pss enroll 5:	Not Reported

Pss enroll 6:	6
Pss enroll 7:	20
Pss enroll 8:	15
Pss enroll 9:	Not Reported
Pss enroll 10:	Not Reported
Pss enroll 11:	Not Reported
Pss enroll 12:	Not Reported
Pss enroll t:	41
Pss enroll tk12:	41
Pss race ai:	Not Reported
Pss race as:	Not Reported
Pss race h:	Not Reported
Pss race b:	Not Reported
Pss race w:	Not Reported
Pss fte teach:	4.1
Pss locale:	1
Pss coed:	1
Pss type:	1
Pss level:	1
Pss relig:	1
Pss comm type:	1
Pss indian pct:	Not Reported
Pss asian pct:	Not Reported
Pss hisp pct:	Not Reported
Pss black pct:	Not Reported
Pss white pct:	Not Reported
Pss stdtch rt:	10
Pss orient:	1
Pss county name:	ALAMEDA
Pss assoc 1:	National Catholic Educational Association (NCEA)
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051022064

AS217
NE
1-2 mi
5435
Higher

SRHO20070005556
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19990831
Medicare/Medicaid:	1
Facility name:	EYE MD LASER AND SURGERY CENTER
Intermediary/Carrier:	00542
Medicaid number:	Not Reported
Partcipation date:	19990831

Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05C0001449
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	481 30TH STREET
Phone num:	5108354521
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070005556

AV218
NNE
1-2 mi
5480
Higher

SRDCCA200729790
Daycare

EDR ID:	SRDCCA200729790
Facility number:	13418274
Facility name:	"ROBINSON, ALISA V "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	655-32ND ST.
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	655-32ND ST.
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"ROBINSON, ALISA V "
Licensee type:	A
License effective date:	50601
License expiration date:	Not Reported
License issue date:	050601
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050414
Facility closed date:	Not Reported

Mailing address:	655-32ND ST.	
Mailing city:	OAKLAND	
Mailing state:	CA	
Mailing zip:	94609	
Contact person:	"ROBINSON, ALISA V "	
Facility capacity:	8	
Type of clients served:	960	
Facility phone:	5105950227	

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219 SRDCCA200754859
North Daycare
1-2 mi
5491
Higher

EDR ID:	SRDCCA200754859
Facility number:	13418964
Facility name:	ST. MARY'S CENTER PRESCHOOL
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	3208 SAN PABLO AVE.
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	925 BROCKHURST ST.
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	ST. MARY'S CENTER
Licensee type:	C
License effective date:	61212
License expiration date:	Not Reported
License issue date:	061212
Program type:	"AGES 2 TO FIRST GRADE ENTRY. OPERATING MONDAY THROUGH FRIDAY, 9:00 AM TO 3:00 PM IN ONE ROOM. "
Original app. received date:	061005
Facility closed date:	Not Reported
Mailing address:	925 BROCKHURST ST.
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"RIGA, LORITA "
Facility capacity:	30
Type of clients served:	950
Facility phone:	5105954030

AS220 SRHO20070007843
NE AHA Hospitals
1-2 mi
5521
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported

FMS survey date:	Not Reported
Current survey date:	19831011
Medicare/Medicaid:	1
Facility name:	PERALTA HOSPITAL
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19660701
Prior COO date:	Not Reported
Prior carrier:	00041
Provider ID:	050004
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	450 30TH ST
Phone num:	4154514900
Termination reason:	01
Term Date:	19890901
Purpose of action:	2
Provider control:	03
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	1
Num beds:	0204
Num cert beds:	0204
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070007843

AW221
NE
1-2 mi
5524
Higher

SRHO20070160254
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	THI LE NGUYEN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20050511
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1040533
Record Status:	A

Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	2929 SUMMIT #210
Phone num:	5108320839
Termination reason:	00
Term Date:	20070510
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070160254

AW222 SRHO20070136521
NE AHA Hospitals
1-2 mi
5524
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19971001
Medicare/Medicaid:	1
Facility name:	SMITHKLINE BEECHAM CLINICAL LABS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0643719
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	2929 SUMMIT STREET, SUITE 105
Phone num:	5108255033
Termination reason:	04
Term Date:	19981002
Purpose of action:	2
Provider control:	04

Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070136521

AW223
NE
1-2 mi
5524
Higher

SRHO20070133775
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20050511
Medicare/Medicaid:	1
Facility name:	MEDICAL SPECIALTY LAB
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0594708
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	2929 SUMMIT STREET STE 208
Phone num:	5108394829
Termination reason:	00
Term Date:	20070720
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA

	Edr id:	SRHO20070133775

AW224 SRHO20070140024
NE AHA Hospitals
1-2 mi
5543
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	MICHAEL DIGIACOMO DPM INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930401
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0713044
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	445 30TH STREET
Phone num:	5104658012
Termination reason:	08
Term Date:	20020831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070140024

AW225 SRHO20070133241
NE AHA Hospitals
1-2 mi
5543
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000

Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	BRUCE P LAWRENCE MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930803
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602095
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	445-30TH STREET, 2ND FLOOR
Phone num:	5104652500
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133241

AW226
NE
1-2 mi
5553
Higher

SRHO20070144653
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JAMES L RORIE MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950210
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0897675

Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	2941 SUMMIT STREET SUITE 2-A
Phone num:	5104443318
Termination reason:	00
Term Date:	20080502
Purpose of action:	Not Reported
Provider control:	07
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070144653

AW227
NE
1-2 mi
5567
Higher

SRHO20070150889
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PREVENTIVE CARE NETWORK MED SVCS INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990202
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0956654
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2940 SUMMIT ST FIRST FLOOR
Phone num:	5104449460
Termination reason:	00
Term Date:	20070201
Purpose of action:	Not Reported

Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070150889

228
West
1-2 mi
5582
Lower

SRPR20051022212
Private Schools

Pss school id:	A0101197
Pss inst:	PENTECOSTAL WAY OF TRUTH ACAD
Lograde:	K
Higrade:	12
Pss address:	1575 SEVENTH ST.
Pss city:	OAKLAND
Pss county no:	001
Pss county fips:	06001
Pss stabb:	CA
Pss fips:	06
Pss zip5:	94607
Pss phone:	5106252002
Pss sch days:	180
Pss stu day hrs:	6.5
Pss library:	Yes
Pss enroll ug:	Not Reported
Pss enroll pk:	Not Reported
Pss enroll k:	2
Pss enroll 1:	1
Pss enroll 2:	2
Pss enroll 3:	2
Pss enroll 4:	1
Pss enroll 5:	4
Pss enroll 6:	4
Pss enroll 7:	1
Pss enroll 8:	4
Pss enroll 9:	3
Pss enroll 10:	4
Pss enroll 11:	5
Pss enroll 12:	7
Pss enroll t:	40
Pss enroll tk12:	40
Pss race ai:	0
Pss race as:	0
Pss race h:	2
Pss race b:	28
Pss race w:	10
Pss fte teach:	12.8
Pss locale:	1
Pss coed:	1

Pss type:	1
Pss level:	3
Pss relig:	3
Pss comm type:	1
Pss indian pct:	0
Pss asian pct:	0
Pss hisp pct:	5
Pss black pct:	70
Pss white pct:	25
Pss stdtch rt:	3.13
Pss orient:	29
Pss county name:	ALAMEDA
Pss assoc 1:	No Membership Association
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051022212

AU229
West
1-2 mi
5615
Lower

SRPU20071013376
Public Schools

Ncessch:	062805004309
Schname05:	PRESCOTT ELEMENTARY
Mstreet05:	920 CAMPBELL ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94607
Mzip405:	1320
Member05:	353
Phone05:	(510) 879-1470
Locale05:	1
Type05:	1
Level05:	1
Gslo05:	KG
Gshi05:	05
Edr id:	SRPU20071013376

230
NNE
1-2 mi
5618
Higher

SRDCCA200734798
Daycare

EDR ID:	SRDCCA200734798
Facility number:	13418689
Facility name:	"BEST, ELAINE "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	703 BROCKHURST
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	703 BROCKHURST
City:	OAKLAND

State:	CA	
Zip:	94609	
Facility investor:	"BEST, ELAINE "	
Licensee type:	A	
License effective date:	60829	
License expiration date:	Not Reported	
License issue date:	060829	
Program type:	MAX. CAP(WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.	4
Original app. received date:	060414	
Facility closed date:	Not Reported	
Mailing address:	703 BROCKHURST	
Mailing city:	OAKLAND	
Mailing state:	CA	
Mailing zip:	94609	
Contact person:	"BEST, ELAINE "	
Facility capacity:	14	
Type of clients served:	960	
Facility phone:	5106523082	

AW231
NE
1-2 mi
5626
Higher

SRHO20070152044
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	NEW DAY PEDIATRICS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990810
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0963828
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	419 30TH STREET
Phone num:	5104654445
Termination reason:	00
Term Date:	20070313
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001

SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070152044

AW232 SRHO20070133112
NE AHA Hospitals
1-2 mi
5626
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	RICHARD L WACHT MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921215
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602057
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	419 30TH ST
Phone num:	5104444305
Termination reason:	08
Term Date:	20040831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133112

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AW233			SRHO20070136100
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5655	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	1	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	19950526	
	Medicare/Medicaid:	1	
	Facility name:	A B G LABORATORY	
	Intermediary/Carrier:	00542	
	Medicaid number:	Not Reported	
	Partcipation date:	19920901	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0643838	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	411 30TH STREET SUITE 208 B	
	Phone num:	5102680991	
	Termination reason:	01	
	Term Date:	19950902	
	Purpose of action:	2	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070136100	

AW234			SRHO20070157539
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5655	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	20061214	

Medicare/Medicaid:	1
Facility name:	MARILDA H CHUNG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20031103
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1018866
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	411 30TH ST MEDICAL BLDG 2ND FL STE202
Phone num:	5104375097
Termination reason:	00
Term Date:	20061206
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157539

AW235
NE
1-2 mi
5655
Higher

SRHO20070156285
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	AHF HEALTHCARE CENTERS/OAKLAND
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20000616
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0974814
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	411 30TH STREET SUITE 202
Phone num:	3238605200
Termination reason:	00
Term Date:	20080615
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070156285

AW236 SRHO20070147820
NE AHA Hospitals
1-2 mi
5655
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PRIMARY PEDIATRIC MEDICAL GROUP, INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19970115
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0924011
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	411 30TH STREET #212
Phone num:	5108390831
Termination reason:	00
Term Date:	20090114
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147820

AW237 SRHO20070156290
NE AHA Hospitals
1-2 mi
5655
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	LEON F RICHMOND MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20000726
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0976149
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	411 30TH STREET STE 502
Phone num:	5104522229
Termination reason:	08
Term Date:	20061215
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070156290

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AW238			SRHO20070142322
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5668	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	ROBERT SANDBERG MD	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930202	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0860121	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	418 30TH ST	
	Phone num:	5102085200	
	Termination reason:	00	
	Term Date:	20080831	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070142322	

AW239			SRHO20070133243
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5668	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	W IRVING JOHNSON MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921215
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602104
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	418 30TH ST
Phone num:	5102085100
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133243

AX240
North
1-2 mi
5690
Higher

SRDCCA200745889
Daycare

EDR ID:	SRDCCA200745889
Facility number:	13415725
Facility name:	YMCA OF THE EAST BAY Y-KIDS HOOVER
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	840
Facility status code:	03
Address:	890 BROCKHURST
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	890 BROCKHURST
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	YMCA OF THE EAST BAY
Licensee type:	D
License effective date:	10702
License expiration date:	Not Reported
License issue date:	010702

Program type:	"AGES KINDERGARTEN ENTRY TO 18 YEARS. HOURS OF OPERATION: MONDAY-FRIDAY, 7:00AM TO 8:30AM AND 11:30AM TO 6:00PM OPERATING IN A PORTABLE BUILDING. LICENSE SUBJECT TO TEMPORARY "WAIVER TO BE POSTED.
Original app. received date:	010510
Facility closed date:	Not Reported
Mailing address:	263 SO. 20TH STREET
Mailing city:	RICHMOND
Mailing state:	CA
Mailing zip:	94804
Contact person:	"DOWNS, NADEEN "
Facility capacity:	30
Type of clients served:	950
Facility phone:	5104280749

AX241 — SRPU20071012647
North — Public Schools
1-2 mi
5690
Higher

Ncessch:	062805004276
Schname05:	HOOVER ELEMENTARY
Mstreet05:	890 BROCKHURST ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94608
Mzip405:	4318
Member05:	377
Phone05:	(510) 879-1700
Locale05:	1
Type05:	1
Level05:	1
Gslo05:	KG
Gshi05:	05
Edr id:	SRPU20071012647

AS242 — SRHO20070141586
NE — AHA Hospitals
1-2 mi
5708
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ROBERT BEALLO MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930527
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0723075
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 TELEGRAPH AVE FOURTH FLOOR
Phone num:	5108348494
Termination reason:	08
Term Date:	20060831
Purpose of action:	Not Reported
Provider control:	10
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141586

AS243 SRHO20070157587
NE AHA Hospitals
1-2 mi
5708
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20050322
Medicare/Medicaid:	1
Facility name:	ALICE REIER MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20040830
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1030082
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3100 TELEGRAPH AVE 3101
Phone num:	5108346923
Termination reason:	00
Term Date:	20070321
Purpose of action:	1
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157587

AS244 SRHO20070145537
NE AHA Hospitals
1-2 mi
5708
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	OAKLAND WOMEN'S HEALTH MED CORP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19941114
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0894402
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 TELEGRAPH AVENUE
Phone num:	5102083300
Termination reason:	08
Term Date:	19981113
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070145537

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AS245			SRHO20070155084
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5708	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	Q ROBERT YAN MD	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	20011206	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0994161	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M1	
	street address:	3100 TELEGRAPH AVENUE,SUITE 3000	
	Phone num:	5105949595	
	Termination reason:	00	
	Term Date:	20071205	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070155084	

AS246			SRHO20070133524
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5708	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	TOM K LEE MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930317
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602247
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 TELEGRAPH AVE SUITE 3106
Phone num:	5102717999
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133524

AS247
NE
1-2 mi
5708
Higher

SRHO20070149064
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PERALTA ORTHOPAEDICS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19970806
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0931887
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 TELEGRAPH AVENUE, SUITE 100
Phone num:	5104442756
Termination reason:	08
Term Date:	19990805
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070149064

AS248 SRHO20070136041
NE AHA Hospitals
1-2 mi
5708
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19970923
Medicare/Medicaid:	1
Facility name:	EAST BAY FAMILY PRACTICE MED GROUP INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0603134
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3100 TELEGRAPH AVE #2109
Phone num:	5106459900
Termination reason:	00
Term Date:	20080316
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070136041

AS249 SRHO20070136007
NE AHA Hospitals
1-2 mi
5708
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20010502
Medicare/Medicaid:	1
Facility name:	BAYSIDE PEDIATRICS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0669200
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3100 TELEGRAPH AVENUE
Phone num:	5107248300
Termination reason:	00
Term Date:	20080225
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070136007

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AS250			SRHO20070133405
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5708	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	JACQUES CALMA MD	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19950620	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0602204	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	3100 TELEGRAPH AVE SUITE 3104	
	Phone num:	5108936060	
	Termination reason:	00	
	Term Date:	20080831	
	Purpose of action:	Not Reported	
	Provider control:	02	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070133405	

AS251			SRHO20070151565
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5708	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	PETER H ROWE MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19981124
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0954382
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 TELEGRAPH AVENUE SUITE 3000
Phone num:	5104446680
Termination reason:	12
Term Date:	19990128
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070151565

AS252
NE
1-2 mi
5708
Higher

SRHO20070138525
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JOSEPH E YARRIS JR MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930120
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0689103
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 TELEGRAPH AVENUE SUITE 220
Phone num:	5102738133
Termination reason:	17
Term Date:	20000407
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138525

AS253 SRHO20070133259
NE AHA Hospitals
1-2 mi
5708
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19971209
Medicare/Medicaid:	1
Facility name:	LARRY G STRIEFF MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602162
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3100 TELEGRAPH AVENUE #3101
Phone num:	5108346923
Termination reason:	01
Term Date:	19990909
Purpose of action:	1
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133259

AS254 SRHO20070139823
NE AHA Hospitals
1-2 mi
5708
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	FAMILY PRACTICE MED GROUP OF OAKLAND
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930111
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0707111
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 TELEGRAPH AVENUE SUITE 4100
Phone num:	5104190230
Termination reason:	00
Term Date:	20080229
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070139823

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AS255			SRHO20070133667
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5708	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	NORTH OAKLAND FAMILY PRACTICE	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19940111	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0602376	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	3100 TELEGRAPH AVENUE SUITE 2102	
	Phone num:	5102868160	
	Termination reason:	00	
	Term Date:	20080831	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070133667	

AW256			SRHO20070137795
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5724	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	FIRST RESORT
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930106
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0700370
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 30TH STREET SUITE 401
Phone num:	4154099985
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070137795

AW257
NE
1-2 mi
5724
Higher

SRHO20070160806
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PHYSICIAN FOUNDATION AT CPMC HEPOTOLOG
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20050311
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1038150
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	400 30TH STREET SUITE 200
Phone num:	4156004250
Termination reason:	00
Term Date:	20070310
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070160806

AW258 SRHO20070133550
NE AHA Hospitals
1-2 mi
5724
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20040720
Medicare/Medicaid:	1
Facility name:	EPSTEIN & EPSTEIN
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602332
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	400 30TH STREET, SUITE #205
Phone num:	5104448282
Termination reason:	00
Term Date:	20070126
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133550

AW259 SRHO20070152525
NE AHA Hospitals
1-2 mi
5724
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	K YOGAM MD APC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990104
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0955524
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 30TH STREET SUITE 207
Phone num:	5102343660
Termination reason:	00
Term Date:	20090103
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070152525

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

AY260 — SRDCCA200742322
SE — Daycare
1-2 mi
5729
Higher

EDR ID:	SRDCCA200742322
Facility number:	10212101
Facility name:	LANEY COLLEGE CHILDREN'S CENTER
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	900 FALLON STREET
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	900 FALLON STREET
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	PERALTA COMMUNITY COLLEGE DISTRICT
Licensee type:	F
License effective date:	951204
License expiration date:	Not Reported
License issue date:	891204
Program type:	"INFANT COMPONENT OF A COMBINAITON CENTER, INFANT CAPACITY 12 TOTAL CAPACITY 110. AGES 6 MONTHS TO 23 MONTHS. HOURS: 7:45 A.M. TO 10 P.M., MONDAY THROUGH FRIDAY. "
Original app. received date:	881104
Facility closed date:	Not Reported
Mailing address:	333 EAST 8TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"MITCHELL, LINDA "
Facility capacity:	12
Type of clients served:	955
Facility phone:	5104643104

AY261 — SRDCCA200744944
SE — Daycare
1-2 mi
5729
Higher

EDR ID:	SRDCCA200744944
Facility number:	10206129
Facility name:	LANEY COLLEGE CHILDREN'S CENTER
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	900 FALLON STREET
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	900 FALLON STREET
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	PERALTA COMMUNITY COLLEGE DISTRICT

Licensee type:	F
License effective date:	951204
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"PRESCHOOL COMPONENT OF COMBINATION CENTER. PRESCHOOL CAPACITY 98, TOTAL CAPACITY 110. AGES 2 TO FIRST GRADE ENTRY. HOURS OF OPERATION: 7:45A.M. - 10:00P.M. MONDAY - SATURDAY. "
Original app. received date:	840202
Facility closed date:	Not Reported
Mailing address:	333 EAST 8TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"MITCHELL, LINDA "
Facility capacity:	98
Type of clients served:	950
Facility phone:	5104643575

AY262
SE
1-2 mi
5729
Higher

SRCL20051000524
Colleges

Unitid:	117247
Instnm:	LANEY COLLEGE
Addr:	900 FALLON ST
City:	OAKLAND
Stabbr:	CA
Zip:	94607
Zip4:	Not Reported
Unk:	Not Reported
Fips:	094607
Oberge:	8
Chfnm:	Odell Johnson
Chftitle:	PRESIDENT
Gentele:	5108345740
Fintele:	5104643420
Admtele:	5104667368
Ein:	941590799
Duns:	179363205
Opeid:	126600
Opeflag:	1
Webaddr:	laney.peralta.cc.ca.us/
Sector:	4
Iclevel:	2
Control:	1
Hloffer:	3
Ugoffer:	1
Groffer:	2
Fpoffer:	2
Hdegoffer:	40
Deggrant:	1
Hbcu:	2
Hospital:	2
Medical:	2
Tribal:	2
Carnegie:	40
Locale:	1

Openpubl:	1
Act:	A
Newid:	-2
Deathyr:	-2
Closedat:	-2
Cyactive:	1
Postsec:	1
Pseflag:	1
Pset4flg:	1
Rptmth:	1
Fte:	5591
Enrtot:	11591
Edr id:	SRCL20051000524

AZ263
West
1-2 mi
5799
Lower

SRDCCA200705926
Daycare

EDR ID:	SRDCCA200705926
Facility number:	10216464
Facility name:	"MORA, LIBIA "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1635- 8TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1635- 8TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"MORA, LIBIA "
Licensee type:	A
License effective date:	941103
License expiration date:	Not Reported
License issue date:	941103
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	941005
Facility closed date:	Not Reported
Mailing address:	1635- 8TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"MORA, LIBIA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5102683768

AW264
NE
1-2 mi
5801
Higher

SRHO20070133245
AHA Hospitals

Hospital type:	01
Num of times COO:	00

Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	VINCENT W CANGELLO MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921221
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602156
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3017 SUMMIT STREET
Phone num:	4158344282
Termination reason:	12
Term Date:	20020501
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133245

AV265
NNE
1-2 mi
5804
Higher

SRDCCA200751109
Daycare

EDR ID:	SRDCCA200751109
Facility number:	13414708
Facility name:	FELICIA'S GIANT STEP PRESCHOOL
Facility eval. code:	0207
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	3261 MARTIN LUTHER KING JR.WY.
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	3261 MARTIN LUTHER KING JR.WY.

City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"BROWN, FELICIA "
Licensee type:	A
License effective date:	991115
License expiration date:	Not Reported
License issue date:	991115
Program type:	"AGES: 18 MONTHS TO FIRST GRADE ENTRY, INCLUDING A MAXIMUM OF 12 TODDLERS, AGES 18MOS. TO 30 MOS. HOURS OF OPERATION: MONDAY-FRIDAY, 7:30AM TO 6:00PM. "
Original app. received date:	991012
Facility closed date:	Not Reported
Mailing address:	2640 TAMALPAIS DRIVE
Mailing city:	PINOLE
Mailing state:	CA
Mailing zip:	94564
Contact person:	"BROWN, FELICIA "
Facility capacity:	30
Type of clients served:	950
Facility phone:	5106528110

BA266
NE
1-2 mi
5806
Higher

SRHO20070010260
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19821014
Medicare/Medicaid:	1
Facility name:	NOR CAL HHA
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19821014
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	057512
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	2946 WEBSTER ST
Phone num:	4157636490
Termination reason:	04
Term Date:	19870901
Purpose of action:	1
Provider control:	04
Zip:	94609

Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010260

AZ267
West
1-2 mi
5815
Lower

SRDCCA200744952
Daycare

EDR ID:	SRDCCA200744952
Facility number:	10206144
Facility name:	OUSD - PRESCOTT
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	800 CAMPBELL STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	495 JONES AVE
City:	OAKLAND
State:	CA
Zip:	94603
Facility investor:	OAKLAND UNIFIED SCHOOL DISTRICT
Licensee type:	F
License effective date:	940405
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"AGES 2 YRS. TO FIRST GRADE ENTRY. HOURS OF OPERATION: MON. - FRI., 7:00AM - 6:00PM IN ROOMS 1A, 1B AND PORTABLE. "
Original app. received date:	840208
Facility closed date:	Not Reported
Mailing address:	1025 SECOND AVENUE- ROOM 320
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	WILLIAMS(AM)/JEFFERIES(PM)
Facility capacity:	57
Type of clients served:	950
Facility phone:	5108935882

AW268
NE
1-2 mi
5820
Higher

SRHO20070160210
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND

Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20051115
Medicare/Medicaid:	1
Facility name:	DIALYSIS ACCESS CENTER INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20030724
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1015115
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3012 SUMMIT STREET D WING
Phone num:	5108410411
Termination reason:	00
Term Date:	20080121
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070160210

AW269
NE
1-2 mi
5820
Higher

SRHO20070007721
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19830816
Medicare/Medicaid:	1
Facility name:	PROVIDENCE HOSPITAL
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19660701

Prior COO date:	Not Reported
Prior carrier:	00041
Provider ID:	050053
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3012 SUMMIT ST
Phone num:	4158354500
Termination reason:	01
Term Date:	19920301
Purpose of action:	2
Provider control:	01
Zip:	94623
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	1
Num beds:	0230
Num cert beds:	0230
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070007721

AW270
NE
1-2 mi
5820
Higher

SRHO20070007380
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20030916
Medicare/Medicaid:	1
Facility name:	DIALYSIS ACCESS CENTER, INC
Intermediary/Carrier:	00542
Medicaid number:	Not Reported
Partcipation date:	20030916
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05C0001612
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3012 SUMMIT STREET, D WING
Phone num:	5102511002

Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070007380

AW271
NE
1-2 mi
5820
Higher

SRHO20070136968
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	FMC OAKLAND HEMODIALYSIS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930607
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0664289
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3012 SUMMIT ST 6TH FLOOR
Phone num:	5108932060
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported

Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070136968	

AW272 SRHO20070157665
NE AHA Hospitals
1-2 mi
5831
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20040512
Medicare/Medicaid:	1
Facility name:	MACHAON DIAGNOSTICS INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20031119
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1019489
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3023 SUMMIT STREET
Phone num:	5108395600
Termination reason:	00
Term Date:	20070807
Purpose of action:	1
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157665

AW273 SRHO20070136085
NE AHA Hospitals
1-2 mi
5831
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported

City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20020308
Medicare/Medicaid:	1
Facility name:	COAGULATION CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0643829
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3023 SUMMIT ST
Phone num:	5104529305
Termination reason:	01
Term Date:	20030619
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070136085

BB274
ENE
1-2 mi
5841
Higher

SRPU20071013388
Public Schools

Ncessch:	062805004323
Schname05:	WESTLAKE MIDDLE
Mstreet05:	2629 HARRISON ST.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94612
Mzip405:	3813
Member05:	705
Phone05:	(510) 879-2130
Locale05:	1
Type05:	1
Level05:	2
Gslo05:	06
Gshi05:	08

Edr id: SRPU20071013388

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275 SRDCCA200711091
North EDR ID: SRDCCA200711091 Daycare
1-2 mi Facility number: 13414596
5843 Facility name: "LITTLEJOHN, KAREN "
Lower Facility eval. code: 0202
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 3122 MAGNOLIA
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 3122 MAGNOLIA
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "LITTLEJOHN, KAREN "
Licensee type: A
License effective date: 991026
License expiration date: Not Reported
License issue date: 991026
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 990810
Facility closed date: Not Reported
Mailing address: 3122 MAGNOLIA
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "LITTLEJOHN, KAREN "
Facility capacity: 6
Type of clients served: 960
Facility phone: 5104500511

AW276 SRHO20070152708
NE Hospital type: 01 AHA Hospitals
1-2 mi Num of times COO: 00
5865 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: Not Reported
Compliance status: Not Reported
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: Not Reported
Medicare/Medicaid: Not Reported
Facility name: SUTTER EAST BAY MEDICAL FOUNDATION
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported

Partcipation date:	19990810
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0963845
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 30TH STREET SUITE 311
Phone num:	5108395642
Termination reason:	00
Term Date:	20070809
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070152708

AW277
NE
1-2 mi
5865
Higher

SRHO20070141375
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	NAYVIN GORDON MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930120
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0716007
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 30TH ST STE 405

Phone num:	5104441319
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141375

AW278
NE
1-2 mi
5865
Higher

SRHO20070133272
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DAVID L ESTRICH MD A MEDICAL CORP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930105
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602181
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 30TH ST SUITE 311
Phone num:	5108395640
Termination reason:	00
Term Date:	20071222
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported

Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070133272	

AW279 SRHO20070133552
NE AHA Hospitals
1-2 mi
5865
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DR DAVID LOUIS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930125
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602361
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 30TH ST SUITE 540
Phone num:	5108360223
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133552

AW280 SRHO20070157596
NE AHA Hospitals
1-2 mi
5865
Higher

Hospital type:	01
Num of times COO:	00

	Owner date:	Not Reported
	City:	OAKLAND
	Has plan of corr:	Not Reported
	Compliance status:	Not Reported
	SSA county code:	000
	Cross ref number:	Not Reported
	FMS survey date:	Not Reported
	Current survey date:	Not Reported
	Medicare/Medicaid:	Not Reported
	Facility name:	SUTTER EAST BAY MEDICAL FOUNDATION
	Intermediary/Carrier:	Not Reported
	Medicaid number:	Not Reported
	Partcipation date:	20040929
	Prior COO date:	Not Reported
	Prior carrier:	Not Reported
	Provider ID:	05D1031397
	Record Status:	A
	Region code:	09
	Is Partial Record:	Y
	state abbrev:	CA
	ssa state:	05
	state region cd:	M2
	street address:	350 30TH STREET, SUITE #411
	Phone num:	5109878616
	Termination reason:	00
	Term Date:	20080928
	Purpose of action:	Not Reported
	Provider control:	04
	Zip:	94609
	Fips state:	06
	Fips cnty:	001
	SSA MSA:	418
	SSA MSA size code:	B
	Date accredited:	Not Reported
	Accred expire date:	Not Reported
	Accred Org:	Not Reported
	Num beds:	0000
	Num cert beds:	0000
	Source:	US_HOSPITAL_POSCLIA
	Edr id:	SRHO20070157596

AW281 SRHO20070152316
NE
1-2 mi
5865
Higher
AHA Hospitals

	Hospital type:	01
	Num of times COO:	00
	Owner date:	Not Reported
	City:	OAKLAND
	Has plan of corr:	Not Reported
	Compliance status:	Not Reported
	SSA county code:	000
	Cross ref number:	Not Reported
	FMS survey date:	Not Reported
	Current survey date:	Not Reported
	Medicare/Medicaid:	Not Reported
	Facility name:	ASSOCIATED INTERNAL MEDICINE
	Intermediary/Carrier:	Not Reported

Medicaid number:	Not Reported
Partcipation date:	19991118
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0967624
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 30TH ST #320
Phone num:	5104656700
Termination reason:	00
Term Date:	20071117
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070152316

AW282
NE
1-2 mi
5865
Higher

SRHO20070154003
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	EAST BAY PERINATAL ASSOCIATES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19980313
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0942632
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB

street address:	350 30TH STREET, #205
Phone num:	5104440790
Termination reason:	00
Term Date:	20081231
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070154003

AW283
NE
1-2 mi
5865
Higher

SRHO20070133538
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19990611
Medicare/Medicaid:	1
Facility name:	ASSOCIATED INTERNAL MEDICINE MED GROUP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602290
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	350 30TH STREET SUITE 320
Phone num:	5104656700
Termination reason:	01
Term Date:	19990707
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B

Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133538

AW284 SRHO20070139550
NE AHA Hospitals
1-2 mi
5865
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20020701
Medicare/Medicaid:	1
Facility name:	JOHN A LINFOOT MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0694134
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	350 30TH STREET SUITE 208
Phone num:	5107634807
Termination reason:	00
Term Date:	20080408
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070139550

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AW285			SRHO20070145907
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
5865	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	20060712	
	Medicare/Medicaid:	1	
	Facility name:	DAVID A PFISTER	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19920901	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0866818	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	350 30TH STREET	
	Phone num:	5104523375	
	Termination reason:	00	
	Term Date:	20080822	
	Purpose of action:	2	
	Provider control:	10	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070145907	

286			SRDCCA200737085
West	EDR ID:	SRDCCA200737085	Daycare
1-2 mi	Facility number:	13418912	
5902	Facility name:	"EMMERSON, PEARLIE "	
Lower	Facility eval. code:	0203	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	810	
	Facility status code:	03	
	Address:	1017 WILLOW ST.	
	City:	OAKLAND	

State:	CA
Zip:	94607
Alt. address:	1017 WILLOW ST.
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"EMMERSON, PEARLIE "
Licensee type:	A
License effective date:	60823
License expiration date:	Not Reported
License issue date:	060823
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	060622
Facility closed date:	Not Reported
Mailing address:	1017 WILLOW ST.
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"EMMERSON, PEARLIE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5103029324

BB287
ENE
1-2 mi
5909
Higher

SRDCCA200701176
Daycare

EDR ID:	SRDCCA200701176
Facility number:	15650019
Facility name:	CLARENCE ANDERSON YOUTH HOME
Facility eval. code:	1507
Facility office number:	14
Facility county number:	01
Facility type code:	730
Facility status code:	03
Address:	114 HAMILTON PLACE
City:	OAKLAND
State:	CA
Zip:	94612
Alt. address:	112 HAMILTON PLACE
City:	OAKLAND
State:	CA
Zip:	94612
Facility investor:	"GAY AND LESBIAN ADOLESCENT SOCIAL SERVICES, INC. "
Licensee type:	C
License effective date:	40414
License expiration date:	Not Reported
License issue date:	040414
Program type:	LICENSED TO SERVE AGES 6 THROUGH 17. ALL MUST BE AMBULATORY.
Original app. received date:	031017
Facility closed date:	Not Reported
Mailing address:	650 N. ROBERTSON BLVD.
Mailing city:	WEST HOLLOYWOOD
Mailing state:	CA
Mailing zip:	90069
Contact person:	"NAPOLITANO, BRIAN "

Facility capacity:	9	
Type of clients served:	950	
Facility phone:	5104525437	

BC288 SRDCCA200750135
NNE
1-2 mi
5914
Higher Daycare

EDR ID:	SRDCCA200750135
Facility number:	10206137
Facility name:	OUSD - HARRIET TUBMAN
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	800-33RD STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	495 JONES AVE
City:	OAKLAND
State:	CA
Zip:	94603
Facility investor:	OAKLAND UNIFIED SCHOOL DISTRICT
Licensee type:	F
License effective date:	940211
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"AGES 2 TO FIRST GRADE ENTRY. HOURS: 7 A.M. TO 6 P.M. MONDAY THROUGH FRIDAY IN ROOMS #1,2 & 3. "
Original app. received date:	840208
Facility closed date:	Not Reported
Mailing address:	1025 SECOND AVENUE - ROOM 320
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	ROBINSON(AM)/FIGGS(PM)
Facility capacity:	72
Type of clients served:	950
Facility phone:	5105471832

BD289 SRHO20070138563
NE
1-2 mi
5930
Higher AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SILVESTRE LARSEN SPECTOR MDS
Intermediary/Carrier:	Not Reported

Medicaid number:	Not Reported
Partcipation date:	19930210
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0696084
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3043 SUMMIT STREEET
Phone num:	5104516840
Termination reason:	08
Term Date:	20040831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138563

BE290
ENE
1-2 mi
6069
Higher

SRDCCA200751926
Daycare

EDR ID:	SRDCCA200751926
Facility number:	13411232
Facility name:	FIRST STEP CHILDREN'S CENTER
Facility eval. code:	0207
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	111 FAIRMOUNT AVENUE
City:	OAKLAND
State:	CA
Zip:	94611
Alt. address:	111 FAIRMOUNT AVENUE
City:	OAKLAND
State:	CA
Zip:	94611
Facility investor:	ASSOCIATION FOR RETARDED CITIZENS- ALA. CO.
Licensee type:	C
License effective date:	951221
License expiration date:	Not Reported
License issue date:	951221
Program type:	"AGE RANGE: 2YRS TO FIRST GRADE ENTRY, 6 OF WHOM MAY BE NON-AMBULATORY.PRESCHOOL COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT: INFANT, CAPACITY 12. TOTAL CAPACITY 42. HOURS OF OPERATION: MONDAY THROUGH ""FRIDAY, 7:00 A.M. TO 6:00 P.M. IN 2 CLASSROOMS. "

Original app. received date:	951010
Facility closed date:	Not Reported
Mailing address:	575 INDEPENDENT
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94621
Contact person:	"WOLFE, DONNA "
Facility capacity:	30
Type of clients served:	950
Facility phone:	5102380880

BE291 SRDCCA200741799
ENE Daycare
1-2 mi
6069
Higher

EDR ID:	SRDCCA200741799
Facility number:	13411233
Facility name:	FIRST STEP CHILDREN'S CENTER
Facility eval. code:	0207
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	111 FAIRMOUNT AVENUE
City:	OAKLAND
State:	CA
Zip:	94611
Alt. address:	111 FAIRMOUNT AVENUE
City:	OAKLAND
State:	CA
Zip:	94611
Facility investor:	ASSOCIATION FOR RETARDED CITIZENS- ALA. CO.
Licensee type:	C
License effective date:	951221
License expiration date:	Not Reported
License issue date:	951221
Program type:	"AGE RANGE: BIRTH TO 2 YEARS, NO MORE THAN 6 OF WHOM MAY BE YOUNGER THAN 12 MONTHS. INFANT COMPONENT OF A COMBINATION CENTER. OTHER COMP.:PRESCHOOL CAPACITY 30. TOTAL CAPACITY 42.HOURS OF OPERATION: MONDAY ""THROUGH FRIDAY, 7:00 A.M. TO 6:00 P.M. IN 3 ROOMS. "
Original app. received date:	951010
Facility closed date:	Not Reported
Mailing address:	575 INDEPENDENT ROAD
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94621
Contact person:	"WOLFE, DONNA "
Facility capacity:	12
Type of clients served:	955
Facility phone:	5102380882

BA292 SRHO20070010192
NE AHA Hospitals
1-2 mi
6074
Higher

Hospital type:	03
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND

Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	20041112
Current survey date:	20051018
Medicare/Medicaid:	1
Facility name:	OAKLAND CARE CENTER
Intermediary/Carrier:	52280
Medicaid number:	ZZR05215I
Partcipation date:	19670101
Prior COO date:	Not Reported
Prior carrier:	51051
Provider ID:	055215
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3030 WEBSTER ST.
Phone num:	5104513856
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	03
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0098
Num cert beds:	0098
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010192

BA293
NE
1-2 mi
6074
Higher

SRHO20070142492
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	OAKLAND CARE CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930203

Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0860410
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3030 WEBSTER STREET
Phone num:	5104513856
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070142492

BA294
NE
1-2 mi
6074
Higher

SRNH20060900570
Nursing Homes

Provnum:	055215
Nursinghomename:	OAKLAND CARE CENTER
Street:	3030 WEBSTER ST.
City:	OAKLAND
State:	CA
Zipcode:	94609
Phonenumber:	5104513856
Dateoflastinspection:	20051013
Certifiednumberofbeds:	98
Totalnumberofresidents:	82
Percofoccupiedbeds:	84
Categorydescription:	Participating in Medicare and Medicaid
Typeofownership:	For profit - Corporation
Locatedwithinahospital:	NO
Multinursinghomeownership:	YES
Residentandfamilycouncils:	BOTH
Edr id:	SRNH20060900570

BC295
NNE
1-2 mi
6139
Higher

SRDCCA200718379
Daycare

EDR ID:	SRDCCA200718379
Facility number:	13416324
Facility name:	"GLADNEY-SHERRON, DEBORAH "
Facility eval. code:	0406
Facility office number:	02
Facility county number:	01

Facility type code:	810
Facility status code:	03
Address:	823 34TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	823 34TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"GLADNEY-SHERRON, DEBORAH "
Licensee type:	A
License effective date:	20605
License expiration date:	Not Reported
License issue date:	020605
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	020408
Facility closed date:	Not Reported
Mailing address:	823 34TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"GLADNEY-SHERRON, DEBORAH "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5105970425

296
ENE
1-2 mi
6195
Higher

SRDCCA200740606
Daycare

EDR ID:	SRDCCA200740606
Facility number:	13419111
Facility name:	"BAGAGA, NIAMA "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	296 LENOX AVE #4
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	296 LENOX AVE #4
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"BAGAGA, NIAMA "
Licensee type:	A
License effective date:	61212
License expiration date:	Not Reported
License issue date:	061212
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "

Original app. received date:	061120
Facility closed date:	Not Reported
Mailing address:	296 LENOX AVE #4
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"BAGAGA, NIAMA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108270338

BD297 SRHO20070137841
NE AHA Hospitals
1-2 mi
6207
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	HILLCARE HEALTH SERVICES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930204
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0684438
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3100 SUMMIT ST SO BLDG 2ND FL
Phone num:	5102875400
Termination reason:	08
Term Date:	19971222
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070137841

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BD298			SRHO20070141007
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
6207	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	1	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	19931022	
	Medicare/Medicaid:	1	
	Facility name:	NICHOLS INSTITUTE BAY AREA REG LAB	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19920901	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0723810	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	3100 SUMMIT STREET	
	Phone num:	5108354940	
	Termination reason:	01	
	Term Date:	19940630	
	Purpose of action:	1	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070141007	

BD299			SRHO20070008465
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	01	
6207	Owner date:	19800826	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	19821028	

Medicare/Medicaid:	1
Facility name:	SUMMIT MEDICAL
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19770812
Prior COO date:	Not Reported
Prior carrier:	00041
Provider ID:	052308
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK1
street address:	3100 SUMMIT STREET
Phone num:	4158354500
Termination reason:	01
Term Date:	19821101
Purpose of action:	2
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008465

BD300
NE
1-2 mi
6207
Higher

SRHO20070145076
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	CHILDREN'S HOSPITAL & RESEARCH CENTER AT
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950227
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0898270
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3100 SUMMIT STREET
Phone num:	5106554000
Termination reason:	00
Term Date:	20080524
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070145076

BD301 SRHO20070109984
NE AHA Hospitals
1-2 mi
6207
Higher

Hospital type:	01
Num of times COO:	01
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20060302
Medicare/Medicaid:	1
Facility name:	ABSMC SUMMIT CAMPUS D/P SNF
Intermediary/Carrier:	00454
Medicaid number:	Not Reported
Partcipation date:	19910304
Prior COO date:	20020701
Prior carrier:	00040
Provider ID:	555448
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3100 SUMMIT STREET
Phone num:	5106554000
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	05
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0071
Num cert beds:	0071
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070109984

BD302 SRHO20070008335
NE AHA Hospitals
1-2 mi
6207
Higher

Hospital type:	01
Num of times COO:	01
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20000317
Medicare/Medicaid:	1
Facility name:	BMA OF OAKLAND
Intermediary/Carrier:	00400
Medicaid number:	Not Reported
Partcipation date:	19760901
Prior COO date:	19760831
Prior carrier:	00040
Provider ID:	052534
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3100 SUMMIT STREET 6TH FLOOR
Phone num:	5108932060
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070008335

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BD303 NE 1-2 mi 6207 Higher			SRHO20070159280 AHA Hospitals
	Hospital type:	01	
	Num of times COO:	00	
	Owner date:	Not Reported	
	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	EAST BAY AIDS CENTER MEDICAL GROUP	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	20050920	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D1045661	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	3100 SUMMIT STREET 2ND FLOOR	
	Phone num:	5108698400	
	Termination reason:	00	
	Term Date:	20070919	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070159280	
BD304 NE 1-2 mi 6207 Higher			SRNH20060914307 Nursing Homes
	Provnum:	555448	
	Nursinghomename:	ABSMC SUMMIT CAMPUS D/P SNF	
	Street:	3100 SUMMIT STREET	
	City:	OAKLAND	
	State:	CA	
	Zipcode:	94609	
	Phonenumber:	5106554000	
	Dateoflastinspection:	20060223	
	Certifiednumberofbeds:	71	
	Totalnumberofresidents:	40	

Percofoccupiedbeds:	56	
Categorydescription:	Participating in Medicare Only	
Typeofownership:	Non profit - Corporation	
Locatedwithinahospital:	YES	
Multinursinghomeownership:	NO	
Residentandfamilycouncils:	NONE	
Edr id:	SRNH20060914307	

NA
SSW
1-2 mi
6277
NA

CUSA136129
FED_LAND

Name:	Alameda Naval Air Station (Closed)
Feature:	Navy DOD
URL:	Not Reported
Bureau:	DOD
State:	CA
Is DOD?:	Yes

BF305
NE
1-2 mi
6295
Higher

SRHO20070010549
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19860124
Medicare/Medicaid:	1
Facility name:	HOME CALLS HOME HEALTH AGENCY
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19860124
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	057730
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3229 ELM STREET
Phone num:	4156526161
Termination reason:	04
Term Date:	19921101
Purpose of action:	1
Provider control:	03
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported

Accred Org:	0	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSOTHER	
Edr id:	SRHO20070010549	

BF306 SRHO20070138434
NE AHA Hospitals
1-2 mi
6316
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SURGICAL ONCOLOGY ASSOCIATES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930208
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0694522
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3232 ELM ST
Phone num:	5105475223
Termination reason:	08
Term Date:	20020831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138434

BF307 SRHO20070155714
NE AHA Hospitals
1-2 mi
6316
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported

City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ALBERTINE OMANI MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20000928
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0978599
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3232 ELM STREET SUITE B
Phone num:	5106533335
Termination reason:	08
Term Date:	20040927
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070155714

BF308
NE
1-2 mi
6316
Higher

SRHO20070152252
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	EAST BAY PERINATAL MEDICAL ASSOCIATES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported

Partcipation date:	19981218
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0955145
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3232 ELM ST STE B
Phone num:	5104441544
Termination reason:	00
Term Date:	20070731
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070152252

BG309
NE
1-2 mi
6353
Higher

SRCL20051000775
Colleges

Unitid:	122296
Instnm:	SAMUEL MERRITT COLLEGE
Addr:	370 HAWTHORNE AVE
City:	OAKLAND
Stabbr:	CA
Zip:	94609
Zip4:	Not Reported
Unk:	Not Reported
Fips:	094609
Oberge:	8
Chfnm:	SHARON DIAZ
Chftitle:	PRESIDENT
Gentele:	5108696511
Fintele:	5108696131
Admtele:	8006076377
Ein:	942992642
Duns:	606136778
Opeid:	701200
Opeflag:	1
Webaddr:	www.samuelmerritt.edu
Sector:	2
Iclevel:	1
Control:	2
Hloffer:	9
Ugoffer:	1

Groffer:	1
Fpoffer:	1
Hdegoffer:	11
Deggrant:	1
Hbcu:	2
Hospital:	2
Medical:	2
Tribal:	2
Carnegie:	53
Locale:	1
Openpubl:	1
Act:	A
Newid:	-2
Deathyr:	-2
Closedat:	-2
Cyactive:	1
Postsec:	1
Pseflag:	1
Pset4flg:	1
Rptmth:	1
Fte:	912
Enrtot:	1008
Edr id:	SRCL20051000775

BF310 — SRHO20070148048
NE — AHA Hospitals
1-2 mi
6392
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	KIMBERLY HICKS MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960930
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0920342
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3317 ELM STREET SUITE 102
Phone num:	5109861900
Termination reason:	00
Term Date:	20080929
Purpose of action:	Not Reported
Provider control:	04

Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070148048

BF311
NE
1-2 mi
6412
Higher

SRHO20070143780
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	RONALD P GRUBER MD A MED CORP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930819
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0875246
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3318 ELM ST
Phone num:	5106549222
Termination reason:	00
Term Date:	20070818
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA

Edr id: SRHO20070143780

BG312 SRHO20070137720
NE AHA Hospitals
1-2 mi
6444
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	05D0602195
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	THOMAS LEE HAMBRICK MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921215
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0683945
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	365 HAWTHORNE AVENUE, SUITE 301
Phone num:	5102720501
Termination reason:	01
Term Date:	19980101
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070137720

BG313 SRHO20070133393
NE AHA Hospitals
1-2 mi
6444
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000

Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	OB/GYN PARTNERS FOR HEALTH MED GRP,INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921221
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602195
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	365 HAWTHORNE AVE, SUITE 301
Phone num:	5108931700
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133393

BG314
NE
1-2 mi
6444
Higher

SRHO20070144965
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	05D0602195
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	HON FONG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930805
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0874322

Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	365 HAWTHORNE AVEUNE, SUITE 301
Phone num:	5106559003
Termination reason:	01
Term Date:	19980101
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070144965

BG315
NE
1-2 mi
6444
Higher

SRHO20070139543
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	NELSON ROBERT N MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950607
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0692770
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	365 HAWTHORNE AVENUE SUITE 301
Phone num:	5108931700
Termination reason:	08
Term Date:	20040831
Purpose of action:	Not Reported

Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070139543

BG316
NE
1-2 mi
6444
Higher

SRHO20070147090
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20020228
Medicare/Medicaid:	1
Facility name:	OAKLAND EAST BAY PATHOLOGY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960820
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0918766
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	365 HAWTHORNE AVE, # 102
Phone num:	5108327888
Termination reason:	12
Term Date:	20030707
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000

Source: US_HOSPITAL_POSCLIA
Edr id: SRHO20070147090

BH317 SRDCCA200712658
West EDR ID: SRDCCA200712658 Daycare
1-2 mi Facility number: 13415335
6452 Facility name: "JONES, SHEMEKA "
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 700 WILLOW STREET #11
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 700 WILLOW STREET #11
City: OAKLAND
State: CA
Zip: 94607
Facility investor: "JONES, SHEMEKA "
Licensee type: A
License effective date: 927
License expiration date: Not Reported
License issue date: 000927
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 000825
Facility closed date: Not Reported
Mailing address: 700 WILLOW STREET #11
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94607
Contact person: "JONES, SHEMEKA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5102720447

BH318 SRDCCA200719338
West EDR ID: SRDCCA200719338 Daycare
1-2 mi Facility number: 13416782
6452 Facility name: "VALDEZ-TAYLOR, GLORIA "
Lower Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 700 WILLOW STREET #14
City: OAKLAND
State: CA
Zip: 94607
Alt. address: 700 WILLOW STREET #14

City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"VALDEZ-TAYLOR, GLORIA "
Licensee type:	A
License effective date:	30224
License expiration date:	Not Reported
License issue date:	030224
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	021230
Facility closed date:	Not Reported
Mailing address:	700 WILLOW STREET #14
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"VALDEZ-TAYLOR, GLORIA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108354021

BF319
NE
1-2 mi
6546
Higher

SRHO20070133122
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	MELVIN S DONALDSON MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921217
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602077
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	461 34TH STREET
Phone num:	5106545855
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609

Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133122

BF320
NE
1-2 mi
6546
Higher

SRHO20070147195
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	MAX M BYNUM MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930524
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0870383
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	461 34TH STREET
Phone num:	5106554212
Termination reason:	04
Term Date:	19940630
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147195

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BF321			SRHO20070133126
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
6546	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	H E MILLIKEN MD	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930401	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0602124	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	461 34TH	
	Phone num:	5106555336	
	Termination reason:	04	
	Term Date:	20000323	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070133126	

BF322			SRHO20070134185
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
6581	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	20060608	

Medicare/Medicaid:	1
Facility name:	AFFILIATES IN DERMATOLOGY MED GRP INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0597288
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	460 34TH STREET
Phone num:	5106528091
Termination reason:	00
Term Date:	20080627
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134185

BG323
NE
1-2 mi
6642
Higher

SRHO20070140939
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19941207
Medicare/Medicaid:	1
Facility name:	ROBERT S SAFRAN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0716312
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	444 34TH STREET
Phone num:	5104208114
Termination reason:	08
Term Date:	20021206
Purpose of action:	1
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070140939

BG324
NE
1-2 mi
6661
Higher

SRHO20070141669
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19951222
Medicare/Medicaid:	1
Facility name:	ROBERT O TAYLOR MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0718320
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	440 34TH STREET
Phone num:	5104208111
Termination reason:	12
Term Date:	19980225
Purpose of action:	1
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141669

BI325 SRHO20070139130
NE AHA Hospitals
1-2 mi
6753
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SUMMIT MEDICAL CENTER NUCLEAR MEDICINE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930602
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0691784
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 HAWTHORNE AVE
Phone num:	5104206042
Termination reason:	33
Term Date:	19960831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070139130

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
BI326			SRHO20070140667
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
6753	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	ALTA BATES SUMMIT MED CTR-PULM LAB	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930301	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0707775	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	350 HAWTHORNE AVE	
	Phone num:	5104206044	
	Termination reason:	00	
	Term Date:	20080916	
	Purpose of action:	Not Reported	
	Provider control:	02	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070140667	

BI327			SRHO20070133553
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
6753	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	20021001	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	SUMMIT MEDICAL CENTER LABORATORY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921223
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602367
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 HAWTHORNE AVE
Phone num:	5104206060
Termination reason:	00
Term Date:	20070208
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133553

BI328
NE
1-2 mi
6753
Higher

SRHO20070140809
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SUMMIT MED CENTER BEDSIDE TESTING LAB
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930301
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0707874
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	350 HAWTHORNE AVE
Phone num:	5104206067
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070140809

BI329 SRHO20070007595
NE AHA Hospitals
1-2 mi
6753
Higher

Hospital type:	01
Num of times COO:	01
Owner date:	20020701
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19931123
Medicare/Medicaid:	1
Facility name:	ALTA BATES SUMMIT MEDICAL CENTER--SUMMIT CAMPUS
Intermediary/Carrier:	00454
Medicaid number:	Not Reported
Partcipation date:	19660701
Prior COO date:	Not Reported
Prior carrier:	00040
Provider ID:	050043
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	350 HAWTHORNE AVENUE
Phone num:	5106554000
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	5
Provider control:	03
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	19901122
Accred expire date:	19931122
Accred Org:	1
Num beds:	0569
Num cert beds:	0569
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070007595

BI330 SRHO20070138310
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DR WILLIAM R CRAIN
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950707
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0695545
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER STREET STE 509
Phone num:	5104524900
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138310

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

BI331 SRHO20070142739
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20041018
Medicare/Medicaid:	1
Facility name:	NORCAL UROLOGY MEDICAL GROUP, INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0856715
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3300 WEBSTER ST, #710
Phone num:	5104655800
Termination reason:	00
Term Date:	20070313
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070142739

BI332 SRHO20070134361
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	RICHARD B LOCKETT MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930510
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602673
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER STREET SUITE 500
Phone num:	5104524430
Termination reason:	08
Term Date:	19930512
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134361

BI333
NE
1-2 mi
6797
Higher

SRHO20070152140
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20040308
Medicare/Medicaid:	1
Facility name:	KATHRYN P RODAN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990409
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0959380
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3300 WEBSTER ST STE 1106
Phone num:	5105492707
Termination reason:	01
Term Date:	20040406
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070152140

BI334
NE
1-2 mi
6797
Higher

SRHO20070150325
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20030729
Medicare/Medicaid:	1
Facility name:	EAST BAY PULMONARY LAB MED GRP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19970717
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0930789
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3300 WEBSTER STREET, #304
Phone num:	5107639742
Termination reason:	01
Term Date:	20030730
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070150325

BI335 SRHO20070133244
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JOSEPH W CLIFT MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19961017
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602141
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER ST SUITE 702
Phone num:	5108320147
Termination reason:	08
Term Date:	20040831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133244

BI336 SRHO20070133111
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	WILEY DARBY AND HARGROVE P C
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921217
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602056
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER STREET SUITE 312
Phone num:	5104443297
Termination reason:	08
Term Date:	19960831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133111

BI337 SRHO20070133260
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	JOHN N CHOKATOS MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19941117
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602168
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER ST SUITE 501
Phone num:	5108352520
Termination reason:	08
Term Date:	20031031
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133260

BI338
NE
1-2 mi
6797
Higher

SRHO20070157937
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	BONE & JOINT MEDICAL ASSOCIATES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20040123
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1021521
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER ST 12TH FL SUITE 1202
Phone num:	5108363300
Termination reason:	08
Term Date:	20060122
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157937

BI339 SRHO20070133127
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	LAWRENCE I SCHWARTZ MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930408
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602127
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M1
street address:	3300 WEBSTER STREET, SUITE 501
Phone num:	5106588841
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94619
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133127

BI340
NE
1-2 mi
6797
Higher

SRHO20070139908
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ZEALOUS WILEY MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930115
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0718741
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER ST STE 312
Phone num:	5104443297
Termination reason:	08
Term Date:	19960831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070139908

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BI341			SRHO20070149558
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
6797	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	05D0944000	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	OAKLAND PERITONEAL DIALYSIS	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19980820	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0950232	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	3300 WEBSTER STREET SUITE 306	
	Phone num:	5102670203	
	Termination reason:	16	
	Term Date:	20020819	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070149558	

BI342			SRHO20070161026
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
6797	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	

Medicare/Medicaid:	Not Reported
Facility name:	WEBSTER SURGERY CENTER LP
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20030218
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1009511
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER STREET SUITE 1010
Phone num:	5104511875
Termination reason:	00
Term Date:	20070217
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070161026

BI343
NE
1-2 mi
6797
Higher

SRHO20070147555
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	KENYA NUMAN, MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19961108
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0921938
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER ST, #803
Phone num:	5104331940
Termination reason:	08
Term Date:	19961108
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147555

BI344 SRHO20070133258
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JOHN S HEGE MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19921221
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602159
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER STREET #602
Phone num:	5108345427
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133258

BI345 SRHO20070010624
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19970318
Medicare/Medicaid:	1
Facility name:	HEALTHSOUTH REHAB CENTER OF OAKLAND
Intermediary/Carrier:	00010
Medicaid number:	Not Reported
Partcipation date:	19970318
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	056819
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK1
street address:	3300 WEBSTER STREET SUITE 410
Phone num:	5104512040
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	1
Provider control:	06
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010624

BI346 SRHO20070133261
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	05D0856715
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	JAMES K MOONEY MD INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950607
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602177
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER ST
Phone num:	5108392650
Termination reason:	01
Term Date:	19960903
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133261

BI347 SRHO20070005557
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	01
Owner date:	20000701
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20030128

Medicare/Medicaid:	1
Facility name:	WEBSTER SURGERY CENTER
Intermediary/Carrier:	00542
Medicaid number:	Not Reported
Partcipation date:	19990825
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05C0001450
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3300 WEBSTER STREET, SUITE 1010
Phone num:	5104516952
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070005557

BI348
NE
1-2 mi
6797
Higher

SRHO20070150065
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DOREEN LEIGHTON, MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19951127
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0909134
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3300 WEBSTER #1105
Phone num:	5102868190
Termination reason:	08
Term Date:	19991126
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070150065

BI349 SRHO20070153859
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	EAST BAY WOMEN'S HEALTH INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19980330
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0943592
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3300 WEBSTER STREET, SUITE 1200
Phone num:	5106530846
Termination reason:	00
Term Date:	20080329
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070153859

BI350 SRHO20070157573
NE AHA Hospitals
1-2 mi
6797
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20060330
Medicare/Medicaid:	1
Facility name:	KHOSROW MEHRANY MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20050224
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1037428
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3300 WEBSTER ST SUITE 1106
Phone num:	5107632662
Termination reason:	01
Term Date:	20060811
Purpose of action:	1
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157573

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation | **Site** | **EDR ID / Database**

351
West
1-2 mi
6815
Lower

SRDCCA200724598
Daycare

EDR ID:	SRDCCA200724598
Facility number:	13417599
Facility name:	"CORBETT, GERTRUDE "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1796 9TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1796 9TH STREET
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"CORBETT, GERTRUDE "
Licensee type:	A
License effective date:	40506
License expiration date:	Not Reported
License issue date:	040506
Program type:	INACTIVE STATUS: EFFECTIVE 01/01/06 - ENDING 12/31/06
Original app. received date:	040420
Facility closed date:	Not Reported
Mailing address:	1796 9TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"CORBETT, GERTRUDE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5104442907

352
NE
1-2 mi
6898
Higher

SRHO20070133125
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DEAN GOLDBERG MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930104
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602110
Record Status:	A
Region code:	09

Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 34TH
Phone num:	5105476554
Termination reason:	04
Term Date:	19940304
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133125

BI353
NE
1-2 mi
6903
Higher

SRHO20070133392
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	MILES E NUDDLEMAN MD
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930430
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602193
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3324 WEBSTER STREET
Phone num:	5108930142
Termination reason:	17
Term Date:	20000411
Purpose of action:	Not Reported
Provider control:	04
Zip:	94609

Fips state:	06	
Fips cnty:	001	
SSA MSA:	418	
SSA MSA size code:	B	
Date accredited:	Not Reported	
Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070133392	

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354 SRPU20071005757
SE Ncessch: 060008810734 Public Schools
1-2 mi Schname05: OAKLAND/ALAMEDA ROP
7033 Mstreet05: 1025 2ND AVE., P-14
Higher Mcity05: OAKLAND
Mstate05: CA
Mzip05: 94606
Mzip405: Not Reported
Member05: -1
Phone05: (510) 337-7093
Locale05: 1
Type05: 3
Level05: 3
Gslo05: 09
Gshi05: 12
Edr id: SRPU20071005757

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355 SRDCCA200713231
NNE EDR ID: SRDCCA200713231 Daycare
1-2 mi Facility number: 13415078
7115 Facility name: "CORBIN, CAROLYN "
Higher Facility eval. code: 0406
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 859 - 37TH STREET
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 859 - 37TH STREET
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "CORBIN, CAROLYN "
Licensee type: A
License effective date: 725
License expiration date: Not Reported
License issue date: 000725
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "

Original app. received date:	000418	
Facility closed date:	Not Reported	
Mailing address:	859 - 37TH STREET	
Mailing city:	OAKLAND	
Mailing state:	CA	
Mailing zip:	94608	
Contact person:	"CORBIN, CAROLYN "	
Facility capacity:	8	
Type of clients served:	960	
Facility phone:	5106530795	

BJ356 SRPU20071012628
ESE Public Schools
1-2 mi
7161
Higher

Ncessch:	062805004255
Schname05:	DEWEY ACADEMY SENIOR HIGH
Mstreet05:	1111 2ND AVE.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94606
Mzip405:	Not Reported
Member05:	280
Phone05:	(510) 879-3100
Locale05:	1
Type05:	4
Level05:	3
Gslo05:	09
Gshi05:	12
Edr id:	SRPU20071012628

357 SRDCCA200729998
North Daycare
1-2 mi
7164
Higher

EDR ID:	SRDCCA200729998
Facility number:	13418298
Facility name:	"SMITH, RENEE "
Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	967 37TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	967 37TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"SMITH, RENEE "
Licensee type:	A
License effective date:	50908
License expiration date:	Not Reported
License issue date:	050908
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	050509

Facility closed date:	Not Reported
Mailing address:	967 37TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"SMITH, RENEE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5106546223

358 SRHO20070138805
ESE AHA Hospitals
1-2 mi
7181
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PHUONG DUC DANG
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19950707
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0690579
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	145 INTERNATIONAL BLVD
Phone num:	5104654422
Termination reason:	00
Term Date:	20080531
Purpose of action:	Not Reported
Provider control:	04
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138805

359 SRDCCA200728523
NNE EDR ID: SRDCCA200728523 Daycare
1-2 mi Facility number: 13417997
7245 Facility name: "NEWTON, JEAN & JACKSON, MARTINIQUE "
Higher Facility eval. code: 0202
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 3710 WEST STREET
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 3710 WEST STREET
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "NEWTON, JEAN & JACKSON, MARTINIQUE "
Licensee type: A
License effective date: 41123
License expiration date: Not Reported
License issue date: 041123
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 040916
Facility closed date: Not Reported
Mailing address: 3710 WEST STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "NEWTON, J. & JACKSON, M. "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106019424

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360 SRDCCA200719134
NE EDR ID: SRDCCA200719134 Daycare
1-2 mi Facility number: 13416761
7326 Facility name: "JOHNSON, JANICE "
Higher Facility eval. code: 0404
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 454 - 36TH STREET #4
City: OAKLAND
State: CA
Zip: 94609
Alt. address: 454 - 36TH STREET #4
City: OAKLAND
State: CA
Zip: 94609
Facility investor: "JOHNSON, JANICE "
Licensee type: A

License effective date: 30520
License expiration date: Not Reported
License issue date: 030520
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 021209
Facility closed date: Not Reported
Mailing address: 454 - 36TH STREET #4
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: "JOHNSON, JANICE "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106531337

361
NNE
1-2 mi
7406
Higher

SRDCCA200723764
Daycare

EDR ID: SRDCCA200723764
Facility number: 13417188
Facility name: "JONES, TANYA "
Facility eval. code: 0404
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 545 - 37TH STREET
City: OAKLAND
State: CA
Zip: 94609
Alt. address: 545 - 37TH STREET
City: OAKLAND
State: CA
Zip: 94609
Facility investor: "JONES, TANYA "
Licensee type: A
License effective date: 30807
License expiration date: Not Reported
License issue date: 030807
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 030801
Facility closed date: Not Reported
Mailing address: 545 - 37TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: "JONES, TANYA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5107986048

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

BK362 SRDCCA200744937
SE EDR ID: SRDCCA200744937 Daycare
1-2 mi Facility number: 10206033
7475 Facility name: OUSD - CENTRO INFANTIL DE LA RAZA ANNEX
Higher Facility eval. code: 0304
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 314 EAST 10TH STREET
City: OAKLAND
State: CA
Zip: 94606
Alt. address: 495 JONES AVE
City: OAKLAND
State: CA
Zip: 94603
Facility investor: OAKLAND UNIFIED SCHOOL DISTRICT
Licensee type: F
License effective date: 940405
License expiration date: Not Reported
License issue date: Not Reported
Program type: "AGES 2 YEARS TO FIRST GRADE ENTRY.HOURS: MONDAY-FRIDAY, 7AM TO 6PM OPERATING IN ONE ROOM OF THE PORTABLE AND THE MAIN BUILDING. LICENSE SUBJECT TO A WAIVER TO BE POSTED.
"
Original app. received date: 831020
Facility closed date: Not Reported
Mailing address: 1025 2ND AVENUE - ROOM 320
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94606
Contact person: "ROTHWELL, MARY "
Facility capacity: 72
Type of clients served: 950
Facility phone: 5108790818

BK363 SRDCCA200750073
SE EDR ID: SRDCCA200750073 Daycare
1-2 mi Facility number: 10206138
7475 Facility name: OUSD - YUK YAU ANNEX
Higher Facility eval. code: 0304
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 314 EAST 10TH STREET
City: OAKLAND
State: CA
Zip: 94606
Alt. address: 495 JONES AVE
City: OAKLAND
State: CA
Zip: 94603
Facility investor: OAKLAND UNIFIED SCHOOL DISTRICT DEPT. OF CHILD DEV

Licensee type:	F
License effective date:	940405
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"AGES 2 YEARS TO FIRST GRADE ENTRY. OPERATING IN 3 ROOMS AND THE MULTI-PURPOSE ROOM. HOURS OF OPERATION: MONDAY-FRIDAY, 7:30AM TO 6:00PM. "
Original app. received date:	840208
Facility closed date:	Not Reported
Mailing address:	1025 SECOND AVENUE - ROOM 320
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"CHEN, ALISON "
Facility capacity:	79
Type of clients served:	950
Facility phone:	5108324388

BK364 — SRPU20071009665
SE — Public Schools
1-2 mi
7475
Higher

Ncessch:	062805011350
Schname05:	METWEST HIGH
Mstreet05:	314 EAST 10TH STREET, HUERTA H
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94606
Mzip405:	Not Reported
Member05:	131
Phone05:	(510) 879-0235
Locale05:	1
Type05:	1
Level05:	4
Gslo05:	KG
Gshi05:	12
Edr id:	SRPU20071009665

BK365 — SRPU20071013354
SE — Public Schools
1-2 mi
7486
Higher

Ncessch:	062805004284
Schname05:	LA ESCUELITA ELEMENTARY
Mstreet05:	1100 THIRD AVE.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94606
Mzip405:	2227
Member05:	239
Phone05:	(510) 879-1210
Locale05:	1
Type05:	1
Level05:	1
Gslo05:	KG
Gshi05:	05
Edr id:	SRPU20071013354

BJ366 SRDCCA200705506
ESE EDR ID: SRDCCA200705506 Daycare
1-2 mi Facility number: 10216609
7535 Facility name: "DUNSON, TOSHA "
Higher Facility eval. code: 0304
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1175 - 3RD AVENUE
City: OAKLAND
State: CA
Zip: 94606
Alt. address: 1175 - 3RD AVENUE
City: OAKLAND
State: CA
Zip: 94606
Facility investor: "DUNSON, TOSHA "
Licensee type: A
License effective date: 950307
License expiration date: Not Reported
License issue date: 950307
Program type: "MAXIMUM CAPACITY: 6 CHILDREN, INCLUDING LICENSEE'S CHILDREN UNDER 10 YEARS OF AGE WHO RESIDE IN THE HOME, WITH NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY (INFANT MEANS A CHILD UNDER 2 YEARS OLD). "
Original app. received date: 950109
Facility closed date: Not Reported
Mailing address: 1175 - 3RD AVENUE
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94606
Contact person: "DUNSON, TOSHA "
Facility capacity: 6
Type of clients served: 960
Facility phone: 5108366131

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367 SRCL20051000415
SE Unitid: 121178 Colleges
1-2 mi Instnm: PERALTA COMMUNITY COLLEGE SYSTEM OFFICE
7562 Addr: 333 E EIGHTH ST
Lower City: OAKLAND
Stabbr: CA
Zip: 94606
Zip4: Not Reported
Unk: Not Reported
Fips: 094606
Oberge: 8
Chfnm: Elihu Harris
Chftitle: Chancellor
Gentele: 5104667200
Fintele: 5104667366
Admtele: 5104667366
Ein: 941590799
Duns: 76567718
Opeid: 126500

Opeflag:	2
Webaddr:	www.peralta.cc.ca.us
Sector:	0
Iclevel:	2
Control:	1
Hloffer:	4
Ugoffer:	1
Groffer:	2
Fpoffer:	2
Hdegoffer:	40
Deggrant:	1
Hbcu:	2
Hospital:	2
Medical:	-2
Tribal:	2
Carnegie:	-3
Locale:	1
Openpubl:	1
Act:	A
Newid:	-2
Deathyr:	-2
Closedat:	-2
Cyactive:	1
Postsec:	1
Pseflag:	1
Pset4flg:	1
Rptmth:	-2
Fte:	Not Reported
Enrtot:	Not Reported
Edr id:	SRCL20051000415

BL368
ENE
1-2 mi
7577
Higher

SRDCCA200704722
Daycare

EDR ID:	SRDCCA200704722
Facility number:	10213905
Facility name:	"MCMULLEN, DOROTHY & FRAZIER, DOROTHY "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	380 VERNON STREET
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	380 VERNON STREET
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"MCMULLEN, DOROTHY & FRAZIER, DOROTHY "
Licensee type:	A
License effective date:	940613
License expiration date:	Not Reported
License issue date:	910613
Program type:	"MAXIMUM CAPACITY: 12 CHILDREN WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED. "

Original app. received date:	910521
Facility closed date:	Not Reported
Mailing address:	380 VERNON STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"MCMULLEN, DOROTHY "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5108326383

BM369 SRHO20070157844
NE AHA Hospitals
1-2 mi
7620
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	TPMG MOSSWOOD LAB
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20040813
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1029322
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3505 BROADWAY
Phone num:	5107526083
Termination reason:	00
Term Date:	20080812
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157844

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BM370			SRHO20070157670
NE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
7620	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	KAISER PERMANENTE DIVISION OF RESEARCH	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	20031210	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D1020064	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	3505 BROADWAY	
	Phone num:	5108913400	
	Termination reason:	00	
	Term Date:	20071209	
	Purpose of action:	Not Reported	
	Provider control:	02	
	Zip:	94611	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070157670	

BM371			SRCL20051000386
NE	Unitid:	118994	Colleges
1-2 mi	Instnm:	MOLER BARBER COLLEGE	
7620	Addr:	3500 BROADWAY	
Higher	City:	OAKLAND	
	Stabbr:	CA	
	Zip:	94611	
	Zip4:	5729	
	Unk:	Not Reported	
	Fips:	094611	
	Oberge:	8	

Chfnm:	ELSIA CURRY
Chftitle:	OWNER/DIRECTOR
Gentele:	5106524177
Fintele:	5106524177
Admtele:	5106524177
Ein:	942546511
Duns:	70148200
Opeid:	2185800
Opeflag:	1
Webaddr:	-1
Sector:	9
Iclevel:	3
Control:	3
Hloffer:	2
Ugoffer:	1
Groffer:	2
Fpoffer:	2
Hdegoffer:	0
Deggrant:	2
Hbcu:	2
Hospital:	2
Medical:	2
Tribal:	2
Carnegie:	-3
Locale:	1
Openpubl:	1
Act:	A
Newid:	-2
Deathyr:	-2
Closedat:	-2
Cyactive:	1
Postsec:	1
Pseflag:	1
Pset4flg:	1
Rptmth:	2
Fte:	27
Enrtot:	27
Edr id:	SRCL20051000386

BL372
ENE
1-2 mi
7630
Higher

SRDCCA200751797
Daycare

EDR ID:	SRDCCA200751797
Facility number:	13411080
Facility name:	"BROADWAY CHILDREN'S SCHOOL OF OAKLAND, INC. "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	394 ADAMS STREET
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	394 ADAMS STREET
City:	OAKLAND
State:	CA

Zip:	94610
Facility investor:	"BROADWAY CHILDREN'S SCHOOL OF OAKLAND, INC. "
Licensee type:	C
License effective date:	950828
License expiration date:	Not Reported
License issue date:	950828
Program type:	"AGES 18MOS. TO FIRST GRADE ENTRY, NO MORE THAN 20 OF WHOM MAY PARTICIPATE IN THE TODDLER OPTION. HOURS OF OPERATION: MON. - FRI. 9:00AM - 3:00PM IN 6 CLASSROOM AREAS ON THE FIRST FLOOR. "
Original app. received date:	950706
Facility closed date:	Not Reported
Mailing address:	394 ADAMS STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"KENWORTHY, KATHY "
Facility capacity:	42
Type of clients served:	950
Facility phone:	5107639337

373
ENE
1-2 mi
7673
Higher

SRDCCA200708358
Daycare

EDR ID:	SRDCCA200708358
Facility number:	13411582
Facility name:	"HERNANDEZ, LINDA "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	397 JAYNE
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	397 JAYNE
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"HERNANDEZ, LINDA "
Licensee type:	A
License effective date:	960926
License expiration date:	Not Reported
License issue date:	960926
Program type:	"MAXIMUM CAPACITY: 12 CHILDREN WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD "CONSENT IS REQUIRED.
Original app. received date:	960522
Facility closed date:	Not Reported
Mailing address:	397 JAYNE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"HERNANDEZ, LINDA "
Facility capacity:	14

Type of clients served:	960	
Facility phone:	5108919409	

NA
NW
1-2 mi
7690
NA

CUSA136080
FED_LAND

Name:	Oakland Army Base (Closed)
Feature:	Army DOD
URL:	Not Reported
Bureau:	DOD
State:	CA
Is DOD?:	Yes

BL374
ENE
1-2 mi
7740
Higher

SRDCCA200733091
Daycare

EDR ID:	SRDCCA200733091
Facility number:	13418589
Facility name:	"JOHNSON, LASHANYA R "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	424 ORANGE STREET #306
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	424 ORANGE STREET #306
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"JOHNSON, LASHANYA R "
Licensee type:	A
License effective date:	60420
License expiration date:	Not Reported
License issue date:	060420
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	060207
Facility closed date:	Not Reported
Mailing address:	424 ORANGE STREET #306
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"JOHNSON, LASHANYA R "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108930676

BN375
ENE
1-2 mi
7763
Higher

SRDCCA200744927
Daycare

EDR ID:	SRDCCA200744927
Facility number:	10205169
Facility name:	GAN AVRAHAM NURSERY SCHOOL
Facility eval. code:	AU03
Facility office number:	02

Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	330 EUCLID
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	330 EUCLID AVENUE
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	TEMPLE BETH ABRAHAM.
Licensee type:	C
License effective date:	940610
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	2 YRS. TO 1ST GRADE ENTRY. OPERATING MON.- THURS. 8A.M.- 6 P.M. & FRI. 8A.M.- 3:30 P.M. IN ROOMS 1 THROUGH 10. CAPACITY IS REDUCED TO 16 CHILDREN TUES. & THURS. 4 P.M.- 6 P.M.SEPT. THROUGH MAY WHENOPERATING IN RM.1/10 ONLY. LICENSE SUBJECT TO WAIVER TO BE POSTED.
Original app. received date:	801208
Facility closed date:	Not Reported
Mailing address:	336 EUCLID AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	SIVER WENDY
Facility capacity:	48
Type of clients served:	950
Facility phone:	5107637528

376
South
1-2 mi
7877
Lower

SRDCCA200753307
Daycare

EDR ID:	SRDCCA200753307
Facility number:	13417441
Facility name:	SUGAR AND SPICE
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	2238 MARINER SQUARE DRIVE
City:	ALAMEDA
State:	CA
Zip:	94501
Alt. address:	2238 MARINER SQUARE DRIVE
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	"SUGAR AND SPICE CENTER FOR CHILDREN, INC. "
Licensee type:	C
License effective date:	40121
License expiration date:	Not Reported
License issue date:	040121
Program type:	AGES 2 TO FIRST GRADE ENTRY. OPERATING MONDAY THROUGH FRIDAY 7:30 AM TO 6 PM IN ONE PORTABLE BUILDING. LICENSE SUBJECT TO TWO WAIVERS TO BE POSTED.

Original app. received date:	040109
Facility closed date:	Not Reported
Mailing address:	3600 MONTEREY BLVD.
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94619
Contact person:	CHRISTI WILLIAMS
Facility capacity:	40
Type of clients served:	950
Facility phone:	5108651055

377 SRHO20070164254
ESE AHA Hospitals
1-2 mi
7890
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SAV-ON PHARMACY # 7214
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20051129
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1048347
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	247 EAST 18 STREET
Phone num:	5102729042
Termination reason:	00
Term Date:	20071128
Purpose of action:	Not Reported
Provider control:	04
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070164254

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
378			SRDCCA200715690
NNE	EDR ID:	SRDCCA200715690	Daycare
1-2 mi	Facility number:	13416061	
7895	Facility name:	"HURT, JEANETTE "	
Higher	Facility eval. code:	0404	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	810	
	Facility status code:	03	
	Address:	701 APGAR STREET	
	City:	OAKLAND	
	State:	CA	
	Zip:	94609	
	Alt. address:	701 APGAR STREET	
	City:	OAKLAND	
	State:	CA	
	Zip:	94609	
	Facility investor:	"HURT, JEANETTE "	
	Licensee type:	A	
	License effective date:	11207	
	License expiration date:	Not Reported	
	License issue date:	011207	
	Program type:	"MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "	
	Original app. received date:	011106	
	Facility closed date:	Not Reported	
	Mailing address:	701 APGAR STREET	
	Mailing city:	OAKLAND	
	Mailing state:	CA	
	Mailing zip:	94609	
	Contact person:	"HURT, JEANETTE "	
	Facility capacity:	14	
	Type of clients served:	960	
	Facility phone:	5104200651	

379			SRDCCA200715814
ESE	EDR ID:	SRDCCA200715814	Daycare
1-2 mi	Facility number:	13416115	
7899	Facility name:	"ODOM, JEANNETTE "	
Higher	Facility eval. code:	0304	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	810	
	Facility status code:	03	
	Address:	166 ATHOL AVENUE #205	
	City:	OAKLAND	
	State:	CA	
	Zip:	94606	
	Alt. address:	166 ATHOL AVENUE #205	
	City:	OAKLAND	
	State:	CA	
	Zip:	94606	
	Facility investor:	"ODOM, JEANNETTE "	
	Licensee type:	A	

License effective date: 20227
License expiration date: Not Reported
License issue date: 020227
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED. "
Original app. received date: 011204
Facility closed date: Not Reported
Mailing address: 166 ATHOL AVENUE #205
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94606
Contact person: "YDOM, JEANETTE "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5104656112

BO380 SRDCCA200743825
SSW EDR ID: SRDCCA200743825 Daycare
1-2 mi Facility number: 13418969
7899 Facility name: "ISLAND HIGH SCHOOL, CAL-SAFE PROGRAM INFANT CTR. "
Lower Facility eval. code: 0103
Facility office number: 02
Facility county number: 01
Facility type code: 830
Facility status code: 03
Address: 250 SINGLETON ST.
City: ALAMEDA
State: CA
Zip: 94501
Alt. address: 250 SINGLETON ST.
City: ALAMEDA
State: CA
Zip: 94501
Facility investor: ALAMEDA UNIFIED SCHOOL DISTRICT
Licensee type: F
License effective date: 70109
License expiration date: Not Reported
License issue date: 070109
Program type: "AGES BIRTH TO TWO YEARS, INCLUDING A MAXIMUM OF 6 CRIB AGE CHILDREN. OPERATING MONDAY-FRIDAY, 8:30AM TO 3PM. LICENSE SUBJECT TO ONE WAIVER TO BE POSTED.
"
Original app. received date: 061214
Facility closed date: Not Reported
Mailing address: 250 SINGLETON ST.
Mailing city: ALAMEDA
Mailing state: CA
Mailing zip: 94501
Contact person: "HANSEN, DELINDA "
Facility capacity: 12
Type of clients served: 955
Facility phone: 5107484024

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

BO381 SRPU20071006188
SSW Ncessch: 060177000053 Public Schools
1-2 mi Schname05: GEORGE P. MILLER ELEMENTARY
7899 Mstreet05: 250 SINGLETON AVE.
Lower Mcity05: ALAMEDA
Mstate05: CA
Mzip05: 94501
Mzip405: 7238
Member05: 172
Phone05: (510) 748-4011
Locale05: 3
Type05: 1
Level05: 1
Gslo05: KG
Gshi05: 05
Edr id: SRPU20071006188

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382 SRDCCA200709591
NNE EDR ID: SRDCCA200709591 Daycare
1-2 mi Facility number: 13412865
7917 Facility name: "JACKSON, DARLENE & JIMMIE "
Higher Facility eval. code: 0202
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 3859 WEST STREET
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 3859 WEST STREET
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "JACKSON, DARLENE & JIMMIE "
Licensee type: A
License effective date: 980810
License expiration date: Not Reported
License issue date: 980810
Program type: "MAXIMUM CAPACITY: 12 CHILDREN WITH NO MORE THAN 4 INFANTS, OR CAPACITY14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUMOF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED. "
Original app. received date: 980527
Facility closed date: Not Reported
Mailing address: 3859 WEST STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "JACKSON, DARLENE "
Facility capacity: 14
Type of clients served: 960
Facility phone: 5106545480

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

BO383 SRDCCA200748604
SSW EDR ID: SRDCCA200748604 Daycare
1-2 mi Facility number: 13414464
7993 Facility name: A.U.S.D.- WOODSTOCK CHILD DEVELOPMENT CENTER
Lower Facility eval. code: 0103
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 190 SINGLETON AVENUE
City: ALAMEDA
State: CA
Zip: 94501
Alt. address: 1980 THIRD STREET
City: ALAMEDA
State: CA
Zip: 94501
Facility investor: ALAMEDA UNIFIED SCHOOL DISTRICT
Licensee type: F
License effective date: 990811
License expiration date: Not Reported
License issue date: 990811
Program type: "AGES 2 TO FIRST GRADE ENTRY,INCLUDING 2 GROUPS OF 12 TODDLERS IN ROOMS I AND J. HOURS OF OPERATION MON-FRI, 7 AM TO 6 PM.
"
Original app. received date: 990505
Facility closed date: Not Reported
Mailing address: 2200 CENTRAL AVENUE
Mailing city: ALAMEDA
Mailing state: CA
Mailing zip: 94501
Contact person: "BARTON, CAROL "
Facility capacity: 165
Type of clients served: 950
Facility phone: 5107484001

---

384 SRDCCA200724596
North EDR ID: SRDCCA200724596 Daycare
1-2 mi Facility number: 13417598
7993 Facility name: "CUSTER, ANTOINETTE "
Higher Facility eval. code: 0406
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 1015 39TH STREET
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 1015 39TH STREET
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "CUSTER, ANTOINETTE "
Licensee type: A

License effective date: 40719
License expiration date: Not Reported
License issue date: 040719
Program type: "MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 040420
Facility closed date: Not Reported
Mailing address: 1015 39TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "CUSTER, ANTOINETTE "
Facility capacity: 14
Type of clients served: 960
Facility phone: 5106582505

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385 SRDCCA200739249
SSW EDR ID: SRDCCA200739249 Daycare
1-2 mi Facility number: 13419173
8114 Facility name: "HOFERER, HEATHER "
Lower Facility eval. code: 0103
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 4067A SEAHORSE DR.
City: ALAMEDA
State: CA
Zip: 94501
Alt. address: 4067A SEAHORSE DR.
City: ALAMEDA
State: CA
Zip: 94501
Facility investor: "HOFERER, HEATHER "
Licensee type: A
License effective date: 70413
License expiration date: Not Reported
License issue date: 070413
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 070129
Facility closed date: Not Reported
Mailing address: 4067A SEAHORSE DR.
Mailing city: ALAMEDA
Mailing state: CA
Mailing zip: 94501
Contact person: "HOFERER, HEATHER "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5107641337

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BN386			SRHO20070138994
ENE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
8131	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	MACARTHUR CARE CENTER	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930322	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0693043	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	309 MACARTHUR BLVD	
	Phone num:	5108363777	
	Termination reason:	00	
	Term Date:	20080831	
	Purpose of action:	Not Reported	
	Provider control:	02	
	Zip:	94610	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070138994	

BN387			SRHO20070010587
ENE	Hospital type:	03	AHA Hospitals
1-2 mi	Num of times COO:	04	
8131	Owner date:	Not Reported	
Higher	City:	OAKLAND	
	Has plan of corr:	1	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	20060111	
	Current survey date:	20051221	

Medicare/Medicaid:	1
Facility name:	MACARTHUR CARE CENTER
Intermediary/Carrier:	00040
Medicaid number:	ZZR06350M
Partcipation date:	19720831
Prior COO date:	19931008
Prior carrier:	52280
Provider ID:	056350
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	309 MACARTHUR BLVD
Phone num:	5108363777
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	03
Zip:	94610
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0053
Num cert beds:	0053
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010587

BN388
ENE
1-2 mi
8131
Higher

SRNH20060901060
Nursing Homes

Provnum:	056350
Nursinghomename:	MACARTHUR CARE CENTER
Street:	309 MACARTHUR BLVD
City:	OAKLAND
State:	CA
Zipcode:	94610
Phonenumber:	5108363777
Dateoflastinspection:	20051215
Certifiednumberofbeds:	53
Totalnumberofresidents:	46
Percofoccupiedbeds:	87
Categorydescription:	Participating in Medicare and Medicaid
Typeofownership:	For profit - Corporation
Locatedwithinahospital:	NO
Multinursinghomeownership:	NO
Residentandfamilycouncils:	BOTH
Edr id:	SRNH20060901060

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

BP389 SRDCCA200700788
NE Daycare
1-2 mi
8160
Higher

EDR ID:	SRDCCA200700788
Facility number:	15600490
Facility name:	OPPORTUNITY PLUS II
Facility eval. code:	1510
Facility office number:	14
Facility county number:	01
Facility type code:	730
Facility status code:	03
Address:	3761 RUBY ST.
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	6915 NORFOLK ROAD
City:	BERKELEY
State:	CA
Zip:	94705
Facility investor:	OPPORTUNITY PLUS II
Licensee type:	C
License effective date:	811
License expiration date:	Not Reported
License issue date:	000811
Program type:	AGE RANGE 8 THROUGH 17 YEARS. AMBULATORY ONLY.
Original app. received date:	000615
Facility closed date:	Not Reported
Mailing address:	5859 MARGARIDO DR.
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94618
Contact person:	SHELIA SYKES-NERO
Facility capacity:	6
Type of clients served:	950
Facility phone:	5106551681

BQ390 SRDCCA200701765
North Daycare
1-2 mi
8164
Higher

EDR ID:	SRDCCA200701765
Facility number:	10209953
Facility name:	"CLARK,LA VALLE & HOLLINS ALA "
Facility eval. code:	0406
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	937 - 39TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	937 - 39TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"CLARK,LA VALLE & HOLLINS,ALA "
Licensee type:	A
License effective date:	950515
License expiration date:	Not Reported

License issue date: Not Reported
Program type: "MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 860312
Facility closed date: Not Reported
Mailing address: 937 - 39TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "CLARK,LA VALLE & HOLLINS,A"
Facility capacity: 14
Type of clients served: 960
Facility phone: 5106550531

BQ391 SRDCCA200722321
North EDR ID: SRDCCA200722321 Daycare
1-2 mi Facility number: 13416857
8170 Facility name: "YOUNG, VERONICA "
Higher Facility eval. code: 0202
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 945 - 39TH STREET
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 945 - 39TH STREET
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "YOUNG, VERONICA "
Licensee type: A
License effective date: 30402
License expiration date: Not Reported
License issue date: 030402
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 030206
Facility closed date: Not Reported
Mailing address: 945 - 39TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "YOUNG, VERONICA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5105940503

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
392			SRDCCA200750657
ESE	EDR ID:	SRDCCA200750657	Daycare
1-2 mi	Facility number:	10205449	
8173	Facility name:	LAKE SCHOOL (THE)	
Higher	Facility eval. code:	0304	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	850	
	Facility status code:	03	
	Address:	304 LESTER AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94606	
	Alt. address:	304 LESTER AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94606	
	Facility investor:	LAKE SCHOOL CORPORATION (THE)	
	Licensee type:	C	
	License effective date:	960301	
	License expiration date:	Not Reported	
	License issue date:	Not Reported	
	Program type:	AGE RANGES FROM 2 1/2 YEARS TO 5 YEARS OLD. HOURS OF OPERATION: 8:45 A.M. TO 3:45 P.M. MONDAY THROUGH FRIDAY.	
	Original app. received date:	810409	
	Facility closed date:	Not Reported	
	Mailing address:	304 LESTER AVENUE	
	Mailing city:	OAKLAND	
	Mailing state:	CA	
	Mailing zip:	94606	
	Contact person:	"DAVIS, JAYNESE "	
	Facility capacity:	46	
	Type of clients served:	950	
	Facility phone:	5108394227	
393			SRDCCA200717260
NE	EDR ID:	SRDCCA200717260	Daycare
1-2 mi	Facility number:	13415820	
8253	Facility name:	"TATE, RAYON D. "	
Higher	Facility eval. code:	0203	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	810	
	Facility status code:	03	
	Address:	62 SANTA CLARA AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94610	
	Alt. address:	62 SANTA CLARA AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94610	
	Facility investor:	"TATE, RAYON D. "	
	Licensee type:	A	
	License effective date:	20319	

License expiration date: Not Reported
License issue date: 020319
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 010709
Facility closed date: Not Reported
Mailing address: 62 SANTA CLARA AVENUE
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94610
Contact person: "TATE, RAYON D. "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5104728072

394
ESE
1-2 mi
8299
Higher

SRDCCA200734747
Daycare

EDR ID: SRDCCA200734747
Facility number: 13418775
Facility name: "TORRES, ELIZABETH "
Facility eval. code: 0304
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 345 HANOVER AVE
City: OAKLAND
State: CA
Zip: 94606
Alt. address: 345 HANOVER AVE
City: OAKLAND
State: CA
Zip: 94606
Facility investor: "TORRES, ELIZABETH "
Licensee type: A
License effective date: 60928
License expiration date: Not Reported
License issue date: 060928
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 060512
Facility closed date: Not Reported
Mailing address: 345 HANOVER AVE
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94606
Contact person: "TORRES, ELIZABETH "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5104440664

395 SRDCCA200735494
SSW EDR ID: SRDCCA200735494 Daycare
1-2 mi Facility number: 13418681
8347 Facility name: "MEJIA, MARIA "
Lower Facility eval. code: 0103
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 4043-A KISKA DR
City: ALAMEDA
State: CA
Zip: 94501
Alt. address: 4043-A KISKA DR
City: ALAMEDA
State: CA
Zip: 94501
Facility investor: "MEJIA, MARIA "
Licensee type: A
License effective date: 60503
License expiration date: Not Reported
License issue date: 060503
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 060324
Facility closed date: Not Reported
Mailing address: 4043-A KISKA DR
Mailing city: ALAMEDA
Mailing state: CA
Mailing zip: 94501
Contact person: "MEJIA, MARIA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5105226105

BP396 SRDCCA200714422
NE EDR ID: SRDCCA200714422 Daycare
1-2 mi Facility number: 13415783
8354 Facility name: "MORRIS, ARONDA S. "
Higher Facility eval. code: 0404
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 445 38TH STREET
City: OAKLAND
State: CA
Zip: 94609
Alt. address: 445 38TH STREET
City: OAKLAND
State: CA
Zip: 94609
Facility investor: "MORRIS, ARONDA S. "
Licensee type: A

License effective date: 40109
License expiration date: Not Reported
License issue date: 040109
Program type: "MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 010730
Facility closed date: Not Reported
Mailing address: 445 38TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: "MORRIS, ARONDA S. "
Facility capacity: 14
Type of clients served: 960
Facility phone: 5104200732

BP397
NE
1-2 mi
8370
Higher

SRDCCA200701602
Daycare

EDR ID: SRDCCA200701602
Facility number: 10208080
Facility name: "MORRIS, MARTHA "
Facility eval. code: 0404
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 441 - 38TH STREET
City: OAKLAND
State: CA
Zip: 94609
Alt. address: 441 - 38TH STREET
City: OAKLAND
State: CA
Zip: 94609
Facility investor: "MORRIS, MARTHA "
Licensee type: A
License effective date: 950525
License expiration date: Not Reported
License issue date: Not Reported
Program type: "MAXIMUM CAPACITY: 12 CHILDREN, INCLUDING LICENSEE'S CHILDREN UNDER 10 YEARS OF AGE WHO RESIDE IN THE HOME, WITH NO MORE THAN 4 INFANTS. (INFANT MEANS A CHILD UNDER 2 YEARS OLD).
"
Original app. received date: 841011
Facility closed date: Not Reported
Mailing address: 441 - 38TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: "MORRIS, MARTHA "
Facility capacity: 12
Type of clients served: 960
Facility phone: 5105471632

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BR398 NNE 1-2 mi 8376 Higher			SRHO20070138720 AHA Hospitals
	Hospital type:	01	
	Num of times COO:	00	
	Owner date:	Not Reported	
	City:	OAKLAND	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	SURGERY CENTER OF,THE	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930319	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0695787	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Y	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	M2	
	street address:	3875 TELEGRAPH AVENUE	
	Phone num:	5105472244	
	Termination reason:	00	
	Term Date:	20080831	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94609	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070138720	
BR399 NNE 1-2 mi 8376 Higher			SRHO20070109512 AHA Hospitals
	Hospital type:	01	
	Num of times COO:	01	
	Owner date:	20050331	
	City:	OAKLAND	
	Has plan of corr:	1	
	Compliance status:	A	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	20020919	

Medicare/Medicaid:	1
Facility name:	SURGERY CENTER,THE
Intermediary/Carrier:	31143
Medicaid number:	Not Reported
Partcipation date:	19860603
Prior COO date:	Not Reported
Prior carrier:	00542
Provider ID:	55C0001028
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3875 TELEGRAPH AVE
Phone num:	5105472244
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	01
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070109512

BP400
NE
1-2 mi
8396
Higher

SRDCCA200703260
Daycare

EDR ID:	SRDCCA200703260
Facility number:	10212097
Facility name:	"MARKHAM, KATIE & KARON "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	438 38TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	438 38TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	MARKHAM KATIE & KARON
Licensee type:	A
License effective date:	950613
License expiration date:	Not Reported
License issue date:	890613

Program type: INACTIVE
Original app. received date: 890224
Facility closed date: Not Reported
Mailing address: 438 38TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: "MARKHAM, KATIE & KARON "
Facility capacity: 12
Type of clients served: 960
Facility phone: 5106555994

BS401 SRHO20070156715
NE AHA Hospitals
1-2 mi
8400
Higher

Hospital type: 01
Num of times COO: 00
Owner date: Not Reported
City: OAKLAND
Has plan of corr: Not Reported
Compliance status: Not Reported
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: Not Reported
Medicare/Medicaid: Not Reported
Facility name: KAISER OAKLAND HOSPICE
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported
Partcipation date: 20010823
Prior COO date: Not Reported
Prior carrier: Not Reported
Provider ID: 05D0990476
Record Status: A
Region code: 09
Is Partial Record: Y
state abbrev: CA
ssa state: 05
state region cd: M1
street address: 235 W MACARTHUR BLVD 5TH FLOOR
Phone num: 5107526390
Termination reason: 00
Term Date: 20070822
Purpose of action: Not Reported
Provider control: 02
Zip: 94611
Fips state: 06
Fips cnty: 001
SSA MSA: 418
SSA MSA size code: B
Date accredited: Not Reported
Accred expire date: Not Reported
Accred Org: Not Reported
Num beds: 0000
Num cert beds: 0000
Source: US_HOSPITAL_POSCLIA
Edr id: SRHO20070156715

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

BS402 SRHO20070157845
NE AHA Hospitals
1-2 mi
8400
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	TPMG MB LABORATORY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20040813
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D1029323
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	235 W MACARTHUR BLVD
Phone num:	5107526083
Termination reason:	00
Term Date:	20080812
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070157845

BS403 SRHO20070153647
NE AHA Hospitals
1-2 mi
8400
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	KAISER HOSPITAL HOME HLTH AGENCY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20010627
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0988447
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	235 W MACARTHUR BLVD 7TH FL STE 702
Phone num:	5105966295
Termination reason:	00
Term Date:	20070626
Purpose of action:	Not Reported
Provider control:	02
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070153647

BS404
NE
1-2 mi
8400
Higher

SRHO20070147658
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	EAST BAY NEPHROLOGY MEDICAL GROUP INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19970115
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0924004
Record Status:	A
Region code:	09
Is Partial Record:	Y

state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	235 WEST MACARTHUR BLVD SUITE M135A
Phone num:	5102351057
Termination reason:	00
Term Date:	20090114
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070147658

BS405
NE
1-2 mi
8400
Higher

SRHO20070008442
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20000621
Medicare/Medicaid:	1
Facility name:	KAISER FOUNDATION HOSPITAL HOSPICE - OAKLAND
Intermediary/Carrier:	52280
Medicaid number:	Not Reported
Partcipation date:	19890615
Prior COO date:	Not Reported
Prior carrier:	00040
Provider ID:	051551
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	SJ
street address:	235 WEST MACARTHUR BOULEVARD
Phone num:	5107526390
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	02
Zip:	94611
Fips state:	06

Fips cnty:	001	
SSA MSA:	418	
SSA MSA size code:	B	
Date accredited:	Not Reported	
Accred expire date:	Not Reported	
Accred Org:	1	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSOTHER	
Edr id:	SRHO20070008442	

406 SRDCCA200732583
SE Daycare
1-2 mi
8419
Lower

EDR ID:	SRDCCA200732583
Facility number:	13418636
Facility name:	"MCTILLER, ETHEL "
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	600 EAST 8TH ST
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	600 EAST 8TH ST
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	"MCTILLER, ETHEL J "
Licensee type:	A
License effective date:	51223
License expiration date:	Not Reported
License issue date:	051223
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP. 8 - NO MORE THAN 2 INFANTS,1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	051212
Facility closed date:	Not Reported
Mailing address:	600 EAST 8TH ST
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"MCTILLER, ETHEL J "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5104330935

BS407 SRHO20070133683
NE AHA Hospitals
1-2 mi
8472
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported

SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	KAISER FOUNDATION HOSPITAL OAKLAND LABORATORY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930512
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602613
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	280 WEST MACARTHUR BOULEVARD
Phone num:	5107526078
Termination reason:	00
Term Date:	20071130
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133683

BS408
NE
1-2 mi
8472
Higher

SRHO20070140243
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	05D0602613
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	TPMG OAKLAND LABORATORY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930512
Prior COO date:	Not Reported
Prior carrier:	Not Reported

Provider ID:	05D0702860
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	280 W MACARTHUR BLVD
Phone num:	5105966083
Termination reason:	01
Term Date:	19970601
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070140243

BS409
NE
1-2 mi
8472
Higher

SRHO20070141194
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	05D0702860
FMS survey date:	Not Reported
Current survey date:	19951025
Medicare/Medicaid:	1
Facility name:	PERMANENTE MEDICAL OFFICES LAB B
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0702774
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	280 W MACARTHUR BLVD
Phone num:	5105966083
Termination reason:	01
Term Date:	19951110

Purpose of action:	2
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141194

BS410
NE
1-2 mi
8472
Higher

SRHO20070141184
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PERMANENTE MEDICAL GROUP, INC,THE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930512
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0702773
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	280 W MACARTHUR BLVD
Phone num:	5107526082
Termination reason:	00
Term Date:	20071220
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000

Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070141184	

BS411 SRHO20070007214
NE AHA Hospitals
1-2 mi
8472
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19890912
Medicare/Medicaid:	1
Facility name:	KAISER FOUNDATION HOSPITAL OAKLAND/RICHMOND
Intermediary/Carrier:	52280
Medicaid number:	Not Reported
Partcipation date:	19660701
Prior COO date:	Not Reported
Prior carrier:	51051
Provider ID:	050075
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	280 W MAC ARTHUR BLVD
Phone num:	5107521000
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	03
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	19860820
Accred expire date:	19890820
Accred Org:	1
Num beds:	0396
Num cert beds:	0348
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070007214

BS412 SRHO20070140242
NE AHA Hospitals
1-2 mi
8472
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported

Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	05D0602613
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	KAISER FOUNDATION HOSPITAL LAB A
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930512
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0702859
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	280 W MACARTHUR BLVD
Phone num:	5105966083
Termination reason:	12
Term Date:	19970601
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070140242

BS413
NE
1-2 mi
8472
Higher

SRHO20070164795
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	KAISER FOUNDATION HOSPITAL OAKLAND LAB
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20060316
Prior COO date:	Not Reported

Prior carrier:	Not Reported
Provider ID:	05D1052056
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	280 W MACARTHUR BLVD
Phone num:	5107526082
Termination reason:	00
Term Date:	20080315
Purpose of action:	Not Reported
Provider control:	02
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070164795

BS414
NE
1-2 mi
8472
Higher

SRHO20070138826
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	05D0602613
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	DEPARTMENT OF NUCLEAR MEDICINE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930511
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0689363
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	280 W MACARTHUR BLVD
Phone num:	5105966210
Termination reason:	01

Term Date:	19950406
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070138826

BT415
ESE
1-2 mi
8504
Higher

SRDCCA200737677
Daycare

EDR ID:	SRDCCA200737677
Facility number:	13419079
Facility name:	"PHONEXAYSITTHIDET, SOMSY "
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1518 - 5TH AVENUE
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	1518 - 5TH AVENUE
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	"PHONEXAYSITTHIDET, SOMSY "
Licensee type:	A
License effective date:	70123
License expiration date:	Not Reported
License issue date:	070123
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	061013
Facility closed date:	Not Reported
Mailing address:	1518 - 5TH AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"PHONEXAYSITTHIDET, SOMSY "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108342166

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

416 SRHO20070134359
ESE Hospital type: 01 AHA Hospitals
1-2 mi Num of times COO: 00
8519 Owner date: Not Reported
Lower City: OAKLAND
Has plan of corr: Not Reported
Compliance status: Not Reported
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: Not Reported
Medicare/Medicaid: Not Reported
Facility name: BAY DANG-VU MD
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported
Partcipation date: 19921222
Prior COO date: Not Reported
Prior carrier: Not Reported
Provider ID: 05D0601891
Record Status: A
Region code: 09
Is Partial Record: Y
state abbrev: CA
ssa state: 05
state region cd: LAB
street address: 401 E 18TH
Phone num: 5108930683
Termination reason: 00
Term Date: 20080831
Purpose of action: Not Reported
Provider control: 04
Zip: 94606
Fips state: 06
Fips cnty: 001
SSA MSA: 418
SSA MSA size code: B
Date accredited: Not Reported
Accred expire date: Not Reported
Accred Org: Not Reported
Num beds: 0000
Num cert beds: 0000
Source: US_HOSPITAL_POSCLIA
Edr id: SRHO20070134359

417 SRDCCA200733441
NE EDR ID: SRDCCA200733441 Daycare
1-2 mi Facility number: 13418509
8521 Facility name: "VARGAS, EVA H "
Higher Facility eval. code: 0404
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 411- 38TH STREET
City: OAKLAND

State: CA
Zip: 94609
Alt. address: 411- 38TH STREET
City: OAKLAND
State: CA
Zip: 94609
Facility investor: "VARGAS, EVA H "
Licensee type: A
License effective date: 51118
License expiration date: Not Reported
License issue date: 051118
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 051101
Facility closed date: Not Reported
Mailing address: 411- 38TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: "VARGAS, EVA H "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5105970792

418
NE
1-2 mi
8527
Higher

SRDCCA200750494
Daycare

EDR ID: SRDCCA200750494
Facility number: 10212020
Facility name: SNOW WHITE PRESCHOOL
Facility eval. code: 0207
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 214 WEST MAC ARTHUR BLVD.
City: OAKLAND
State: CA
Zip: 94611
Alt. address: P.O. BOX 20057
City: OAKLAND
State: CA
Zip: 94620
Facility investor: SNOW WHITE PRESCHOOL
Licensee type: D
License effective date: 941210
License expiration date: Not Reported
License issue date: 881210
Program type: "18 MOS. TO 1ST GRADE ENTRY INCLUDING A MAXIMUM OF 8 TODDLERS IN THE TODDLER ROOM. OPERATING MON-FRI, 7AM TO 5:30PM
"
Original app. received date: 881209
Facility closed date: Not Reported
Mailing address: P.O. BOX 20057
Mailing city: OAKLAND
Mailing state: CA

Mailing zip:	94620	
Contact person:	"WATERS, CYNTHIA "	
Facility capacity:	31	
Type of clients served:	950	
Facility phone:	5106558353	

BT419 SRDCCA200717390
ESE Daycare
1-2 mi
8533
Higher

EDR ID:	SRDCCA200717390
Facility number:	13416432
Facility name:	MARLA KIRKWOOD
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	525 E. 15TH STREET
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	525 E. 15TH STREET
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	MARLA KIRKWOOD
Licensee type:	A
License effective date:	20722
License expiration date:	Not Reported
License issue date:	020722
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	020607
Facility closed date:	Not Reported
Mailing address:	525 E. 15TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"KIRKWOOD-TOLES, MARLA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108324643

BU420 SRHO20070134372
ESE AHA Hospitals
1-2 mi
8579
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported

Medicare/Medicaid:	Not Reported
Facility name:	LAKESHORE CONVALESCENT
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930218
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601898
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1901 3RD AVE
Phone num:	5108349880
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134372

BU421
ESE
1-2 mi
8579
Lower

SRHO20070009592
AHA Hospitals

Hospital type:	03
Num of times COO:	02
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	05A416
FMS survey date:	Not Reported
Current survey date:	19990721
Medicare/Medicaid:	1
Facility name:	LAKESHORE CONV HOSP
Intermediary/Carrier:	52280
Medicaid number:	Not Reported
Partcipation date:	19710301
Prior COO date:	19820401
Prior carrier:	Not Reported
Provider ID:	055543
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported

state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	1901 THIRD AVE
Phone num:	5108349880
Termination reason:	07
Term Date:	19971031
Purpose of action:	2
Provider control:	01
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0038
Num cert beds:	0038
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070009592

BU422 SRHO20070005790
ESE AHA Hospitals
1-2 mi
8579
Lower

Hospital type:	02
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	555774
FMS survey date:	Not Reported
Current survey date:	20001129
Medicare/Medicaid:	1
Facility name:	LAKESHORE CONVALESCENT HOSPITAL
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19990818
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05A416
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	1901 THIRD AVENUE
Phone num:	5108349880
Termination reason:	07
Term Date:	20010705
Purpose of action:	2
Provider control:	01
Zip:	94606
Fips state:	06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0038
Num cert beds:	0038
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070005790

BU423 SRHO20070107352
ESE AHA Hospitals
1-2 mi
8579
Lower

Hospital type:	03
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	05A416
FMS survey date:	Not Reported
Current survey date:	20051219
Medicare/Medicaid:	1
Facility name:	LAKESHORE CONVALESCENT HOSP
Intermediary/Carrier:	52280
Medicaid number:	ZZR05543I
Partcipation date:	20010705
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	555774
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	1901 - 3RD AVENUE
Phone num:	5108349880
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	03
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0038
Num cert beds:	0038
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070107352

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

BU424 SRNH20060915169
ESE Provnum: 555774 Nursing Homes
1-2 mi Nursinghomename: LAKESHORE CONVALESCENT HOSP
8579 Street: 1901 - 3RD AVENUE
Lower City: OAKLAND
State: CA
Zipcode: 94606
Phonenumber: 5108349880
Dateoflastinspection: 20051129
Certifiednumberofbeds: 38
Totalnumberofresidents: 35
Percofoccupiedbeds: 92
Categorydescription: Participating in Medicare and Medicaid
Typeofownership: For profit - Corporation
Locatedwithinahospital: NO
Multinursinghomeownership: NO
Residentandfamilycouncils: RESIDENT
Edr id: SRNH20060915169

BU425 SRDCCA200738348
ESE EDR ID: SRDCCA200738348 Daycare
1-2 mi Facility number: 13419068
8629 Facility name: "COLLINS, VONDA "
Higher Facility eval. code: 0304
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 257 ATHOL AVENUE #9
City: OAKLAND
State: CA
Zip: 94606
Alt. address: 257 ATHOL AVENUE #9
City: OAKLAND
State: CA
Zip: 94606
Facility investor: "COLLINS, VONDA "
Licensee type: A
License effective date: 70102
License expiration date: Not Reported
License issue date: 070102
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY
SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 061011
Facility closed date: Not Reported
Mailing address: 257 ATHOL AVENUE #9
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94606
Contact person: "COLLINS, VONDA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106251019

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation **Site** **EDR ID** **Database**

BV426 SRDCCA200754177
ENE Daycare
1-2 mi
8658
Higher

EDR ID:	SRDCCA200754177
Facility number:	13416066
Facility name:	GRAND LAKE MONTESSORI
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	466 CHETWOOD STREET
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	466 CHETWOOD STREET
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"GRAND LAKE MONTESSORI, INC. "
Licensee type:	C
License effective date:	20410
License expiration date:	Not Reported
License issue date:	020410
Program type:	"AGES 2 YEARS TO FIRST GRADE ENTRY. HOURS OF OPERATION: MONDAY-FRIDAY, 7:00AM TO 6:00PM. OPERATING IN 2 PORTABLE CLASSROOMS. "
Original app. received date:	011207
Facility closed date:	Not Reported
Mailing address:	466 CHETWOOD
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"CAMPBELL, HELEN "
Facility capacity:	47
Type of clients served:	950
Facility phone:	5108364313

BV427 SRPR20051023686
ENE Private Schools
1-2 mi
8658
Higher

Pss school id:	A0307158
Pss inst:	GRAND LAKE MONTESSORI
Lograde:	PK
Higrade:	5
Pss address:	466 CHETWOOD ST
Pss city:	OAKLAND
Pss county no:	001
Pss county fips:	06001
Pss stabb:	CA
Pss fips:	06
Pss zip5:	94610
Pss phone:	5108364313
Pss sch days:	176
Pss stu day hrs:	6.5
Pss library:	No
Pss enroll ug:	Not Reported
Pss enroll pk:	127

Pss enroll k:	19
Pss enroll 1:	7
Pss enroll 2:	3
Pss enroll 3:	Not Reported
Pss enroll 4:	6
Pss enroll 5:	3
Pss enroll 6:	Not Reported
Pss enroll 7:	Not Reported
Pss enroll 8:	Not Reported
Pss enroll 9:	Not Reported
Pss enroll 10:	Not Reported
Pss enroll 11:	Not Reported
Pss enroll 12:	Not Reported
Pss enroll t:	165
Pss enroll tk12:	38
Pss race ai:	0
Pss race as:	7
Pss race h:	1
Pss race b:	13
Pss race w:	17
Pss fte teach:	26
Pss locale:	1
Pss coed:	1
Pss type:	2
Pss level:	1
Pss relig:	3
Pss comm type:	1
Pss indian pct:	0
Pss asian pct:	18.42
Pss hisp pct:	2.63
Pss black pct:	34.21
Pss white pct:	44.74
Pss stdtch rt:	1.46
Pss orient:	29
Pss county name:	ALAMEDA
Pss assoc 1:	No Membership Association
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051023686

BV428
ENE
1-2 mi
8673
Higher

SRDCCA200750447
Daycare

EDR ID:	SRDCCA200750447
Facility number:	10213743
Facility name:	GRAND LAKE MONTESORI
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	472 CHETWOOD STREET

City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	466 CHETWOOD STREET
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"GRAND LAKE MONTESSORI, INC. "
Licensee type:	C
License effective date:	940726
License expiration date:	Not Reported
License issue date:	910726
Program type:	"AGES 18 MONTHS TO FIRST GRADE ENTRY, NO MORE THAN 12 OF WHOM MAY PARTICIPATE IN THE TODDLER OPTION. HOURS OF OPERATION: MON. - FRI., 7:00 A.M. - 6:00 P.M. IN 3 CLASSROOM "AREAS.
Original app. received date:	910221
Facility closed date:	Not Reported
Mailing address:	466 CHETWOOD
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	DENISE ALLEN
Facility capacity:	28
Type of clients served:	950
Facility phone:	5108364313

BS429
NE
1-2 mi
8680
Higher

SRHO20070133690
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PERMANENTE MEDICAL GRP INC PEDI LB,THE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930512
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601151
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3779 PIEDMONT AVE
Phone num:	5105966083
Termination reason:	12

Term Date:	19940601
Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070133690

BW430
ESE
1-2 mi
8703
Higher

SRHO20070155471
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	INTERNATIONAL PED MED GRP INC
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	20010905
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0990908
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	600 INTERNATIONAL BLVD STE 102
Phone num:	5102083540
Termination reason:	00
Term Date:	20070904
Purpose of action:	Not Reported
Provider control:	04
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported

Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070155471

431
NNE
1-2 mi
8771
Higher

SRPR20051022145
Private Schools

Pss school id:	00074662
Pss inst:	ST MARTIN DE PORRES SCHOOL
Lograde:	K
Higrade:	8
Pss address:	675 41ST ST
Pss city:	OAKLAND
Pss county no:	001
Pss county fips:	06001
Pss stabb:	CA
Pss fips:	06
Pss zip5:	94609
Pss phone:	5106522220
Pss sch days:	183
Pss stu day hrs:	6.5
Pss library:	Yes
Pss enroll ug:	Not Reported
Pss enroll pk:	Not Reported
Pss enroll k:	7
Pss enroll 1:	10
Pss enroll 2:	8
Pss enroll 3:	10
Pss enroll 4:	8
Pss enroll 5:	10
Pss enroll 6:	6
Pss enroll 7:	18
Pss enroll 8:	17
Pss enroll 9:	Not Reported
Pss enroll 10:	Not Reported
Pss enroll 11:	Not Reported
Pss enroll 12:	Not Reported
Pss enroll t:	94
Pss enroll tk12:	94
Pss race ai:	0
Pss race as:	2
Pss race h:	36
Pss race b:	55
Pss race w:	1
Pss fte teach:	11.4
Pss locale:	1
Pss coed:	1
Pss type:	1
Pss level:	1
Pss relig:	1
Pss comm type:	1
Pss indian pct:	0
Pss asian pct:	2.13
Pss hisp pct:	38.3
Pss black pct:	58.51
Pss white pct:	1.06

Pss stdtch rt:	8.25
Pss orient:	1
Pss county name:	ALAMEDA
Pss assoc 1:	National Catholic Educational Association (NCEA)
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051022145

BX432 SRDCCA200739700
North Daycare
1-2 mi
8795
Higher

EDR ID:	SRDCCA200739700
Facility number:	13419225
Facility name:	"FAWVER, JEAN "
Facility eval. code:	0406
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	886 41ST ST
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	886 41ST ST
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"FAWVER, JEAN "
Licensee type:	A
License effective date:	70420
License expiration date:	Not Reported
License issue date:	070420
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	070228
Facility closed date:	Not Reported
Mailing address:	886 41ST ST
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"FAWVER, JEAN "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5106532191

BY433 SRDCCA200756311
SE Daycare
1-2 mi
8807
Lower

EDR ID:	SRDCCA200756311
Facility number:	13417784
Facility name:	"EAST BAY ACADEMY, INC. "
Facility eval. code:	0304

Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	1011 7TH AVENUE
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	1011 7TH AVENUE
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	"EAST BAY ACADEMY, INC. "
Licensee type:	D
License effective date:	40728
License expiration date:	Not Reported
License issue date:	040728
Program type:	"AGES TWO TO FIRST GRADE ENTRY. OPERATING MONDAY - FRIDAY, 7:30 AM TO 6 PM IN 4 ROOMS ON THE FIRST FLOOR AND 3 ROOMS ON THE SECOND FLOOR. LICENSE SUBJECT TO ONE WAIVER TO BE POSTED WITH LICENSE. "
Original app. received date:	040712
Facility closed date:	Not Reported
Mailing address:	4306 SAINT CLOUD COURT
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94619
Contact person:	MARGARIDA WONG
Facility capacity:	113
Type of clients served:	950
Facility phone:	5102670788

BX434
NNE
1-2 mi
8819
Higher

SRDCCA200716512
Daycare

EDR ID:	SRDCCA200716512
Facility number:	13415826
Facility name:	"ALEX, ROSA LEE "
Facility eval. code:	0406
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	4121 LUSK STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	4121 LUSK STREET
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"ALEX, ROSA LEE "
Licensee type:	A
License effective date:	11001
License expiration date:	Not Reported
License issue date:	011001
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "

Original app. received date:	010713
Facility closed date:	Not Reported
Mailing address:	4121 LUSK STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"ALEX, ROSA LEE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5106551249

BZ435 SRDCCA200754607
East Daycare
1-2 mi
8837
Lower

EDR ID:	SRDCCA200754607
Facility number:	13415542
Facility name:	O.U.S.D. - LAKEVIEW CHILD DEVELOPMENT CENTER
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	746 GRAND AVENUE
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	495 JONES AVE
City:	OAKLAND
State:	CA
Zip:	94603
Facility investor:	OAKLAND UNIFIED SCHOOL DISTRICT
Licensee type:	F
License effective date:	10226
License expiration date:	Not Reported
License issue date:	010226
Program type:	"AGES 2 YEARS TO 1ST GRADE ENTRY. HOURS: MONDAY-FRIDAY, 7:30AM-6:00PM OPERATING IN 2 ROOMS OF A PORTABLE BLDG. CAPACITY REDUCED TO 22 FROM 7:00AM-7:30AM AND FROM 2:30PM TO 6:00PM WHEN ONLY THE ORIGINAL PRE- "SCHOOL ROOM IS IN USE. CAPACITY INCLUDES ONE NON-AMBULATORY CHILD.
Original app. received date:	010117
Facility closed date:	Not Reported
Mailing address:	1025 SECOND AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"OHANIS, J./WAGNER, M. "
Facility capacity:	46
Type of clients served:	950
Facility phone:	5108790857

BZ436 SRPU20071013356
East Public Schools
1-2 mi
8837
Lower

Ncessch:	062805004286
Schname05:	LAKEVIEW ELEMENTARY
Mstreet05:	746 GRAND AVE.
Mcity05:	OAKLAND
Mstate05:	CA

Mzip05:	94610
Mzip405:	2714
Member05:	343
Phone05:	(510) 879-1300
Locale05:	1
Type05:	1
Level05:	1
Gslo05:	KG
Gshi05:	05
Edr id:	SRPU20071013356

BY437 SRDCCA200733014
SE Daycare
1-2 mi
8837
Lower

EDR ID:	SRDCCA200733014
Facility number:	13418586
Facility name:	"LI, YANHONG "
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1020 7TH AVE
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	1020 7TH AVE
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	"LI, YANHONG "
Licensee type:	A
License effective date:	60425
License expiration date:	Not Reported
License issue date:	060425
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	060206
Facility closed date:	Not Reported
Mailing address:	1020 7TH AVE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"LI, YANHONG "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108933418

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438 SRHO20070144967
NE AHA Hospitals
1-2 mi
8858
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A

SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19950913
Medicare/Medicaid:	1
Facility name:	TPMG FABIOLA LABORATORY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930805
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0874332
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3801 HOWE ST
Phone num:	5107526083
Termination reason:	00
Term Date:	20080812
Purpose of action:	2
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070144967

BW439
ESE
1-2 mi
8868
Higher

SRHO20070144593
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	THANH K BUI
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19940822
Prior COO date:	Not Reported
Prior carrier:	Not Reported

Provider ID:	05D0890583
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	650 INTERNATIONAL BLVD SUITE B
Phone num:	5104440533
Termination reason:	00
Term Date:	20080821
Purpose of action:	Not Reported
Provider control:	04
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070144593

CA440
South
1-2 mi
8874
Lower

SRDCCA200743763
Daycare

EDR ID:	SRDCCA200743763
Facility number:	13417813
Facility name:	PETER PAN PRESCHOOL/INFANT CENTER
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	2100 MARINER SQUARE DRIVE
City:	ALAMEDA
State:	CA
Zip:	94501
Alt. address:	2100 MARINER SQUARE DRIVE
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	"KAMRANI, MAHVAS & KAMRAMI, HOSSEIN "
Licensee type:	A
License effective date:	41110
License expiration date:	Not Reported
License issue date:	041110
Program type:	"AGES BIRTH TO 2 YRS. INFANT COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT IS PRESCHOOL, CAPACITY 75. TOTAL CAPACITY OF CENTER IS 95. OPERATING MON-FRI, IN ONE ROOM ON THE FIRST FLOOR AND ONE ROOM ON ""THE 2ND FLOOR, 7AM-6PM. "
Original app. received date:	040727
Facility closed date:	Not Reported

Mailing address:	2056 SANTA CLARA AVENUE
Mailing city:	ALAMEDA
Mailing state:	CA
Mailing zip:	94501
Contact person:	"DEMAURI, JULIE "
Facility capacity:	20
Type of clients served:	955
Facility phone:	5105212711

CA441 SRDCCA200756065
South Daycare
1-2 mi
8874
Lower

EDR ID:	SRDCCA200756065
Facility number:	13417812
Facility name:	PETER PAN PRESCHOOL
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	2100 MARINER SQUARE DRIVE
City:	ALAMEDA
State:	CA
Zip:	94501
Alt. address:	2100 MARINER SQUARE DRIVE
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	"KAMRANI, MAHVASH & KAMRANI, HOSSEIN "
Licensee type:	A
License effective date:	41110
License expiration date:	Not Reported
License issue date:	041110
Program type:	"AGES 2 TO 1ST GRADE ENTRY. PRESCHOOL COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT IS INFANT, CAPACITY 20. TOTAL CAPACITY OF CENTER IS 95. OPERATING MON-FRI, 6:30AM-9PM IN 3 ROOMS ON 1ST FLOOR. "
Original app. received date:	040727
Facility closed date:	Not Reported
Mailing address:	2056 SANTA CLARA AVENUE
Mailing city:	ALAMEDA
Mailing state:	CA
Mailing zip:	94501
Contact person:	"DEMAURI, JULIE "
Facility capacity:	75
Type of clients served:	950
Facility phone:	5105212711

BV442 SRDCCA200745048
ENE Daycare
1-2 mi
8887
Higher

EDR ID:	SRDCCA200745048
Facility number:	10210354
Facility name:	GRAND LAKE MONTESSORI
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	850

Facility status code:	03
Address:	281 SANTA CLARA AVENUE
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	466 CHETWOOD STREET
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"GRAND LAKE MONTESSORI, INC "
Licensee type:	C
License effective date:	930508
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"AGES 2YRS. TO FIRST GRADE ENTRY. HOURS OF OPERATION: MONDAY-FRIDAY, 7AM TO 6PM. FROM SEPT. 5TH TO JUNE 16TH. PRESCHOOL CAPACITY IS 64. FROM JUNE 17TH TO SEPT. 4TH, PRESCHOOL CAPACITY CAN EXPAND TO 80 "INCLUDING THE SCHOOLAGE CLASSROOM. SUBJECT TO 2 WAIVERS TO BE POSTED.
Original app. received date:	861016
Facility closed date:	Not Reported
Mailing address:	466 CHETWOOD
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	MISSY CHURCH
Facility capacity:	80
Type of clients served:	950
Facility phone:	4158364313

CB443 — SRPU20071015458
North — Public Schools
1-2 mi

Ncessch:	061263001425
Schname05:	ANNA YATES ELEMENTARY
Mstreet05:	1070 41ST ST.
Mcity05:	EMERYVILLE
Mstate05:	CA
Mzip05:	94608
Mzip405:	3643
Member05:	424
Phone05:	(510) 601-4916
Locale05:	3
Type05:	1
Level05:	1
Gslo05:	KG
Gshi05:	06
Edr id:	SRPU20071015458

8927
Higher

CC444 — SRHO20070006850
ESE — AHA Hospitals
1-2 mi

Hospital type:	02
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	A

8935
Lower

SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20060119
Medicare/Medicaid:	1
Facility name:	PARK MERRITT ICF
Intermediary/Carrier:	Not Reported
Medicaid number:	ZZR18163H
Partcipation date:	19800222
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05E454
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	525 E 18TH STREET
Phone num:	5102688491
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	01
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0024
Num cert beds:	0024
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070006850

CC445
ESE
1-2 mi
8935
Lower

SRNH20060901425
Nursing Homes

Provnum:	05E454
Nursinghomename:	PARK MERRITT ICF
Street:	525 E 18TH STREET
City:	OAKLAND
State:	CA
Zipcode:	94606
Phonenumber:	5102688491
Dateoflastinspection:	20051130
Certifiednumberofbeds:	24
Totalnumberofresidents:	24
Percofoccupiedbeds:	100
Categorydescription:	Participating in Medicaid Only
Typeofownership:	For profit - Individual
Locatedwithinahospital:	NO
Multinursinghomeownership:	NO
Residentandfamilycouncils:	RESIDENT
Edr id:	SRNH20060901425

446 SRDCCA200740498
East EDR ID: SRDCCA200740498 Daycare
1-2 mi Facility number: 13419142
8973 Facility name: "ODEN, VANESSA "
Higher Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 528 MERRITT AVE #208
City: OAKLAND
State: CA
Zip: 94610
Alt. address: 528 MERRITT AVE #208
City: OAKLAND
State: CA
Zip: 94610
Facility investor: "ODEN, VANESSA "
Licensee type: A
License effective date: 70328
License expiration date: Not Reported
License issue date: 070328
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 061227
Facility closed date: Not Reported
Mailing address: 528 MERRITT AVE #208
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94610
Contact person: "ODEN, VANESSA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5108307735

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447 SRHO20070145848
West Hospital type: 01 AHA Hospitals
1-2 mi Num of times COO: 00
9119 Owner date: Not Reported
Lower City: OAKLAND
Has plan of corr: Not Reported
Compliance status: Not Reported
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: Not Reported
Medicare/Medicaid: Not Reported
Facility name: ALLCARE MEDICAL/PORT OAKLAND
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported
Partcipation date: 19950724
Prior COO date: Not Reported
Prior carrier: Not Reported
Provider ID: 05D0903536

Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	2097 7TH STREET
Phone num:	5104448891
Termination reason:	08
Term Date:	20010723
Purpose of action:	Not Reported
Provider control:	04
Zip:	94607
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070145848

448
NNE
1-2 mi
9149
Higher

SRDCCA200732972
Daycare

EDR ID:	SRDCCA200732972
Facility number:	13418585
Facility name:	"BACCETTI, LOUIS "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	482 41ST
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	482 41ST
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"BACCETTI, LOUIS "
Licensee type:	A
License effective date:	60303
License expiration date:	Not Reported
License issue date:	060303
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP. 8 - NO MORE THAN 2 INFANTS,1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	060131
Facility closed date:	Not Reported
Mailing address:	482 41ST
Mailing city:	OAKLAND
Mailing state:	CA

Mailing zip:	94609
Contact person:	"BACCETTI, LOUIS "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5102902854

449
North
1-2 mi
9155
Higher

SRPR20051023599
Private Schools

Pss school id:	A0300346
Pss inst:	LA CHEIM SCHOOL OAKLAND
Lograde:	6
Higrade:	12
Pss address:	1000 42ND STREET
Pss city:	OAKLAND
Pss county no:	001
Pss county fips:	06001
Pss stabb:	CA
Pss fips:	06
Pss zip5:	94608
Pss phone:	5109851339
Pss sch days:	220
Pss stu day hrs:	6
Pss library:	No
Pss enroll ug:	Not Reported
Pss enroll pk:	Not Reported
Pss enroll k:	Not Reported
Pss enroll 1:	Not Reported
Pss enroll 2:	Not Reported
Pss enroll 3:	Not Reported
Pss enroll 4:	Not Reported
Pss enroll 5:	Not Reported
Pss enroll 6:	1
Pss enroll 7:	Not Reported
Pss enroll 8:	3
Pss enroll 9:	4
Pss enroll 10:	8
Pss enroll 11:	1
Pss enroll 12:	3
Pss enroll t:	20
Pss enroll tk12:	20
Pss race ai:	0
Pss race as:	0
Pss race h:	1
Pss race b:	19
Pss race w:	0
Pss fte teach:	3
Pss locale:	1
Pss coed:	3
Pss type:	4
Pss level:	3
Pss relig:	3
Pss comm type:	1
Pss indian pct:	0
Pss asian pct:	0
Pss hisp pct:	5
Pss black pct:	95

Pss white pct:	0
Pss stdtch rt:	6.67
Pss orient:	29
Pss county name:	ALAMEDA
Pss assoc 1:	No Membership Association
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051023599

450
NE
1-2 mi
9234
Higher

SRHO20070137604
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19960813
Medicare/Medicaid:	1
Facility name:	GENETICS LAB KAISER HOSPITAL
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0687104
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	3900 BROADWAY AVENUE
Phone num:	5105966298
Termination reason:	05
Term Date:	19981120
Purpose of action:	2
Provider control:	03
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000

Source: US_HOSPITAL_POSCLIA
Edr id: SRHO20070137604

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451 SRDCCA200731035
ESE EDR ID: SRDCCA200731035 Daycare
1-2 mi Facility number: 13418464
9277 Facility name: "LE, PHUONG MY "
Higher Facility eval. code: 0304
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 2036 - 5TH AVE
City: OAKLAND
State: CA
Zip: 94606
Alt. address: 2036 - 5TH AVE
City: OAKLAND
State: CA
Zip: 94606
Facility investor: "LE, PHUONG MY "
Licensee type: A
License effective date: 51019
License expiration date: Not Reported
License issue date: 051019
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 050907
Facility closed date: Not Reported
Mailing address: 2036 - 5TH AVE
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94606
Contact person: "LE, PHUONG MY "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5102511546

CD452 SRHO20070135442
NE Hospital type: 01 AHA Hospitals
1-2 mi Num of times COO: 00
9291 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: 1
Compliance status: A
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: 19951030
Medicare/Medicaid: 1
Facility name: WILLIAM S PALMER MD
Intermediary/Carrier: Not Reported
Medicaid number: Not Reported

Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0667918
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	400 40TH STREET 301C
Phone num:	5106534082
Termination reason:	01
Term Date:	19961001
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070135442

CD453
NE
1-2 mi
9291
Higher

SRHO20070139814
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19951101
Medicare/Medicaid:	1
Facility name:	OAKLAND PATHOLOGY LABORATORY
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0705105
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	400 40TH ST SUITE 304

Phone num:	5106534082
Termination reason:	01
Term Date:	19961031
Purpose of action:	2
Provider control:	04
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070139814

CD454 SRHO20070133537
NE AHA Hospitals
1-2 mi
9291
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PREGNANCY CONSULTATION CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930219
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602275
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	400 40TH STREET
Phone num:	4159222838
Termination reason:	08
Term Date:	19940831
Purpose of action:	Not Reported
Provider control:	02
Zip:	94609
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported

Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070133537	

CB455 SRDCCA200717562
North Daycare
1-2 mi
9297
Higher

EDR ID:	SRDCCA200717562
Facility number:	13416549
Facility name:	"BURKHALTER, GLENNIS "
Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1055 - 43RD STREET
City:	EMERYVILLE
State:	CA
Zip:	94608
Alt. address:	1055 - 43RD STREET
City:	EMERYVILLE
State:	CA
Zip:	94608
Facility investor:	"BURKHALTER, GLENNIS "
Licensee type:	A
License effective date:	20823
License expiration date:	Not Reported
License issue date:	020823
Program type:	MAX. CAP (WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN 4 INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.
Original app. received date:	020802
Facility closed date:	Not Reported
Mailing address:	1055 - 43RD STREET
Mailing city:	EMERYVILLE
Mailing state:	CA
Mailing zip:	94608
Contact person:	"BURKHALTER, GLENNIS "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5106527121

CE456 SRDCCA200731525
NNE Daycare
1-2 mi
9308
Higher

EDR ID:	SRDCCA200731525
Facility number:	13418453
Facility name:	"PHELPS, SANDRA M "
Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	859 - 43RD
City:	OAKLAND

State: CA
Zip: 94608
Alt. address: 859 - 43RD
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "PHELPS, SANDRA M "
Licensee type: A
License effective date: 50921
License expiration date: Not Reported
License issue date: 050921
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 -NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMEMTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 050826
Facility closed date: Not Reported
Mailing address: 859 - 43RD
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "PHELPS, SANDRA M "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106547255

CE457 SRDCCA200721047
NNE EDR ID: SRDCCA200721047 Daycare
1-2 mi Facility number: 13417115
9351 Facility name: "BLUEFORD, BENITA "
Higher Facility eval. code: 0406
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 828 - 43RD STREET
City: OAKLAND
State: CA
Zip: 94608
Alt. address: 828 - 43RD STREET
City: OAKLAND
State: CA
Zip: 94608
Facility investor: "BLUEFORD, BENITA "
Licensee type: A
License effective date: 30917
License expiration date: Not Reported
License issue date: 030917
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 030701
Facility closed date: Not Reported
Mailing address: 828 - 43RD STREET
Mailing city: OAKLAND

Mailing state:	CA
Mailing zip:	94608
Contact person:	"BLUEFORD, BENITA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5106524372

CD458 SRDCCA200700119
NE EDR ID: SRDCCA200700119 Daycare
1-2 mi Facility number: 11440295
9354 Facility name: THUNDER ROAD CHEMICAL DEPENDENCY RECOVERY CENTER
Higher

Facility eval. code:	1507
Facility office number:	14
Facility county number:	01
Facility type code:	730
Facility status code:	03
Address:	390 - 40TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	390 - 40TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"ADOLESCENT TREATMENT CENTERS, INC. "
Licensee type:	D
License effective date:	931229
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	AGE RANGE 6 THROUGH 17 YEARS. PREFERS ADOLESCENTS WITH SUBSTANCE ABUSE PROBLEMS AGES 13-17. 2 MAY BE NON-AMBULATORY HOUSED IN ROOM #2 ONLY.
Original app. received date:	861215
Facility closed date:	Not Reported
Mailing address:	390 40TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94609
Contact person:	"GERSTEL, THOMAS "
Facility capacity:	50
Type of clients served:	950
Facility phone:	5106535040

CE459 SRDCCA200702793
North EDR ID: SRDCCA200702793 Daycare
1-2 mi Facility number: 10208058
9362 Facility name: "MORGAN, BARBARA "
Higher

Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	4308 MARKET ST
City:	OAKLAND

State:	CA
Zip:	94608
Alt. address:	4308 MARKET ST
City:	OAKLAND
State:	CA
Zip:	94608
Facility investor:	"MORGAN, BARBARA "
Licensee type:	A
License effective date:	960216
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP. 8 - NO MORE THAN 2 INFANTS,1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	841010
Facility closed date:	Not Reported
Mailing address:	4308 MARKET ST.
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94608
Contact person:	"MORGAN, BARBARA "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5106541685

460
East
1-2 mi
9479
Higher

SRDCCA200725638
Daycare

EDR ID:	SRDCCA200725638
Facility number:	13417402
Facility name:	"MYERS, MICHELLE "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	659 WESLEY AVENUE #4
City:	OAKLAND
State:	CA
Zip:	94610
Alt. address:	659 WESLEY AVENUE #4
City:	OAKLAND
State:	CA
Zip:	94610
Facility investor:	"MYERS, MICHELLE "
Licensee type:	A
License effective date:	40115
License expiration date:	Not Reported
License issue date:	040115
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	031121
Facility closed date:	Not Reported
Mailing address:	659 WESLEY AVENUE #4
Mailing city:	OAKLAND

Mailing state:	CA	
Mailing zip:	94610	
Contact person:	"MYERS, MICHELLE "	
Facility capacity:	8	
Type of clients served:	960	
Facility phone:	5102680071	

461
NNE
1-2 mi
9518
Higher

SRDCCA200716256
Daycare

EDR ID:	SRDCCA200716256
Facility number:	13416005
Facility name:	"FRAZIER, CYNTHIA "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	557 - 43RD STREET
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	557 - 43RD STREET
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"FRAZIER, CYNTHIA "
Licensee type:	A
License effective date:	11106
License expiration date:	Not Reported
License issue date:	011106
Program type:	"MAXIMUM CAPACITY: 12 CHILDREN, WITH NO MORE THAN 4 INFANTS, OR CAPACITY 14 CHILDREN WHEN 2 CHILDREN ARE AT LEAST 6 YEARS OF AGE WITH A MAXIMUM OF 3 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	011019
Facility closed date:	Not Reported
Mailing address:	557 - 43RD STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94609
Contact person:	"FRAZIER, CYNTHIA "
Facility capacity:	14
Type of clients served:	960
Facility phone:	5109230237

CF462
ESE
1-2 mi
9609
Higher

SRDCCA200717682
Daycare

EDR ID:	SRDCCA200717682
Facility number:	13416556
Facility name:	"KIM, HEE SOOK "
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1633 - 8TH AVENUE
City:	OAKLAND

State:	CA
Zip:	94606
Alt. address:	1633 - 8TH AVENUE
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	"KIM, HEE SOOK "
Licensee type:	A
License effective date:	20924
License expiration date:	Not Reported
License issue date:	020924
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	020806
Facility closed date:	Not Reported
Mailing address:	1633 - 8TH AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"KIM, HEE SOOK "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5108328071

CG463
NE
1-2 mi
9615
Higher

SRHO20070134360
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	ROUNSEVILLE CARE CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930204
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0602631
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	210 40TH ST WAY
Phone num:	5106582041
Termination reason:	00
Term Date:	20080831

Purpose of action:	Not Reported
Provider control:	04
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070134360

CG464
NE
1-2 mi
9615
Higher

SRHO20070110631
AHA Hospitals

Hospital type:	01
Num of times COO:	04
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	20060214
Medicare/Medicaid:	1
Facility name:	ROUNSEVILLE REHABILITATION CEN
Intermediary/Carrier:	52280
Medicaid number:	Not Reported
Partcipation date:	19880913
Prior COO date:	19910701
Prior carrier:	Not Reported
Provider ID:	555313
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	210 40TH STREET WAY
Phone num:	5106582041
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	03
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0070

Num cert beds:	0010	
Source:	US_HOSPITAL_POSOTHER	
Edr id:	SRHO20070110631	

CG465 SRHO20070010446
NE AHA Hospitals
1-2 mi
9615
Higher

Hospital type:	03
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	B
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19880520
Medicare/Medicaid:	2
Facility name:	ROUNSEVILLE MEM CONV HOSP
Intermediary/Carrier:	52280
Medicaid number:	Not Reported
Partcipation date:	19670101
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	055260
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	210 40TH ST WAY
Phone num:	4156582041
Termination reason:	05
Term Date:	19880619
Purpose of action:	3
Provider control:	03
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0070
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070010446

CG466 SRNH20060913999
NE Nursing Homes
1-2 mi
9615
Higher

Provnum:	555313
Nursinghomename:	ROUNSEVILLE REHABILITATION CEN
Street:	210 40TH STREET WAY
City:	OAKLAND
State:	CA

Zipcode:	94611
Phonenumber:	5106582041
Dateoflastinspection:	20060209
Certifiednumberofbeds:	10
Totalnumberofresidents:	7
Percofoccupiedbeds:	70
Categorydescription:	Participating in Medicare Only
Typeofownership:	For profit - Corporation
Locatedwithinahospital:	NO
Multinursinghomeownership:	YES
Residentandfamilycouncils:	BOTH
Edr id:	SRNH20060913999

CH467 SRDCCA200754529
SW Daycare
1-2 mi
9622
Lower

EDR ID:	SRDCCA200754529
Facility number:	13415427
Facility name:	HOME SWEET HOME CHILD CARE CENTER
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	2750 TODD STREET
City:	ALAMEDA
State:	CA
Zip:	94501
Alt. address:	2750 TODD STREET
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	ALTERNATIVES IN ACTION
Licensee type:	C
License effective date:	10223
License expiration date:	Not Reported
License issue date:	010223
Program type:	"AGES 2 YEARS TO FIRST GRADE ENTRY. HOURS OF OPERATION: MONDAY-FRIDAY, 7:30AM TO 6:00PM. OPERATING IN TWO ROOMS. "
Original app. received date:	001017
Facility closed date:	Not Reported
Mailing address:	2750 TODD STREET
Mailing city:	ALAMEDA
Mailing state:	CA
Mailing zip:	94501
Contact person:	LESLIE MEDINE
Facility capacity:	15
Type of clients served:	950
Facility phone:	5107484314

CH468 SRPU20071006195
SW Public Schools
1-2 mi
9622
Lower

Ncessch:	060177008674
Schname05:	BAY AREA SCHOOL OF ENTERPRISE
Mstreet05:	2750 TODD ST.

Mcity05:	ALAMEDA
Mstate05:	CA
Mzip05:	94501
Mzip405:	Not Reported
Member05:	91
Phone05:	(510) 748-4314
Locale05:	3
Type05:	1
Level05:	3
Gslo05:	09
Gshi05:	12
Edr id:	SRPU20071006195

CF469 SRHO20070134371
ESE AHA Hospitals
1-2 mi
9644
Higher

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19990607
Medicare/Medicaid:	1
Facility name:	HARRIET TUBMAN MEDICAL OFFICE
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0601896
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	819 FOOTHILL BLVD
Phone num:	5102868300
Termination reason:	00
Term Date:	20071009
Purpose of action:	2
Provider control:	04
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA

Edr id: SRHO20070134371

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470 SRDCCA200742623
ENE EDR ID: SRDCCA200742623 Daycare
1-2 mi Facility number: 13419241
9688 Facility name: "SALAZAR, ELIZA "
Higher Facility eval. code: 0203
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 654 VERNON ST #7
City: OAKLAND
State: CA
Zip: 94610
Alt. address: 654 VERNON ST #7
City: OAKLAND
State: CA
Zip: 94610
Facility investor: "SALAZAR, ELIZA "
Licensee type: A
License effective date: 70419
License expiration date: Not Reported
License issue date: 070419
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 070314
Facility closed date: Not Reported
Mailing address: 654 VERNON ST #7
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94610
Contact person: "SALAZAR, ELIZA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5109230320

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471 SRPU20071006197
SSW Ncessch: 060177011549 Public Schools
1-2 mi Schname05: RUBY BRIDGES ELEMENTARY
9691 Mstreet05: 351 JACK LONDON AVE.
Lower Mcity05: ALAMEDA
Mstate05: CA
Mzip05: 94501
Mzip405: Not Reported
Member05: -2
Phone05: M
Locale05: 3
Type05: 1
Level05: 4
Gslo05: N
Gshi05: N
Edr id: SRPU20071006197

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
472 ESE 1-2 mi 9773 Higher			SRDCCA200717494 Daycare
	EDR ID:	SRDCCA200717494	
	Facility number:	13416493	
	Facility name:	"HERRERA, GUADALUPE "	
	Facility eval. code:	0304	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	810	
	Facility status code:	03	
	Address:	1430 9TH AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94606	
	Alt. address:	1430 9TH AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94606	
	Facility investor:	"HERRERA, GUADALUPE "	
	Licensee type:	A	
	License effective date:	20912	
	License expiration date:	Not Reported	
	License issue date:	020912	
	Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "	
	Original app. received date:	020705	
	Facility closed date:	Not Reported	
	Mailing address:	1430 9TH AVENUE	
	Mailing city:	OAKLAND	
	Mailing state:	CA	
	Mailing zip:	94606	
	Contact person:	"HERRERA, GUADALUPE "	
	Facility capacity:	8	
	Type of clients served:	960	
	Facility phone:	5104441789	
473 East 1-2 mi 9776 Higher			SRDCCA200747082 Daycare
	EDR ID:	SRDCCA200747082	
	Facility number:	10210735	
	Facility name:	LAKEVIEW PRESCHOOL	
	Facility eval. code:	0203	
	Facility office number:	02	
	Facility county number:	01	
	Facility type code:	850	
	Facility status code:	03	
	Address:	515 GLENVIEW AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94610	
	Alt. address:	515 GLENVIEW AVENUE	
	City:	OAKLAND	
	State:	CA	
	Zip:	94610	
	Facility investor:	"WEINSTEIN, MADELINE J. & NEIL "	

Licensee type:	A
License effective date:	940712
License expiration date:	Not Reported
License issue date:	880204
Program type:	AGES 2.9 TO FIRST GRADE ENTRY. HOURSOF OPERATION: 7:45 A.M. TO 5:30 P.M. MONDAY - FRIDAY
Original app. received date:	870605
Facility closed date:	Not Reported
Mailing address:	515 GLENVIEW AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94610
Contact person:	"WEINSTEIN, MADELINE & NEIL"
Facility capacity:	24
Type of clients served:	950
Facility phone:	5104441725

CI474 SRDCCA200714678
North Daycare
1-2 mi
9855
Higher

EDR ID:	SRDCCA200714678
Facility number:	13415661
Facility name:	"MILLER, JENNIFER ANNE "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	949 45TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	949 45TH STREET
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"MILLER, JENNIFER ANNE "
Licensee type:	A
License effective date:	10514
License expiration date:	Not Reported
License issue date:	010514
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date:	010405
Facility closed date:	Not Reported
Mailing address:	949 45TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94609
Contact person:	"MILLER, JENNIFER ANNE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5106580232

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

475 SRDCCA200703265
ESE 1-2 mi 9908 Higher — Daycare

EDR ID:	SRDCCA200703265
Facility number:	10207482
Facility name:	"ALVA, ALICIA "
Facility eval. code:	0304
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	1830 - 8TH AVENUE
City:	OAKLAND
State:	CA
Zip:	94606
Alt. address:	1830 - 8TH AVENUE
City:	OAKLAND
State:	CA
Zip:	94606
Facility investor:	"ALVA, ALICIA "
Licensee type:	A
License effective date:	950801
License expiration date:	Not Reported
License issue date:	Not Reported
Program type:	"MAXIMUM CAPACITY: 6 CHILDREN, INCLUDING LICENSEE'S CHILDREN UNDER 10 YEARS OF AGE WHO RESIDE IN THE HOME, WITH NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY (INFANT MEANS A CHILD UNDER 2 YEARS OLD). "
Original app. received date:	840919
Facility closed date:	Not Reported
Mailing address:	1830 - 8TH AVENUE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"ALVA, ALICIA "
Facility capacity:	6
Type of clients served:	960
Facility phone:	5108322336

CJ476 SRHO20070108007
ENE 1-2 mi 9940 Lower — AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	060
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19951205
Medicare/Medicaid:	2
Facility name:	COMMUNITY CARE SERVICES INC
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19951220
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	557621

Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3640 GRAND AVE SUITE 209
Phone num:	5104444526
Termination reason:	01
Term Date:	20000216
Purpose of action:	1
Provider control:	03
Zip:	94610
Fips state:	06
Fips cnty:	013
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070108007

CJ477
ENE
1-2 mi
9940
Lower

SRHO20070107756
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	1
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	19980306
Medicare/Medicaid:	2
Facility name:	E M HEALTH SERVICES
Intermediary/Carrier:	00040
Medicaid number:	Not Reported
Partcipation date:	19970113
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	557770
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	3640 GRAND AVENUE SUITE 210
Phone num:	5104510651
Termination reason:	01
Term Date:	19990528
Purpose of action:	2

Provider control:	04
Zip:	94610
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	0
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070107756

CJ478 SRHO20070148148
ENE AHA Hospitals
1-2 mi
9940
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	E M HEALTH SERVICES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19960815
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0918656
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3640 GRAND AVENUE, SUITE #210
Phone num:	5104510651
Termination reason:	17
Term Date:	20000508
Purpose of action:	Not Reported
Provider control:	04
Zip:	94610
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000

Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070148148	

CJ479 SRHO20070148051
ENE AHA Hospitals
1-2 mi
9940
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	COMMUNITY CARE SERVICES
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19961010
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0920825
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	3640 GRAND AVENUE
Phone num:	5104444526
Termination reason:	08
Term Date:	19961010
Purpose of action:	Not Reported
Provider control:	04
Zip:	94619
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070148051

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480 SRDCCA200734959
SE Daycare
1-2 mi
9969
Higher

EDR ID:	SRDCCA200734959
Facility number:	13418755
Facility name:	"TINEY, MILDRED "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01

Facility type code:	810
Facility status code:	03
Address:	1179 10TH ST.
City:	OAKLAND
State:	CA
Zip:	94607
Alt. address:	1179 10TH ST.
City:	OAKLAND
State:	CA
Zip:	94607
Facility investor:	"TINEY, MILDRED "
Licensee type:	A
License effective date:	60626
License expiration date:	Not Reported
License issue date:	060626
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	060419
Facility closed date:	Not Reported
Mailing address:	1179 10TH ST.
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94607
Contact person:	"TINEY, MILDRED "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5103165671

481
ESE
1-2 mi
9980
Higher

SRPU20071012633
Public Schools

Ncessch:	062805004261
Schname05:	FRANKLIN ELEMENTARY
Mstreet05:	915 FOOTHILL BLVD.
Mcity05:	OAKLAND
Mstate05:	CA
Mzip05:	94606
Mzip405:	3013
Member05:	707
Phone05:	(510) 879-1060
Locale05:	1
Type05:	1
Level05:	1
Gslo05:	KG
Gshi05:	05
Edr id:	SRPU20071012633

CK482
NE
1-2 mi
9987
Higher

SRDCCA200732758
Daycare

EDR ID:	SRDCCA200732758
Facility number:	13418568
Facility name:	"DENNEHY, TIMOTHY & LAUREN "
Facility eval. code:	0203
Facility office number:	02
Facility county number:	01
Facility type code:	810

Facility status code:	03
Address:	40 GLEN AVE
City:	OAKLAND
State:	CA
Zip:	94611
Alt. address:	40 GLEN AVE
City:	OAKLAND
State:	CA
Zip:	94611
Facility investor:	"DENNEHY, TIMOTHY & LAUREN "
Licensee type:	A
License effective date:	60406
License expiration date:	Not Reported
License issue date:	060406
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	060118
Facility closed date:	Not Reported
Mailing address:	40 GLEN AVE
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94611
Contact person:	"DENNEHY, TIMOTHY & LAUREN "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5109239415

483
SSE
1-2 mi
10000
Lower

SRHO20070142604
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	ALAMEDA
Has plan of corr:	Not Reported
Compliance status:	A
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	20010720
Current survey date:	20050607
Medicare/Medicaid:	1
Facility name:	BERKELEY HEART LAB, INC
Intermediary/Carrier:	00542
Medicaid number:	Not Reported
Partcipation date:	19920901
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0861963
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	960 ATLANTIC AVE STE 100
Phone num:	5107471740

Termination reason:	00
Term Date:	20070923
Purpose of action:	2
Provider control:	07
Zip:	94501
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070142604

484
SW
1-2 mi
10020
Lower

SRDCCA200753257
Daycare

EDR ID:	SRDCCA200753257
Facility number:	13417425
Facility name:	ALAMEDA HEAD START - SUE MATHESON CENTER
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	670 WEST MIDWAY
City:	ALAMEDA
State:	CA
Zip:	94501
Alt. address:	2325 CLEMENT AVE
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	ALAMEDA FAMILY SERVICES
Licensee type:	C
License effective date:	31231
License expiration date:	Not Reported
License issue date:	031231
Program type:	AGES 2 TO FIRST GRADE ENTRY. 3 NON AMBULATORY CHILDREN ONLY. OPERATING8 AM TO 5:30 PM MON-FRI IN 3 CLASSROOMS OF A PORTABLE.
Original app. received date:	031212
Facility closed date:	Not Reported
Mailing address:	2325 CLEMENT AVE
Mailing city:	ALAMEDA
Mailing state:	CA
Mailing zip:	94501
Contact person:	DONNA HARRIS
Facility capacity:	60
Type of clients served:	950
Facility phone:	5105213443

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
485 East 1-2 mi 10075 Higher			SRPU20071012625 Public Schools
	Ncessch:	062805004251	
	Schname05:	CLEVELAND ELEMENTARY	
	Mstreet05:	745 CLEVELAND ST.	
	Mcity05:	OAKLAND	
	Mstate05:	CA	
	Mzip05:	94606	
	Mzip405:	1513	
	Member05:	328	
	Phone05:	(510) 879-1080	
	Locale05:	1	
	Type05:	1	
	Level05:	1	
	Gslo05:	KG	
	Gshi05:	05	
	Edr id:	SRPU20071012625	
486 NE 1-2 mi 10077 Higher			SRPR20051024527 Private Schools
	Pss school id:	A9302297	
	Pss inst:	ARCHWAY SCHOOL A PROGRAM OF WO	
	Lograde:	K	
	Higrade:	8	
	Pss address:	250 41ST ST	
	Pss city:	OAKLAND	
	Pss county no:	001	
	Pss county fips:	06001	
	Pss stabb:	CA	
	Pss fips:	06	
	Pss zip5:	94611	
	Pss phone:	5105474747	
	Pss sch days:	Not Reported	
	Pss stu day hrs:	6.5	
	Pss library:	Yes	
	Pss enroll ug:	Not Reported	
	Pss enroll pk:	Not Reported	
	Pss enroll k:	10	
	Pss enroll 1:	12	
	Pss enroll 2:	10	
	Pss enroll 3:	6	
	Pss enroll 4:	6	
	Pss enroll 5:	12	
	Pss enroll 6:	9	
	Pss enroll 7:	10	
	Pss enroll 8:	10	
	Pss enroll 9:	Not Reported	
	Pss enroll 10:	Not Reported	
	Pss enroll 11:	Not Reported	
	Pss enroll 12:	Not Reported	
	Pss enroll t:	85	
	Pss enroll tk12:	85	
	Pss race ai:	0	
	Pss race as:	8	
	Pss race h:	4	
	Pss race b:	11	
	Pss race w:	62	

Pss fte teach:	12.3
Pss locale:	1
Pss coed:	1
Pss type:	1
Pss level:	1
Pss relig:	3
Pss comm type:	1
Pss indian pct:	0
Pss asian pct:	9.41
Pss hisp pct:	4.71
Pss black pct:	12.94
Pss white pct:	72.94
Pss stdtch rt:	6.91
Pss orient:	29
Pss county name:	ALAMEDA
Pss assoc 1:	Not Reported
Pss assoc 2:	Not Reported
Pss assoc 3:	Not Reported
Pss assoc 4:	Not Reported
Pss assoc 5:	Not Reported
Pss assoc 6:	Not Reported
Pss assoc 7:	Not Reported
Source:	NCESDATA_E72D09B4
Edr id:	SRPR20051024527

487
NE
1-2 mi
10103
Higher

SRDCCA200739929
Daycare

EDR ID:	SRDCCA200739929
Facility number:	13419170
Facility name:	"BIVINS, JACQUELYNE "
Facility eval. code:	0404
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	4167 OPAL ST.
City:	OAKLAND
State:	CA
Zip:	94609
Alt. address:	4167 OPAL ST.
City:	OAKLAND
State:	CA
Zip:	94609
Facility investor:	"BIVINS, JACQUELYNE "
Licensee type:	A
License effective date:	70307
License expiration date:	Not Reported
License issue date:	070307
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date:	070112
Facility closed date:	Not Reported
Mailing address:	4167 OPAL ST.
Mailing city:	OAKLAND
Mailing state:	CA

Mailing zip:	94609
Contact person:	"BIVINS, JACQUELYNE "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5109861241

CL488 SRDCCA200750463
South Daycare
1-2 mi
10157
Lower

EDR ID:	SRDCCA200750463
Facility number:	10206051
Facility name:	COLLEGE OF ALAMEDA CHILDREN'S CENTER
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	555 ATLANTIC AVENUE
City:	ALAMEDA
State:	CA
Zip:	94501
Alt. address:	555 ATLANTIC AVENUE
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	PERALTA COMMUNITY COLLEGE DISTRICT
Licensee type:	F
License effective date:	921204
License expiration date:	Not Reported
License issue date:	891204
Program type:	"AGES 2 YRS TO FIRST GRADE ENTRY. PRESCHOOL COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT: INFANT, CAPACITY 12. TOTAL CAPACITY 110. HOURS OF OPERATION: MONDAY-FRIDAY, 7:45 A.M.-5:15 P.M. AND SATURDAY, "8:45 A.M.-5:15 P.M. IN SAME CLASSROOMS.
Original app. received date:	831101
Facility closed date:	Not Reported
Mailing address:	333 EAST 8TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"WATTS, VAL "
Facility capacity:	98
Type of clients served:	950
Facility phone:	5107482381

CL489 SRDCCA200742195
South Daycare
1-2 mi
10157
Lower

EDR ID:	SRDCCA200742195
Facility number:	10212102
Facility name:	COLLEGE OF ALAMEDA CHILDREN'S CENTER
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	830
Facility status code:	03
Address:	555 ATLANTIC AVENUE
City:	ALAMEDA

State:	CA
Zip:	94501
Alt. address:	555 ATLANTIC AVENUE
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	PERALTA COMMUNITY COLLEGE DISTRICT
Licensee type:	F
License effective date:	921204
License expiration date:	Not Reported
License issue date:	891204
Program type:	"AGES 12 MONTHS - 2 YEARS. INFANT COMPONENT OF A COMBINATION CENTER. OTHER COMPONENT: PRESCHOOL, CAPACITY 98. TOTAL CAPACITY: 110. HOURS OF OPERATION: MONDAY - FRIDAY, 7:45 A.M. - 5:15 P.M. AND ""SATURDAY, 8:45 A.M. - 5:15 P.M. "
Original app. received date:	881104
Facility closed date:	Not Reported
Mailing address:	333 EAST 8TH STREET
Mailing city:	OAKLAND
Mailing state:	CA
Mailing zip:	94606
Contact person:	"WATTS, VAL "
Facility capacity:	12
Type of clients served:	955
Facility phone:	5107482381

CL490 — SRPU20071006196
South — Public Schools
1-2 mi

Ncessch:	060177010547
Schname05:	ALAMEDA SCIENCE AND TECHNOLOGY INSTITUTE
Mstreet05:	555 ATLANTIC AVE.
Mcity05:	ALAMEDA
Mstate05:	CA
Mzip05:	94501
Mzip405:	Not Reported
Member05:	61
Phone05:	(510) 337-7094
Locale05:	3
Type05:	4
Level05:	4
Gslo05:	09
Gshi05:	10
Edr id:	SRPU20071006196

CL491 — SRCL20051000287
South — Colleges
1-2 mi

Unitid:	108667
Instnm:	COLLEGE OF ALAMEDA
Addr:	555 Ralph Appezzato Memorial Parkway
City:	ALAMEDA
Stabbr:	CA
Zip:	94501
Zip4:	Not Reported
Unk:	Not Reported
Fips:	094501

Oberge:	8
Chfnm:	Dr. Cecilia Cervantes
Chftitle:	PRESIDENT
Gentele:	5107482299
Fintele:	5107482391
Admtele:	5107482225
Ein:	941590799
Duns:	89179196
Opeid:	672000
Opeflag:	1
Webaddr:	www.peralta.edu
Sector:	4
Iclevel:	2
Control:	1
Hloffer:	3
Ugoffer:	1
Groffer:	2
Fpoffer:	2
Hdegoffer:	40
Deggrant:	1
Hbcu:	2
Hospital:	2
Medical:	2
Tribal:	2
Carnegie:	40
Locale:	2
Openpubl:	1
Act:	A
Newid:	-2
Deathyr:	-2
Closedat:	-2
Cyactive:	1
Postsec:	1
Pseflag:	1
Pset4flg:	1
Rptmth:	1
Fte:	2483
Enrtot:	5176
Edr id:	SRCL20051000287

CI492 SRDCCA200716477
North EDR ID: SRDCCA200716477 Daycare
1-2 mi Facility number: 13416031
10162 Facility name: "STAPLES, SHARON AND STAPLES, BETTY "
Higher Facility eval. code: 0202

Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	954 - 46TH STREET
City:	OAKLAND
State:	CA
Zip:	94608
Alt. address:	954 - 46TH STREET
City:	OAKLAND

State: CA
Zip: 94608
Facility investor: "STAPLES, SHARON AND STAPLES,BETTY "
Licensee type: A
License effective date: 20128
License expiration date: Not Reported
License issue date: 020128
Program type: "MAXIMUM CAPACITY: 6 CHILDREN WITH NO MORE THAN 3 INFANTS, OR 4 INFANTSONLY, OR CAPACITY 8 CHILDREN WHEN 2 ARE AT LEAST 6 YEARS OF AGE WITH AMAXIMUM OF 2 INFANTS; PROPERTY OWNER/LANDLORD CONSENT IS REQUIRED "
Original app. received date: 011102
Facility closed date: Not Reported
Mailing address: 954 - 46TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94608
Contact person: "STAPLES,SHARON & BETTY "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106521317

CM493 SRHO20070009003
SE AHA Hospitals
1-2 mi
10190
Higher

Hospital type: 01
Num of times COO: 00
Owner date: Not Reported
City: OAKLAND
Has plan of corr: Not Reported
Compliance status: Not Reported
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: Not Reported
Current survey date: Not Reported
Medicare/Medicaid: Not Reported
Facility name: SAN ANTONIO NEIGHBORHOOD HEALTH CENTER
Intermediary/Carrier: 00450
Medicaid number: Not Reported
Partcipation date: 19911001
Prior COO date: Not Reported
Prior carrier: 51140
Provider ID: 051822
Record Status: A
Region code: 09
Is Partial Record: Y
state abbrev: CA
ssa state: 05
state region cd: BK
street address: 1030 EAST 14TH ST
Phone num: 5102385400
Termination reason: 00
Term Date: Not Reported
Purpose of action: 1
Provider control: 02
Zip: 94606
Fips state: 06

Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070009003

CM494
SE
1-2 mi
10190
Higher

SRHO20070146320
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	SAN ANTONIO NEIGHBORHOOD HEALTH CENTER
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19961022
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0921215
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	M2
street address:	1030 INTERNATIONAL BOULEVARD
Phone num:	5102385432
Termination reason:	00
Term Date:	20070824
Purpose of action:	Not Reported
Provider control:	02
Zip:	94606
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070146320

CM495 SRDCCA200751346
ESE EDR ID: SRDCCA200751346 Daycare
1-2 mi Facility number: 13414809
10219 Facility name: OAKLAND HEAD START - FRANKLIN CENTER
Higher Facility eval. code: 0304
Facility office number: 02
Facility county number: 01
Facility type code: 850
Facility status code: 03
Address: 1010 EAST 15TH STREET
City: OAKLAND
State: CA
Zip: 94606
Alt. address: 150 FRANK OGAWA PLZ. STE. 5352
City: OAKLAND
State: CA
Zip: 94612
Facility investor: CITY OF OAKLAND HEAD START
Licensee type: F
License effective date: 124
License expiration date: Not Reported
License issue date: 000124
Program type: AGES 3 TO 5 YEARS.
HOURS OF OPERATION: 8:30A.M. TO 4:30P.M. SUBJECT TO CONDITIONS OF WAIVERS (2) TO BE POSTED.
Original app. received date: 991222
Facility closed date: Not Reported
Mailing address: 150 FRANK OGAWA PLZ. STE. 5352
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94612
Contact person: "BURNETT, ANDREA "
Facility capacity: 18
Type of clients served: 950
Facility phone: 5102381306

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496 SRDCCA200736179
SSW EDR ID: SRDCCA200736179 Daycare
1-2 mi Facility number: 13418944
10242 Facility name: "HAKIMZADA, SHINKAI "
Lower Facility eval. code: 0103
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 311 HOLLISTER AVE.
City: ALAMEDA
State: CA
Zip: 94501
Alt. address: 311 HOLLISTER AVE.
City: ALAMEDA
State: CA
Zip: 94501
Facility investor: "HAKIMZADA, SHINKAI "
Licensee type: A

License effective date: 61006
License expiration date: Not Reported
License issue date: 061006
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY.
CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 060802
Facility closed date: Not Reported
Mailing address: 311 HOLLISTER AVE.
Mailing city: ALAMEDA
Mailing state: CA
Mailing zip: 94501
Contact person: "HAKIMZADA, SHINKAI "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5107480268

CN497 SRPU20071015459
North Ncessch: 061263001426 Public Schools
1-2 mi Schname05: EMERY SECONDARY
10246 Mstreet05: 1100 47TH ST.
Higher Mcity05: EMERYVILLE
Mstate05: CA
Mzip05: 94608
Mzip405: 2908
Member05: 398
Phone05: (510) 601-4963
Locale05: 3
Type05: 1
Level05: 3
Gslo05: 07
Gshi05: 12
Edr id: SRPU20071015459

CK498 SRHO20070011709
NE Hospital type: 03 AHA Hospitals
1-2 mi Num of times COO: 00
10317 Owner date: Not Reported
Higher City: OAKLAND
Has plan of corr: 1
Compliance status: A
SSA county code: 000
Cross ref number: Not Reported
FMS survey date: 20051220
Current survey date: 20051121
Medicare/Medicaid: 1
Facility name: PIEDMONT GARDENS
Intermediary/Carrier: 52280
Medicaid number: ZZR06096F
Partcipation date: 19690707
Prior COO date: Not Reported
Prior carrier: 51051
Provider ID: 056096
Record Status: A

Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	BK
street address:	110 41ST STREET
Phone num:	5106547172
Termination reason:	00
Term Date:	Not Reported
Purpose of action:	2
Provider control:	05
Zip:	94611
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0094
Num cert beds:	0094
Source:	US_HOSPITAL_POSOTHER
Edr id:	SRHO20070011709

CK499
NE
1-2 mi
10317
Higher

SRHO20070141571
AHA Hospitals

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	OAKLAND
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	PIEDMONT GARDENS
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930818
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0723041
Record Status:	A
Region code:	09
Is Partial Record:	Y
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	110 41ST STREET
Phone num:	5106547172
Termination reason:	00
Term Date:	20080831
Purpose of action:	Not Reported
Provider control:	01

Zip:	94611	
Fips state:	06	
Fips cnty:	001	
SSA MSA:	418	
SSA MSA size code:	B	
Date accredited:	Not Reported	
Accred expire date:	Not Reported	
Accred Org:	Not Reported	
Num beds:	0000	
Num cert beds:	0000	
Source:	US_HOSPITAL_POSCLIA	
Edr id:	SRHO20070141571	

CK500 — SRNH20060901128
NE — Nursing Homes
1-2 mi
10317
Higher

Provnum:	056096
Nursinghomename:	PIEDMONT GARDENS
Street:	110 41ST STREET
City:	OAKLAND
State:	CA
Zipcode:	94611
Phonenumber:	5106547172
Dateoflastinspection:	20051117
Certifiednumberofbeds:	94
Totalnumberofresidents:	90
Percofoccupiedbeds:	96
Categorydescription:	Participating in Medicare and Medicaid
Typeofownership:	Non profit - Corporation
Locatedwithinahospital:	NO
Multinursinghomeownership:	YES
Residentandfamilycouncils:	BOTH
Edr id:	SRNH20060901128

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501 — SRDCCA200734395
North — Daycare
1-2 mi
10381
Higher

EDR ID:	SRDCCA200734395	
Facility number:	13418694	
Facility name:	"GILLESPIE, PAMELA	"
Facility eval. code:	0406	
Facility office number:	02	
Facility county number:	01	
Facility type code:	810	
Facility status code:	03	
Address:	4701 MARKET STREET	
City:	OAKLAND	
State:	CA	
Zip:	94608	
Alt. address:	4701 MARKET STREET	
City:	OAKLAND	
State:	CA	
Zip:	94608	
Facility investor:	"GILLESPIE, PAMELA	"
Licensee type:	A	
License effective date:	60608	
License expiration date:	Not Reported	
License issue date:	060608	

	Program type:	MAX. CAP(WHEN THERE IS AN ASSISTANT PRESENT): 12 - NO MORE THAN INFANTS. CAP 14 - NO MORE THAN 3 INFANTS. 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6.	4
	Original app. received date:	060216	
	Facility closed date:	Not Reported	
	Mailing address:	4701 MARKET STREET	
	Mailing city:	OAKLAND	
	Mailing state:	CA	
	Mailing zip:	94608	
	Contact person:	"GILLESPIE, PAMELA "	
	Facility capacity:	14	
	Type of clients served:	960	
	Facility phone:	5106898043	

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502 SRDCCA200731993
NNE EDR ID: SRDCCA200731993 Daycare
1-2 mi Facility number: 13418415
10426 Facility name: "ROSECARRINGTON, CHARVELLA "
Higher Facility eval. code: 0404
Facility office number: 02
Facility county number: 01
Facility type code: 810
Facility status code: 03
Address: 754 - 47TH STREET
City: OAKLAND
State: CA
Zip: 94609
Alt. address: 754 - 47TH STREET
City: OAKLAND
State: CA
Zip: 94609
Facility investor: "ROSECARRINGTON, CHARVELLA "
Licensee type: A
License effective date: 50818
License expiration date: Not Reported
License issue date: 050818
Program type: "MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "
Original app. received date: 050803
Facility closed date: Not Reported
Mailing address: 754 - 47TH STREET
Mailing city: OAKLAND
Mailing state: CA
Mailing zip: 94609
Contact person: "ROSECARRINGTON, CHARVELLA "
Facility capacity: 8
Type of clients served: 960
Facility phone: 5106531837

CN503 SRDCCA200754341
North EDR ID: SRDCCA200754341 Daycare
1-2 mi Facility number: 13416362
10439 Facility name: BERKELEY YMCA HDSTART/ST PRESCH EMERYVILLE MARINA
Higher

Facility eval. code:	0202
Facility office number:	02
Facility county number:	01
Facility type code:	850
Facility status code:	03
Address:	4727 SAN PABLO AVENUE
City:	EMERYVILLE
State:	CA
Zip:	94608
Alt. address:	2009 TENTH STREET
City:	BERKELEY
State:	CA
Zip:	94710
Facility investor:	"BERKELEY-ALBANY YMCA, INC. "
Licensee type:	C
License effective date:	20604
License expiration date:	Not Reported
License issue date:	020604
Program type:	"AGES 2 YEARS TO FIRST GRADE ENTRY. HOURS OF OPERATION: MONDAY-FRIDAY, 7:00AM TO 6:00PM. LICENSE INCLUDES 5 NON-AMBULATORY CHILDREN, OPERATING IN 2 PORTABLES. "
Original app. received date:	020423
Facility closed date:	Not Reported
Mailing address:	2009 TENTH STREET
Mailing city:	BERKELEY
Mailing state:	CA
Mailing zip:	94710
Contact person:	"THOMPSON, BETTY "
Facility capacity:	48
Type of clients served:	950
Facility phone:	5106556936

504
SW
1-2 mi
10522
Lower

SRDCCA200729437
Daycare

EDR ID:	SRDCCA200729437
Facility number:	13418323
Facility name:	"PETERS, MICHELLE A "
Facility eval. code:	0103
Facility office number:	02
Facility county number:	01
Facility type code:	810
Facility status code:	03
Address:	775 D ESTERBROOK CT
City:	ALAMEDA
State:	CA
Zip:	94501
Alt. address:	775 D ESTERBROOK CT
City:	ALAMEDA
State:	CA
Zip:	94501
Facility investor:	"PETERS, MICHELLE A "
Licensee type:	A
License effective date:	60217
License expiration date:	Not Reported
License issue date:	060217
Program type:	"MAX. CAP: 6 - NO MORE THAN 3 INFANTS OR 4 INFANTS ONLY. CAP 8 - NO MORE THAN 2 INFANTS, 1 CHILD IN KINDERGARTEN OR ELEMENTARY SCHOOL AND 1 CHILD AT LEAST AGE 6. "

Original app. received date:	050526
Facility closed date:	Not Reported
Mailing address:	775 D ESTERBROOK CT
Mailing city:	ALAMEDA
Mailing state:	CA
Mailing zip:	94501
Contact person:	"PETERS, MICHELLE A "
Facility capacity:	8
Type of clients served:	960
Facility phone:	5105233672

CO505 SRHO20070141878
SSE AHA Hospitals
1-2 mi
10541
Lower

Hospital type:	01
Num of times COO:	00
Owner date:	Not Reported
City:	ALAMEDA
Has plan of corr:	Not Reported
Compliance status:	Not Reported
SSA county code:	000
Cross ref number:	Not Reported
FMS survey date:	Not Reported
Current survey date:	Not Reported
Medicare/Medicaid:	Not Reported
Facility name:	CRITICAL CARE AMERICA
Intermediary/Carrier:	Not Reported
Medicaid number:	Not Reported
Partcipation date:	19930125
Prior COO date:	Not Reported
Prior carrier:	Not Reported
Provider ID:	05D0858228
Record Status:	A
Region code:	09
Is Partial Record:	Not Reported
state abbrev:	CA
ssa state:	05
state region cd:	LAB
street address:	1105 ATLANTIC AVENU SUITE 101
Phone num:	5105221492
Termination reason:	15
Term Date:	19940831
Purpose of action:	Not Reported
Provider control:	04
Zip:	94501
Fips state:	06
Fips cnty:	001
SSA MSA:	418
SSA MSA size code:	B
Date accredited:	Not Reported
Accred expire date:	Not Reported
Accred Org:	Not Reported
Num beds:	0000
Num cert beds:	0000
Source:	US_HOSPITAL_POSCLIA
Edr id:	SRHO20070141878

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
CO506			SRHO20070143134
SSE	Hospital type:	01	AHA Hospitals
1-2 mi	Num of times COO:	00	
10541	Owner date:	Not Reported	
Lower	City:	ALAMEDA	
	Has plan of corr:	Not Reported	
	Compliance status:	Not Reported	
	SSA county code:	000	
	Cross ref number:	Not Reported	
	FMS survey date:	Not Reported	
	Current survey date:	Not Reported	
	Medicare/Medicaid:	Not Reported	
	Facility name:	CRITICAL CARE AMERICA	
	Intermediary/Carrier:	Not Reported	
	Medicaid number:	Not Reported	
	Partcipation date:	19930114	
	Prior COO date:	Not Reported	
	Prior carrier:	Not Reported	
	Provider ID:	05D0857701	
	Record Status:	A	
	Region code:	09	
	Is Partial Record:	Not Reported	
	state abbrev:	CA	
	ssa state:	05	
	state region cd:	LAB	
	street address:	1105 ATLANTIC AVENUE #101	
	Phone num:	4155898330	
	Termination reason:	08	
	Term Date:	19930116	
	Purpose of action:	Not Reported	
	Provider control:	04	
	Zip:	94501	
	Fips state:	06	
	Fips cnty:	001	
	SSA MSA:	418	
	SSA MSA size code:	B	
	Date accredited:	Not Reported	
	Accred expire date:	Not Reported	
	Accred Org:	Not Reported	
	Num beds:	0000	
	Num cert beds:	0000	
	Source:	US_HOSPITAL_POSCLIA	
	Edr id:	SRHO20070143134	

RECORDS SEARCHED/DATA CURRENCY TRACKING

Census

Source: U.S. Census Bureau
Telephone: 301-763-4636
2010 U.S. Census data was used to estimate residential population following these EPA guidelines:
"Census data are presented by Census tract. If your circle covers only a portion of the tract, you should develop an estimate for that portion...Determine the population density per square mile (total population of the Census tract divided by the number of square miles in the tract) and apply that density figure to the number of square miles within your circle."

FED_LAND: Federal Lands

Source: USGS
Telephone: 888-275-8747
Federal lands data. Includes data from several Federal land management agencies, including Fish and Wildlife Service, Bureau of Land Management, National Park Service, and Forest Service. Includes National Parks, Forests, Monuments; . Wildlife Sanctuaries, Preserves, Refuges; Federal Wilderness Areas.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Colleges - Integrated Postsecondary Education Data

Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on integrated postsecondary education in the United States.

Arenas

Source: Dunhill International
EDR indicates the location of buildings and facilities - arenas - where individuals who are public receptors are likely to be located.

Prisons: Bureau of Prisons Facilities

Source: Federal Bureau of Prisons
Telephone: 202-307-3198
List of facilities operated by the Federal Bureau of Prisons.

Daycare Centers: Licensed Facilities

Source: Department of Social Services
Telephone: 916-657-4041

STREET AND ADDRESS INFORMATION

AIR.2 City of Oakland Significance Thresholds for GHG Emissions

Appendix AIR.2
City of Oakland Significance Thresholds for GHG Emissions

In 2009, Appendix G of the CEQA Guidelines was amended to provide screening questions to assist lead agencies when assessing a project's potential impacts with regard to GHG emissions, and additional amendments were made in 2018. The following thresholds of significance are consistent with CEQA Guidelines section 15064.4 and CEQA Guidelines Appendix G.

A significant impact would occur if the Proposed Project would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the CEQA Guidelines gives lead agencies the discretion to determine whether to assess the significance of GHG emissions quantitatively or qualitatively. Section 15064.4 recommends considering certain factors, among others, when determining the significance of a project's GHG emissions, including the extent to which the project may increase or reduce GHG emissions as compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs. None of the amendments establishes a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including by looking to thresholds developed by other public agencies, such as air districts, or suggested by experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (see Section 15064.7(c)).

The CNRA's *Final Statement of Reasons for Regulatory Action* from 2009 similarly provides that project-level quantification of emissions should be conducted where it would assist in determining the significance of emissions, even where no numeric threshold applies. In such cases, CNRA's guidance provides that qualitative thresholds can be utilized to determine the ultimate significance of project-level impacts based on a project's consistency with plans, which can include applicable regional transportation plans. Even when using a qualitative threshold, quantification can inform "the qualitative factors" and indicate "whether emissions reductions are possible, and, if so, from which sources" (CNRA, 2009).

Applicable Case Law

Center for Biological Diversity v. California Department of Fish and Wildlife

The California Supreme Court considered the CEQA issue of determining the significance of GHG emissions in its *Center for Biological Diversity v. California Department of Fish and Wildlife* decision

(62 Cal.4th 204), commonly referred to as the "Newhall Ranch" ruling, based on the project reviewed in the EIR in question. The Court questioned a then-common CEQA approach to GHG analyses for development projects that compares project emissions to the reductions from "business as usual" (BAU) that would be needed statewide to reduce emissions to 1990 levels by 2020, as required by AB 32. The court upheld the BAU method as valid in theory, but concluded that the BAU method was improperly applied in the case of the Newhall project because the target for the project was incorrectly deemed consistent with the statewide emission target of 29 percent below BAU for the year 2020 without explanation as to how that statewide target applied to the project being analyzed. In other words, the court said that the percentage below BAU target developed by the AB 32 Scoping Plan is intended as a measure of the GHG reduction effort required by the State as a whole, and it cannot necessarily be applied to the impacts of a specific project in a specific location. The Court provided some guidance to evaluating the cumulative significance of a proposed land use project's GHG emissions, but noted that none of the approaches could be guaranteed to satisfy CEQA for a particular project. The Court's suggested "pathways to compliance" include:

1. Use a geographically specific GHG emission reduction plan (e.g., a local climate action plan) that outlines how the jurisdiction will reduce emissions consistent with State reduction targets, to provide the basis for streamlining project-level CEQA analysis, as described in CEQA § 15183.5.

   The City's current Energy and Climate Action Plan (ECAP) has a planning horizon of 2020 and does not demonstrate how the City will achieve GHG emissions reductions by 2030 that are consistent with the goals of SB 32, meaning that the CAP would not adequately address full buildout of the proposed project, anticipated in 2027.

2. Utilize the Scoping Plan's business-as-usual (no-action-taken) reduction goal, but provide substantial evidence to bridge the gap between the statewide goal and the project's emissions reductions.

   The Court acknowledged that "a business-as-usual comparison based on the Scoping Plan's methodology may be possible," and that "a lead agency might be able to determine what level of reduction from business as usual a new land use development at the proposed location must contribute in order to comply with statewide goals."

3. Assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities; as an example, the Court points out that projects consistent with an SB 375 Sustainable Communities Strategy (SCS) may need to re-evaluate GHG emissions from cars and light trucks.

   This approach could work if it can be shown how regulatory programs or performance-based standards apply to a project's emissions, but this type of analysis can be difficult, especially if some GHG-emitting elements of projects are covered by such standards and others are not. Transportation emissions in particular are not regulated by the Scoping Plan because local government retains control over the location and density of residential and commercial development.

4. Rely on existing numerical thresholds of significance for GHG emissions, such as those developed by an air district.

   Number four is the most straightforward approach to analysis, since it relies on a "bright-line" project threshold typically based on total annual GHG emissions, or an or efficiency metric threshold typically based on total annual GHG emissions per service population. Relevant to this Project, the City has developed significance thresholds for GHG emissions, but as noted above they are designed to assess the impact of GHG emissions with regard to AB 32's 2020 target and not the 2030 target of SB 32.

The Court did not list the above pathways in order of importance or intentional sequence, nor require that they be relied upon in an analysis. However, this EIR considers the potential GHG emissions associated with the Project within the context of the Court's suggested pathways to compliance.

Golden Door v. County of San Diego

In *Golden Door Properties v County of San Diego* (2018), California's Fourth District Court of Appeal affirmed a trial court judgement that invalidated a document adopted by the County of San Diego that was intended as guidance for CEQA review of GHG impacts. The County's GHG guidance document included recommended guidelines for determining significance based on an efficiency metric of 4.9 metric tons of carbon dioxide equivalent per service population. The guidance stated that the efficiency metric represented the county's "fair share" of statewide emissions mandates.

The Court found that the threshold of significance provided by the efficiency metric was not supported by substantial evidence, because it was based on statewide standards with no explanation why those standards were sufficient for use in the county. Specifically, the court held that the county needed to support the efficiency metric with substantial evidence establishing a relationship between the statewide data used to establish the metric and the county-specific reduction targets. Additionally, the Court found that the county's guidance did not sufficiently explain how the efficiency metric would be appropriate across all project types.

City of Oakland Thresholds of Significance Guidelines

In 2016, the City of Oakland updated its CEQA Thresholds of Significance Guidelines which supplements the Environmental Checklist Form in Appendix G of the CEQA Guidelines (City of Oakland, 2016). Under the City established thresholds, the Project would have a significant adverse impact related to greenhouse gas emissions if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically:

    a. For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO2e annually [NOTE: Stationary sources are projects that require a BAAQMD permit to operate.].

    b. For a project involving a land use development, produce total emissions[1] of more than 1,100 metric tons of CO2e annually **AND** more than 4.6 metric tons of CO2e per service population annually [NOTE: Land use developments are projects that do not require a BAAQMD permit to operate. The service population includes both the residents and the employees of the project. The project's impact would be considered significant if the emissions exceed BOTH the 1,100 metric

[1] Note: The City's thresholds instruct that the project's expected GHG emissions during construction should be annualized over a period of 40 years and then added to the expected emissions during operation for comparison to the threshold. A 40-year period is used because 40 years is considered the average life expectancy of a building before it is remodeled with considerations for increased energy efficiency. The thresholds are based on the BAAQMD thresholds, which were originally developed for project operation impacts only. Therefore, combining both the construction emissions and operation emissions for comparison to the threshold represents a conservative analysis of potential greenhouse gas impacts.

tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if the project's emissions are below EITHER of these thresholds.][2]

2. Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.

However, these thresholds are generally based on the thresholds adopted by BAAQMD in June 2010, which are designed to assess the impact of GHG emissions with regard to the state's AB 32 target for 2020. The City of Oakland recognizes that with the passing of SB 32 in 2016 and the City Council's adoption of a 2030 city-wide target for GHG emissions in October 2018, that its current thresholds are outdated and not appropriate for assessing the GHG impact of the Project.

Section 15183.5 of the CEQA Guidelines states that a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted mitigation program, or plan for the reduction of GHG emissions that includes the following elements:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

The City of Oakland's ECAP, adopted in 2012, provides a set of strategies and supporting actions for achieving the City's 2020 GHG reduction targets, but it does not demonstrate how the City plans to reduce GHG emissions consistent with the State's post-2020 targets as represented by SB 32 and EO S-3-05, nor did it undergo environmental review. Thus, the 2012 ECAP is not considered a qualified GHG reduction strategy for the purposes of analyzing the significance of the Project's GHG emissions.

[2] Refer to the City's Standard Conditions of Approval for conditions related to greenhouse gas emissions (GHG) and requirements to reduce project GHG emissions even for projects with emissions below either of these thresholds. Also refer to the screening criteria contained in the BAAQMD CEQA Guidelines. For residential development projects, refer to the City's 2007-2014 Housing Element EIR screening criteria. The Housing Element EIR's analysis showed that residential development projects of less than 172 units would not result in a significant climate change impact and, therefore, no project-specific GHG analysis is required for such projects. Under an alternative approach in the Housing Element EIR, the analysis found that ANY residential development project (including those containing 172 or more units) would not result in a significant climate change impact and that no project-specific GHG analysis would be required. For residential projects containing 172 or more units, please consult with City Planning staff and the City Attorney's office on the appropriate GHG review. For nonresidential development projects and mixed-use development projects, the nonresidential component of the project must be compared to the BAAQMD screening criteria, and the applicable threshold if the screening criteria are exceeded, independently from any residential component of the project.

It can be reasoned that the City's 2030 GHG reduction goal of 56 percent below 2005 levels is more aggressive than the statewide goal of reducing GHG emissions 40 percent below 1990 levels based on SB 32. Although the City of Oakland did not conduct a 1990 emissions inventory, it is likely that 1990 emissions were less than 2005 emissions because the City grew significantly from 1990 to 2005 (10 percent increase in population). Therefore, if emissions were to scale roughly with population (which is a reasonable approximation absent actual inventory data), the City's 2030 target would represent a reduction of approximately 51 percent below 1990 levels. Looked at another way, statewide emissions in 2005 (486.1 $MMTCO_2e$) were approximately 13 percent greater than 1990 emissions (431 $MMTCO_2e$) (CARB, 2018). Adjusting for this growth, the statewide target of 40 percent below 1990 levels is roughly equivalent to 47 percent below 2005 levels. As such, the City's target of 56 percent below 2005 levels by 2030 is more aggressive than the state target of 40 percent below 1990 levels by 2030. Therefore, a project that meets the City's 2030 GHG reduction goal would also support the statewide 2030 GHG reduction goal.

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's CEQA Thresholds of Significance Guidelines related to transportation impacts to align with OPR's December 2018 guidance on implementation of SB 743 (OPR, 2018). Accordingly, in April 2017 the City issued its Transportation Impact Review Guidelines (TIRG) that specify the following thresholds of significance related to substantial additional VMT:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent;
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent;
- For retail projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.

Support for "No Net New" Emissions Threshold for the Athletics' New Ballpark Project

The "no net new" emissions threshold means that if the project would not emit any additional GHG emissions beyond the baseline, its impact would be less than significant. For the purposes of this analysis, baseline is defined as all emissions associated with events that would be relocated to the new ballpark, which includes Athletics'-related activities at the Coliseum in the year 2018. Baseline emissions were estimated for existing conditions (2018) and for future conditions based on existing activity at the Coliseum (year 2018), accounting for the effect of declining emission factors over time (e.g., estimated electricity emission factors and vehicle emission factors in future years as electricity and vehicles get cleaner over time). Net new emissions are calculated by subtracting baseline emissions from the Project's total emissions.

This threshold serves as a *project-specific* GHG threshold and does not set precedent for future City projects.[3] In the absence of an adopted ECAP update (qualified as a GHG reduction plan per Section

[3] Project-specific thresholds are not required to be formally adopted because the requirement for formal adoption of thresholds under 14 Cal Code Regs §15064(b) applies only to thresholds of general application. In addition, a lead agency has discretion to accept a threshold of significance developed by the experts preparing the EIR (*Mount Shasta Bioregional Ecology Ctr. V*

15183.5 of the CEQA Guidelines) to show how the city will achieve the City's adopted 2030 target through actual policy and program implementation within the City, this threshold serves as an interim project-specific threshold to determine compliance with the City's adopted 2030 target.

The "no net new" emissions threshold for the Project is consistent with the Project Sponsor's commitment to abide by the requirements of AB 734, which stipulates that the Project will not result in any net additional emissions of GHGs compared to the baseline, including GHG emissions from employee transportation.

OPR's Final Statement of Reasons for Senate Bill 97 revisions to the CEQA Guidelines state that, "AB32, and regulations implementing that statute, will require reductions in emissions from certain sectors in the economy, but do not preclude new emissions. Moreover, as explained in the Initial Statement of Reasons, the proposed amendments do not establish a zero emissions threshold of significance because there is no 'one molecule rule' in CEQA" (CNRA, 2009). Under CEQA, individual projects are only required to mitigate a fair share of the impact; a net zero threshold likely exceeds this fair share requirement. In addition, according to the Associated of Environmental Professionals, "It is a fundamental principle under CEQA that new projects cannot be required to mitigate impacts that they did not create. The statewide targets for 2020 and 2030 (and even 2050) are not zero GHG emissions; this is evidence that a zero threshold cannot be legally applied as a significance threshold under CEQA… a zero net additional threshold is not a "Less than Significant" threshold, but rather a "No Impact" Threshold" (AEP, 2017). Following this line of reasoning, meeting the "no net new" emissions standard for the Project would ensure that the Project would have a less than significant impact under CEQA.

Further, CARB's 2017 Scoping Plan Update advises that absent conformity with a qualified GHG reduction plan, projects should incorporate all feasible GHG reduction measures and that achieving "no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development (CARB, 2017)." [4]

CEQA Threshold of Significance for the Waterfront Ballpark District at Howard Terminal Project

Because the City has not adopted GHG-related CEQA Significance Thresholds for the SB 32 horizon year of 2030, and does not currently have a "qualified" GHG reduction strategy available for use beyond the year 2020, the City has elected to use project-specific thresholds for the purposes of the EIR evaluating the Waterfront Ballpark District at Howard Terminal Project (Project), consistent with CEQA Guidelines section 15064.4 and CEQA Guidelines Appendix G. Specifically, the Project would be deemed to have a significant adverse impact[5] related to GHG emissions if it would:

County of Siskiyou [2012] 2010 CA4th 184, 204) and the threshold of significance may be tailored to the project reviewed in the EIR (*Save Cuyama Valley v County of Santa Barbara* [2013] 2013 CA4th 1059, 1068).

4 At pages 100 - 101.

5 Greenhouse gas impacts are, by their nature, cumulative impacts because one project by itself cannot cause global climate change. These thresholds pertain to a project's contribution to cumulative impacts but are labeled "Project-Level Impacts" here to be consistent with the terminology used by BAAQMD.

1. Generate "net new" GHG emissions, either directly or indirectly, from the construction and operation of the Project;

2. Result in a conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The first threshold is consistent with the Project applicant's commitment to abide by the requirements of AB 734, which stipulates that the Project will not result in any net additional emissions of GHGs compared to the baseline. The no net new threshold is an appropriate CEQA significance threshold for this Project given this special State legislation and the unique major league ballpark Project use. This threshold is also consistent with language in the State's Scoping Plan and does not establish a precedent for use for any other project within the City.

The second threshold requires an assessment of the Project's consistency with applicable plans, policies or regulations adopted for the purpose of reducing the emissions of GHGs, including Plan Bay Area 2040, CARB's 2017 Climate Change Scoping Plan Update, and Executive Order S-3-05.

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AIR.3 Potential Health Effects of Air Quality Impacts

Prepared for
City of Oakland
Oakland, California

Prepared by
Ramboll US Corporation

Project Number
1690010168-008

Date
February 2020
(Modeling Analysis completed in August, 2019)

OAKLAND WATERFRONT BALLPARK DISTRICT PROJECT ADDITIONAL INFORMATION REGARDING POTENTIAL HEALTH EFFECTS OF AIR QUALITY IMPACTS

OAKLAND, CALIFORNIA

RAMBOLL

CONTENTS

ATTACHMENTS

1. INTRODUCTION

This report presents an estimate of the potential health effects of the emissions of criteria pollutants that may result from the adoption and implementation of the proposed mixed-use Oakland Waterfront Ballpark District Project in Oakland, California (referred to hereafter as "the Proposed Project" or "Project").

FRIANT RANCH DECISION

As background for this evaluation, Environmental Impact Reports (EIRs) prepared pursuant to the California Environmental Quality Act (CEQA) have long evaluated project-related health effects of toxic air contaminants, such as diesel particulate matter, through quantitative and/or qualitative means relative to air district-issued thresholds of significance. However, EIRs historically have not evaluated the specific health effects of project-related increases in criteria pollutants,[1] other than to note and summarize scientific literature regarding the general effect of those pollutants on health. Instead, in accordance with air district-issued thresholds of significance and industry standard practice at the time, CEQA analysis historically and traditionally focused on estimating project-related mass emissions totals for criteria pollutants and, in certain cases, conducting dispersion modeling to assess impacts on local ambient air quality concentrations.

In a recent court ruling in Sierra Club v. County of Fresno (Friant Ranch), the California Supreme Court determined the EIR was inadequate as it failed to correlate the significant increase in emissions that the project would generate to the adverse impacts on human health or explain why it is not scientifically possible to do so. In particular, the court noted that the project was significant for the emissions of criteria pollutants, including oxides of nitrogen (NOx), and particulate matter (PM), but did not explain the health effects of the emissions of these two pollutants as a result of the Project. Ramboll understands the court's ruling to apply to both attainment and non-attainment areas, as there was no apparent distinction between the two in the court ruling.

In this report, Ramboll presents one method that correlates project-related mass emissions totals for criteria pollutants to estimated health-based consequences. More specifically, in order to estimate the health effects of the increases of criteria pollutants for the proposed Project, Ramboll applied a photochemical grid model (PGM), Comprehensive Air Quality Model with extensions (CAMx), to estimate the small increases in concentrations of ozone and $PM_{2.5}$ in the region as a result of the emissions of criteria and precursor pollutants from the Project. We then applied a USEPA-authored program, the Benefits Mapping and Analysis Program Community Edition (BenMAP-CE, herein referred to as "BenMAP")[2], to estimate the resulting health effects from the small increases in concentration. Only the health effects of ozone and $PM_{2.5}$ are estimated, as those are the pollutants that USEPA uses in BenMAP to estimate the health effects of emissions of NOx, VOCs, and $PM_{2.5}$. Ozone and $PM_{2.5}$ have the most critical health effects and thus are the emissions evaluated to determine the Project's health effects.

[1] Criteria pollutants are those pollutants with an air pollution standard or pollutants which are precursors to those with a standard. Pollutants with an air pollution standard include nitrogen dioxide, sulfur dioxide, ozone, carbon monoxide, particulate matter smaller than 2.5 microns in diameter and 10 microns in diameter, and ozone. Precursor pollutants to criteria pollutants include oxides of nitrogen (NOx), oxides of sulfur (SOx), carbon monoxide (CO), and volatile organic compounds (VOCs).

[2] https://www.epa.gov/benmap/benmap-ce-manual-and-appendices.

ADDITIONAL EVALUATION

In light of a decision issued by the California Supreme Court issued in December 2018,[3] this analysis estimates the health effects of criteria pollutants and their precursors, specifically those that are evaluated by the U.S. Environmental Protection Agency (USEPA) in rulemaking setting the national ambient air quality standards: NOx, VOC [also known as reactive organic gases, or ROG, which are virtually the same as VOC with some slight differences] [4], CO, ozone, SO_2, and $PM_{2.5}$. USEPA's default health effect functions in BenMAP for PM use fine particulate ($PM_{2.5}$) as the causal PM agent, so the health effects of PM_{10} are represented using $PM_{2.5}$ as a surrogate. NOx and VOCs are not criteria air pollutants but, in the presence of sunlight, they form ozone and contribute to the formation of secondary $PM_{2.5}$ and thus are analyzed here. SO_2 and CO are not evaluated due to their small contribution to the formation of secondary $PM_{2.5}$ and ozone. The health effects from ozone and $PM_{2.5}$ are examined for this Project because the USEPA has determined that these criteria pollutants would have the greatest effect on human health. The emissions of other criteria pollutants and precursors, including VOC and NOx are analyzed in their contribution in the formation of ozone and secondary $PM_{2.5}$.

The evaluation presented herein serves to describe the potential health effects of the criteria pollutant emissions already disclosed. This evaluation does not make a new significance determination. Instead, this evaluation provides additional information regarding the potential health effects of the previously disclosed emissions.

[3] *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S219783

[4] Reactive organic gas (ROG) emissions are quantified and modeled as VOCs in this assessment. ROG means total organic gases minus ARB's "exempt" compounds (e.g., methane, ethane, CFCs, etc.). ROG is similar, but not identical, to USEPA's term "VOC", which is based on USEPA's exempt list, which is slightly different from ARB's list.

2. TECHNICAL APPROACH

The USEPA's air quality modeling guidelines (Appendix W[5]) and ozone and $PM_{2.5}$ modeling guidance[6] recommend using a PGM to estimate ozone and secondary $PM_{2.5}$ concentrations. The USEPA's modeling guidance does not recommend specific PGMs but provides procedures for determining an appropriate PGM on a case-by-case basis. Both the modeling guidelines and guidance note that the CAMx[7] and the Community Multiscale Air Quality (CMAQ[8]) PGMs have been used extensively in the past and would be acceptable PGMs. As such, the USEPA has prepared a memorandum[9] documenting the suitability for using CAMx and CMAQ for ozone and secondary $PM_{2.5}$ modeling of single-sources or group of sources.

The first step in the process is to run the PGM with appropriate information to assess the small increases in ambient air concentrations that the Project emissions may cause. PGMs require a database of information, including the spatial allocation of emissions, in the area to be modeled. This includes both base (background/existing) emissions and Project emissions. The latest publicly available PGM database for Northern California, which contains baseline emissions, was developed by the Bay Area Air Quality Management District (BAAQMD) in support of the 2012 Central California Ozone Study (CCOS)[10] and was adapted for this analysis. This PGM database is tailored for Northern California using California-specific input tools (e.g., the EMission FACtors (EMFAC)[11] mobile source emissions model) and uses a high-resolution 4-km horizontal grid to better simulate meteorology and air quality in the complex terrain and coastal environment of California. Project emissions included NO_X, respirable (PM_{10}) and fine ($PM_{2.5}$) primary particulate matter (PM), and VOCs. As discussed above, NO_X and VOC are precursors to ozone and are also precursors to secondarily formed $PM_{2.5}$.

To estimate the potential outcome of the proposed Project's emissions on ambient air concentrations, the Project's emissions were added to the CAMx 4-km annual PGM modeling database.[12] Operational and construction emissions from the Project were estimated as described in Section 2 of the main report.[13] For all pollutants, for any year, the maximum operational emissions at full buildout were greater than construction emissions. In order to estimate the worst-case outcome, the operational full build out emissions were used (year 2027). Upon the Athletics' departure from the existing stadium (the Coliseum), a permanent reduction in Athletics-related emissions potential at the Coliseum is anticipated. However, baseline emissions were conservatively not subtracted from the Project emissions in this evaluation.

For use in PGMs, each Project emissions source must be spatially distributed across the modeling grid cells so that they can be incorporated into the gridded emission inventory. The total unmitigated

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[5] https://www3.epa.gov/ttn/scram/appendix_w/2016/AppendixW_2017.pdf.

[6] https://www3.epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling_Guidance-2018.pdf.

[7] http://www.camx.com/.

[8] https://www.epa.gov/cmaq.

[9] https://www3.epa.gov/ttn/scram/guidance/clarification/20170804-Photochemical_Grid_Model_Clarification_Memo.pdf.

[10] http://www.baaqmd.gov/about-air-quality/research-and-data/research-and-modeling.

[11] https://www.arb.ca.gov/emfac/.

[12] BAAQMD performed WRF meteorological modeling for the CCOS 4-km domain and 2012 calendar year that has been processed by WRFCAMx to generate CAMx 2012 4-km meteorological inputs for the CCOS domain. The CMAQ 2012 emissions have been converted to the format used by CAMx using the CMAQ2CAMx processor.

[13] To the extent that the main report used conservative inputs to estimate Project-related criteria pollutants and precursors, the analysis provided herein also is conservatively influenced by those inputs.

emission inventory for the Project was used in the analysis. This includes architectural coatings, VOCs in consumer products, natural gas combustion, landscaping equipment, emergency generators, and emissions associated with motor vehicle use and transportation refrigeration unit (TRU) use. The emissions from architectural coatings, consumer products, natural gas combustion, landscaping equipment, emergency generators, and TRU idling are located onsite, and were therefore allocated to the grid cells representing the Project site. The mobile source category includes both passenger vehicles and trucks. The TRU exhaust category includes exhaust that occurs during travel to the Project site. The mobile and TRU sources are also spatially distributed in both the site's grid cells, as well as the immediately adjacent grid cells. While it is expected that passenger vehicles and trucks may travel some distance outside of the Project site, they were conservatively distributed near the site's grid cells based on travel routes. Annual emission estimates from the Project were spatially gridded, temporally allocated, and chemically speciated to be used for photochemical grid modelling using the Sparse Matrix Operator Kerner Emissions (SMOKE) emissions modelling system supported by the USEPA. The emissions inventory, spatial allocation, and SMOKE inputs and outputs are shown in Attachment A.

As discussed above, the Northern California 2012 CCOS modeling database was used for this project. The Northern California 4-km PGM modeling databases is based on a 2012 base meteorological year. The 2035 future year projections were used for this analysis, as that is the nearest future year with base emissions available as of the date of this report. The Project's emissions were isolated by the source apportionment tools in CAMx to obtain the incremental ozone and $PM_{2.5}$ concentration changes due to the Project's emissions. More details and inputs for the PGM modeling are included in Attachment B.

Following completion of the CAMx source apportionment modeling, Ramboll used the USEPA's BenMAP[14, 15] program to estimate the potential health effects of the Project's contribution to ozone and $PM_{2.5}$ concentration. BenMAP uses the concentration estimates produced by CAMx, along with population and health effect concentration-response (C-R) functions, to estimate various health effects of the concentration increases. BenMAP has a wide history of applications by the USEPA and others, including for local-scale analysis[16] as needed for assessing the health effects of a project's emissions. We used the USEPA default BenMAP health effects C-R functions that are typically used in national rulemaking, such as the health effects assessment[17] for the 2012 $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS). The USEPA default health endpoints for $PM_{2.5}$ include mortality (all causes), hospital admissions (respiratory, asthma, cardiovascular), emergency room visits (asthma), and acute myocardial infarction (non-fatal). For ozone, the USEPA default health endpoints are mortality, emergency room visits (respiratory) and hospital admissions (respiratory). Details on the BenMAP inputs and outputs and definitions for the health effects are shown in Attachment C.

[14] https://www.epa.gov/benmap/how-benmap-ce-estimates-health-and-economic-effects-air-pollution.

[15] https://www.epa.gov/sites/production/files/2015-04/documents/benmap-ce_user_manual_march_2015.pdf.

[16] https://www.epa.gov/benmap/benmap-ce-applications-articles-and-presentations#local.

[17] https://www3.epa.gov/ttn/naaqs/standards/pm/data/PM_RA_FINAL_June_2010.pdf.

3. RESULTS

This section presents the results of the health effects analysis for the incremental increases in $PM_{2.5}$ and ozone resulting from primary and precursor emissions for these constituents. The results presented here describe the potential health effects of the criteria pollutant emissions already disclosed, and the results themselves do not constitute a new significance determination.

There are a number of conservative assumptions built into this evaluation, beginning with the quantification of emissions themselves. These conservative assumptions include, but are not limited to, the following:

- Assumption that emissions are unmitigated with the exception of Tier 4 generators and low-VOC paints (discussed further in Attachment A);
- Use of maximum daily emissions (discussed further in Attachment A), with the exception of mortality health effects from $PM_{2.5}$;
- No removal of baseline emissions (discussed further in Attachment A);
- Assumption that health effects occur at any concentration, including small incremental concentrations (discussed further in Attachment C);
- Assumption that all $PM_{2.5}$ is of equal toxicity (discussed further in Attachment C);

As such, results presented below are meant to represent an upper bound of potential health effects, and actual effects may be zero.

POTENTIAL HEALTH EFFECTS

Overall, the estimated change in health effects from ozone and $PM_{2.5}$ are minimal in light of background incidences. Specifically, for all the health endpoints quantified, the number of estimated incidences is between 0.000046% and 0.0020% of the background health incidence. The “background health incidence” is an estimate of the average number of people that suffer from some adverse health effect in a given population over a given period of time, in the absence of additional emissions from the Project. Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. Background health incident rates presented in this report are over the full model domain, as defined in Attachment B. When taken into context, the small increase in incidences and the very small percent of the number of background incidences indicate that these health effects are minimal in a developed, urban environment.

$PM_{2.5}$-related health effects attributed to Project-related increases in ambient air concentrations included asthma-related emergency room visits (1.11 incidences per year), asthma-related hospital admissions (0.087 incidences per year), all cardiovascular-related hospital admissions (not including myocardial infarctions) (0.18 incidences per year), all respiratory-related hospital admissions (0.42 incidences per year), mortality (1.54 incidences per year),[18] and nonfatal acute myocardial infarction (less than 0.096 incidences per year for all age groups).

Ozone-related health effects attributed to Project-related increases in ambient air concentrations included respiratory-related hospital admissions (0.15 incidences per year), mortality (0.078

[18] Since the mortality health endpoint uses an annual average concentration, results here reflect the use of average daily $PM_{2.5}$ emissions, instead of maximum daily $PM_{2.5}$ emissions. Resulting $PM_{2.5}$ concentrations are mostly from primary $PM_{2.5}$ emissions (see Attachment B), thus only average versus maximum primary $PM_{2.5}$ is used for this adjustment.

incidences per year), and asthma-related emergency room visits (lower than 0.79 incidences for ages 0-17 and less than 1.20 incidences for ages 18-99).

As noted above, health effects presented here conservatively utilize maximum daily emissions (with the exception of mortality health effects from $PM_{2.5}$), assumed to occur for an entire year. Should average daily emissions be used, results would be even lower.

The health effects from ozone and $PM_{2.5}$ are minimal in light of background incidences. We did not quantify the potential health effects from other criteria air pollutants, as the USEPA has recently stopped quantifying the health impacts and economic costs for additional air pollutants (other than ozone and $PM_{2.5}$). As an example, for NO_2, USEPA has noted that uncertainty remains regarding the independent effects of NO_2 from other air pollutants, including ozone and $PM_{2.5}$ (USEPA, 2016). Additionally, in 2017, USEPA concluded that a quantitative risk assessment was not supported for NO_2, stating that there were significant limitations in the available epidemiological studies including "the potential for copollutant confounding of the NO_2 association, potential bias due to exposure measurement error, and the shape of the concentration-response function." (USEPA, 2017)

UNCERTAINTY

Analyses that evaluate the changes in concentrations resulting from individual sources and the health impacts of increases or decreases in pollutants as a result of regulation on a localized basis are routinely done. This analysis does not tie the changes in concentration to a specific health effect in an individual; however, it does use scientific correlations of certain types of health effects from pollution to estimate effects on the population at large.

There is a degree of uncertainty in these results from a combination of the uncertainty in the emissions themselves, the change in concentration resulting from the PGM, and the uncertainty of the application of the C-R functions. All simulations of physical processes, whether ambient air concentrations or health effects from air pollution, have a level of uncertainty associated with them due to simplifying assumptions. The overall uncertainty is a combination of the uncertainty associated with each piece of the modeling study, in this case, the emissions quantification, the emissions model, the PGM, and BenMAP. While these results reflect a level of uncertainty, regulatory agencies, including the USEPA have judged that, even with the uncertainty, they provide sufficient information to the public to allow them to understand the potential health effects of increases or decreases in air pollution.

The approach and methodology of this analysis ensures that the uncertainty is of a conservative nature. In addition to the conservative assumptions built into the emissions noted above, there are a number of assumptions built into the application of C-R functions in BenMAP that may lead to an overestimation of health effects. For example, for all-cause mortality impacts from $PM_{2.5}$, these estimates are based on a single epidemiological study that found an association between $PM_{2.5}$ concentrations and mortality. While similar studies suggest that such an association exists, there remains uncertainty regarding a clear causal link. This uncertainty stems from the limitations of epidemiological studies, such as inadequate exposure estimates and the inability to control for many factors that could explain the association between $PM_{2.5}$and mortality such as lifestyle factors like smoking or exposures to other air pollutants. Several reviews have evaluated the scientific evidence of health effects from specific particulate components (e.g., Rohr and Wyzga 2012; Lippmann and Chen, 2009; Kelly and Fussell, 2007). These reviews indicate that the evidence is strongest for combustion-derived components of PM including elemental carbon (EC), organic carbon (OC) and various metals (e.g., nickel and vanadium); however, there is still no definitive data that points to any particular component of PM as being more toxic than other components. The USEPA has also stated that results

from various studies have shown the importance of considering particle size, composition, and particle source in determining the health effects of PM (USEPA, 2009). Further, the USEPA (2009) found that studies have reported that particles from industrial sources and from coal combustion appear to be the most significant contributors to PM-related mortality, consistent with the findings by Rohr and Wyzga (2012) and others. This is particularly important to note here, as the majority of PM emissions generated from the Project are from brakewear, tirewear, and entrained roadway dust (see Attachment A), and not from combustion. Therefore, by not considering the relative toxicity of PM components, the results presented here are conservative.

For both the $PM_{2.5}$ and ozone health effects calculated, each of the pollutants may be a confounder of the other. Thus, while the C-R functions are from studies that evaluated the effects for each pollutant individually, both air pollutants could contribute to the health effect outcomes evaluated, and thus the overall impacts may be overstated.

Another uncertainty highlighted by the USEPA (2012) which applies to potential health effects from both $PM_{2.5}$ and ozone, is the assumption of a log-linear response between exposure and health effects, without consideration for a threshold below which effects may not be measurable. The issue of a threshold for $PM_{2.5}$ and ozone is highly debated and can have significant implications for health effects analyses as it requires consideration of current air pollution levels and calculating effects only for areas that exceed threshold levels. Without consideration of a threshold, effects of any change in air pollution below or above the threshold are assumed to adversely affect health. Although the USEPA traditionally does not consider thresholds in its cost-benefit analyses, the NAAQS itself is a health-based threshold level that the USEPA has developed based on evaluating the most current evidence of health effects.

As noted above, the health effects estimation using this method presumes that effects seen at large concentration differences can be linearly scaled down to small concentration differences, with no consideration of potential thresholds below which health effects may not occur. This methodology of linearly scaling health effects is broadly accepted for use in regulatory evaluations and is considered as being health protective (USEPA, 2010). In summary, health effects presented in this report are conservatively estimated, and the actual effects may be zero.

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ATTACHMENT A
EMISSIONS INVENTORY, SPATIAL ALLOCATION, AND SMOKE SETUP

1. INTRODUCTION

As discussed earlier, operational emissions from the Project were estimated using methodologies consistent with the California Emissions Estimator Model (CalEEMod®) and Project-specific data, where available. The model employs widely accepted calculation methodologies for emission estimates combined with appropriate default data if site-specific information is not available.

Annual emission estimates from the Project need to be spatially gridded, temporally allocated, and chemically speciated to be used for photochemical grid modeling. The Sparse Matrix Operator Kerner Emissions (SMOKE) emissions modeling system (Coats, 1996; Coats and Houyoux, 1996)[19] is used for this process.

2. PROJECT EMISSIONS AND SPATIAL ALLOCATION

Emissions were estimated for the Project to support the PGM and are allocated into 4 km x 4 km grid cells. This section describes those emissions and how they were spatially allocated.

2.1 Project Emissions and Spatial Allocation

For use in PGMs, emissions must be spatially allocated over the area so that they can be incorporated into the gridded emission inventory. The maximum daily 2027 emission inventory for the Project is below in Table 2-1a. Upon the Athletics' departure from the existing stadium (the Coliseum), a permanent reduction in Athletics-related emissions potential at the Coliseum is anticipated. However, baseline emissions were conservatively not subtracted from the Project emissions in this evaluation.

Mobile source emissions were split into categories based on the EMFAC2017 emission rates. For particulate matter, less than 2.5 microns in diameter ($PM_{2.5}$) emissions are used in the modeling; less than 10 microns in diameter (PM_{10}) emissions are presented for information below. SO_2 and CO are not included in this evaluation due to their small contribution to the formation of secondary $PM_{2.5}$ and ozone.

Since construction emissions are less than operational emissions for all pollutants, the potential health effects evaluated from the operational emissions below will cover any potential health effects during construction years.

Table 2-1a. Maximum Daily Criteria Air Pollutant Emissions Estimates

Emission Category	ROG[20]	NOx	PM_{10}	$PM_{2.5}$
	lbs/day	lbs/day	lbs/day	lbs/day
Mobile	87	187	204	47
Diurnal	4.6	--	--	--
Hotsoak	12	--	--	--
Idling Exhaust	1.4	1.5	0.0062	0.0053
Brakewear	--	--	48	21
Tirewear	--	--	11	2.6
Resting Loss	4.8	--	--	--

[19] https://www.cmascenter.org/smoke/

[20] ROG means total organic gases minus ARB's "exempt" compounds (e.g., methane, ethane, CFCs, etc.). ROG is similar, but not identical, to USEPA's term "VOC", which is based on USEPA's exempt list, which is slightly different from ARB's list. ROG emissions are modeled as VOC emissions in this assessment.

Road Dust	--	--	143	21
Running Exhaust	7.6	110	2.0	1.8
Running Loss	33	--	--	--
Starting Exhaust	24	75	0.27	0.25
Energy	2.1	19	1.5	1.5
Consumer Products	108	--	--	--
Landscaping	7.5	2.9	1.4	1.4
Architectural Coatings	18	--	--	--
Stationary Sources	3.7	9.2	0.41	0.33
TRU	0.059	0.44	0.0031	0.0029
Total	227	219	207	50

All emissions listed in Table 2-1a represent the maximum daily operational emissions estimated for the proposed Project's 2027 buildout scenario. Emissions were derived following methodologies as outlined in Section 2.3 of the main report. Maximum daily mobile emissions were calculated assuming the maximum day would be a weekday with an evening game at the ballpark. Maximum daily emissions for TRUs were calculated assuming 1 event would occur on that maximum day. Maximum daily emissions for emergency generators assume 1 hour of testing for all generators. Landscaping emissions were calculated assuming 180 days/year of landscaping equipment usage. Maximum daily emissions for all other emissions categories were assumed to equal the average day emissions. Emissions are unmitigated with the exception of the inclusion of Tier 4 generators and the use of low-VOC paint. Unmitigated mobile emissions assume the implementation of TDM measures. This analysis utilizes the 2027 full-build out operational emissions as they constitute the highest maximum daily emissions for the Project. The analysis presented here conservatively assumes maximum daily emissions occur over an entire year. Should average daily emissions be used, corresponding results would be lower.

Table 2-1b below presents maximum versus average daily $PM_{2.5}$ emissions. Average daily emissions account for non-routine events (e.g. stadium events), averaged over a year.

Table 2-1b. Maximum versus Average $PM_{2.5}$ Emissions

Emission Category	$PM_{2.5}$	
	Average	Maximum
	lbs/day	lbs/day
Mobile	31	47
Diurnal	--	--
Hotsoak	--	--
Idling Exhaust	0.0050	0.0053
Brakewear	14	21
Tirewear	1.8	2.6
Resting Loss	--	--
Road Dust	14	21
Running Exhaust	1.3	1.8

Table 2-1b. Maximum versus Average $PM_{2.5}$ Emissions		
Emission Category	$PM_{2.5}$	
	Average	Maximum
	lbs/day	lbs/day
Running Loss	--	--
Starting Exhaust	0.17	0.25
Energy	1.5	1.5
Consumer Products	--	--
Landscaping	0.68	1.4
Architectural Coatings	--	--
Stationary Sources	0.045	0.33
TRU	7.2E-04	0.0029
Total	31	50
% Reduction	34%	

Mobile emissions include light, medium, and heavy-duty vehicles. Table 2-2 below provides a summary of the spatial distribution of mobile emissions broken down by highway and major roadway. Values in this table were calculated based on estimated average vehicle miles traveled (VMT). Traffic volumes and VMT in West Oakland were provided by Fehr & Peers for both freeways and surface streets.[21]

Table 2-2. Mobile Emission Distribution

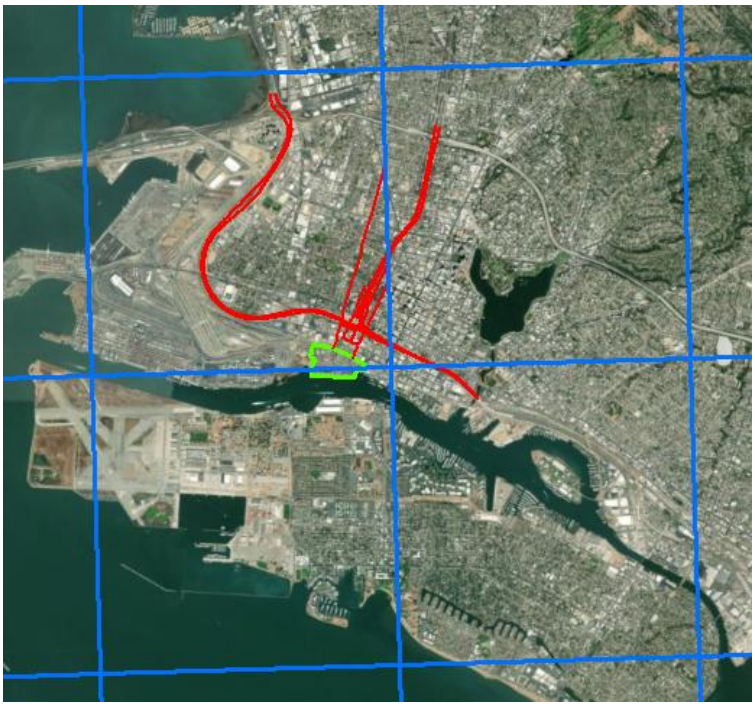
Highway/Roadway	Distribution (%)
Interstate 880	40%
Interstate 980	28%
Market Street	15%
Martin Luther King, Jr. Way	6.2%
Brush Street	3.9%
Castro Street	4.0%
3rd Street	0.90%
5th Street	0.49%
7th Street	0.47%

Project emissions are allocated across the Project site into 4 km x 4 km grid cells for the PGM. Figure 2-1 below shows the Project boundary overlayed with the 4-km grid. The Project site is shown in green, and the highways and major roadways are shown in red. The 4 km x 4 km grid is presented on the figure with 4 blue grid cells containing Project emissions. For highways and major roadways that

[21] Fehr and Peers. 2019. Local Street and Freeway Forecasts - Howard Terminal. March 21

cross into multiple cells, emissions were allocated proportionally based on the length of roadway within each cell. While the full extent of travel may extend beyond the links shown below, this approach conservatively models all emissions in the immediate Project vicinity, near local population centers, and thus may overstate actual outcomes.

Figure 2-1. Overlap of Model Grid Cells on Project Site



2.2 Converting Project Inventories to SMOKE Input Format

The first step in the emissions processing was to convert the Project emission inventory into the Flat File 2010 (FF10) format for input to SMOKE. We assigned appropriate Source Classification Codes (SCCs) to the Project emissions sources. Table 2-3 provides SCC assigned to each project source.

Table 2-3. Assigned SCC to Project Emission Sources

Emission Source	SCC	SCC Description
Energy	2102006000	Stationary Source Fuel Combustion; Industrial; Natural Gas; Total: Boilers and IC Engines
Mobile -LDA	220100111B	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural[22] Interstate: Brake Wear
Mobile -LDA	220100111R	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Resting Loss
Mobile -LDA	220100111S	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Start

[22] Rural and Urban mobile designations provide equivalent chemical speciation and temporal distributions, as the EMFAC mobile emissions model does not distinguish between the two.

Emission Source	SCC	SCC Description
Mobile -LDA	220100111T	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Tire Wear
Mobile -LDA	220100111V	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Evap (except Refueling)
Mobile -LDA	220100111X	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Exhaust
Mobile -LDT1	220102011B	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Brake Wear
Mobile -LDT1	220102011R	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Resting Loss
Mobile -LDT1	220102011S	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Start
Mobile -LDT1	220102011T	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Tire Wear
Mobile -LDT1	220102011V	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Evap (except Refueling)
Mobile -LDT1	220102011X	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Exhaust
Mobile -HHDT	2201070110	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Total
Mobile -HHDT	220107011B	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Brake Wear
Mobile -LHDT1	220107011I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Idling
Mobile -HHDT	220107011R	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Resting Loss
Mobile -HHDT	220107011S	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Start
Mobile -HHDT	220107011T	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Tire Wear
Mobile -HHDT	220107011V	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Evap (except Refueling)
Mobile -HHDT	220107011X	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Exhaust
Mobile -OBUS	220107013B	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Brake Wear

Emission Source	SCC	SCC Description
Mobile -OBUS	220107013I	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Idling
Mobile -OBUS	220107013R	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Resting Loss
Mobile -OBUS	220107013S	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Start
Mobile -OBUS	220107013T	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Tire Wear
Mobile -OBUS	220107013V	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Evap (except Refueling)
Mobile -OBUS	220107013X	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Exhaust
Mobile -MCY	220108011B	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Brake Wear
Mobile -MCY	220108011R	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Resting Loss
Mobile -MCY	220108011S	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Start
Mobile -MCY	220108011T	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Tire Wear
Mobile -MCY	220108011V	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Evap (except Refueling)
Mobile -MCY	220108011X	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Exhaust
Mobile -LDA	223000111B	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Vehicles (LDDV); Rural Interstate: Brake Wear
Mobile -LDA	223000111T	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Vehicles (LDDV); Rural Interstate: Tire Wear
Mobile -LDA	223000111X	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Vehicles (LDDV); Rural Interstate: Exhaust
Mobile -LDT1	223006011B	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Trucks 1 thru 4 (M6) (LDDT); Rural Interstate: Brake Wear
Mobile -LDT1	223006011T	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Trucks 1 thru 4 (M6) (LDDT); Rural Interstate: Tire Wear
Mobile -LDT1	223006011X	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Trucks 1 thru 4 (M6) (LDDT); Rural Interstate: Exhaust
Mobile -LHDT1	223007111B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Brake Wear
Mobile -LHDT1	223007111I	Mobile Sources; Highway Vehicles – Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Idling

Emission Source	SCC	SCC Description
Mobile -LHDT1	223007111T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Tire Wear
Mobile -LHDT1	223007111X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Exhaust
Mobile -MHDT	2230072110	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Total
Mobile -LHDT2	223007211B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Brake Wear
Mobile -LHDT2	223007211I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Idling
Mobile -LHDT2	223007211T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Tire Wear
Mobile -LHDT2	223007211X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Exhaust
Mobile -HHDT	223007311B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Brake Wear
Mobile -HHDT	223007311I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Idling
Mobile -HHDT	223007311S	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Start
Mobile -HHDT	223007311T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Tire Wear
Mobile -HHDT	223007311X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Exhaust
Mobile -OBUS	223007513B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Brake Wear
Mobile -OBUS	223007513I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Idling
Mobile -OBUS	223007513S	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Start
Mobile -OBUS	223007513T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Tire Wear
Mobile -OBUS	223007513X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Exhaust
TRU	2270003060	Mobile Sources; Off-highway Vehicle Diesel; Industrial Equipment; AC Refrigeration
Landscaping	2270004010	Mobile Sources; Off-highway Vehicle Diesel; Lawn and Garden Equipment; Lawn Mowers (Residential)

Emission Source	SCC	SCC Description
Emergency generators	2270006005	Mobile Sources; Off-highway Vehicle Diesel; Commercial Equipment; Generator Sets
Fugitive Dust	2294000000	Mobile Sources; Paved Roads; All Paved Roads; Total: Fugitives
Architectural Coating	2401001000	Solvent Utilization; Surface Coating; Architectural Coatings; Total: All Solvent Types
Consumer Products	2460000000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Processes; Total: All Solvent Types
Consumer Products	2460100000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Personal Care Products; Total: All Solvent Types
Consumer Products	2460200000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Household Products; Total: All Solvent Types
Consumer Products	2460400000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Automotive Aftermarket Products; Total: All Solvent Types
Consumer Products	2460500000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Coatings and Related Products; Total: All Solvent Types

2.2.1 Generate Spatial Surrogates for 4-km Domains

As part of the analysis, the Project source emissions need to be spatially allocated to appropriate geographic locations. The emissions can be allocated to modeling grid cells using gridding surrogates. To process the Project emissions, a Project area-based spatial surrogate was developed. The surrogate was developed using the US Environmental Protection Agency (USEPA's) Spatial Allocation Tool,[23] which combines geographical information system (GIS)-based data (shapefiles) and modeling domain definitions to generate the appropriate gridded surrogate data set. The Project sources were then assigned specific surrogates for gridding by cross-referencing the SCCs. As mentioned above, all Project emissions were distributed in the modeling grid cells where the Project is located as shown in Figure 2-1. The mobile sources are spatially distributed in the site's grid cells and surrounding grid cells, as outlined in Table 2-2.

2.2.2 SMOKE 4 km Processing of Project Emissions

SMOKE system was used to process emissions for the Northern California 4-km modeling grid shown in Figure 2-1. A representative week from each month (seven days a month) was used to represent the entire month's emissions. Holidays were modeled separately as if they were a Sunday. SMOKE was applied to perform following tasks:

1. Chemical Speciation: Emission estimates of criteria air pollutants were speciated for the SAPRC07 AERO6 chemical mechanism employed in CMAQ in SMOKE processing. We used speciation profiles compatible with the SAPRC07 AERO6 mechanism for $PM_{2.5}$ from the BAAQMD's modeling system to be consistent with the regional modeling emissions. We then converted those emissions into CAMx-ready formats using CMAQ2CAMx conversion program and species mapping.

[23] https://www.cmascenter.org/sa-tools/documentation/4.2/html/srgtool/SurrogateToolUserGuide_4_2.pdf

2. Temporal Allocation: Annual emission estimates were resolved on an hourly timescale for CAMx modeling. These allocations were determined from the particular source category, specified by the SCC. Monthly, weekly, and diurnal profiles were cross-referenced to SCC to provide the appropriate temporal resolution. The temporal profiles were also obtained from the BAAQMD's emissions modeling system.
3. Spatial Allocation: The Project emission estimates were spatially resolved to the grid cells for modeling using spatial surrogates as described above.

2.2.3 QA/QC of Emissions Modeling

Standard quality assurance/quality control (QA/QC) was conducted during all aspects of the SMOKE emissions processing. These steps followed the approach recommended in USEPA modeling guidance (USEPA, 2007). SMOKE includes quality assurance (QA) and reporting features to keep track of the adjustments at each processing stage and ensure that data integrity is not compromised. We carefully reviewed the SMOKE log files for error messages and ensured that appropriate source profiles were used. All error records reported during processing were reviewed and resolved. This is important to ensure that source categories are correctly characterized. We also compared SMOKE input and output emissions: Summary tables were generated to compare input inventory totals against model-ready output totals to confirm consistency. Spatial plots were generated to visually verify correct spatial allocation of the emissions.

2.2.4 Merge SMOKE Pre-merged Emissions to Generate CAMx-ready Emission Inputs

The final step in the emissions processing is to merge the Project gridded emissions with other regional components through the gridded merge program (MRGUAM) for CAMx. We merged the daily emissions in the time format required by CAMx.

2.2.5 Emissions Summary

Summaries of the Project gridded CAMx model-ready emissions data are provided in this section. Table 2-4 and Table 2-5 summarize the annual emission inventory data input to SMOKE from the FF10 data files in pounds per day by project source types, by pollutants and by project regions. The consistency in data in Table 2-4 and Table 2-5 as well as Table 2-1 offer confidence in the correct operation of the SMOKE emissions processing for CAMx.

Table 2-4. Project Emission Inventory Data Input to SMOKE by Source Type (lbs/day)

Type	NO_X	VOC	PM_{10}	$PM_{2.5}$
Mobile	187.1	87.4	203.7	46.7
Energy	18.9	2.1	1.5	1.5
Consumer Products	0.0	107.9	0.0	0.0
Landscaping	2.9	7.5	1.4	1.4
Architectural Coatings	0.0	18.3	0.0	0.0
Emergency Generators	9.2	3.7	0.4	0.3
TRU	0.44	0.06	0.00	0.00
Total	218.6	226.9	207.0	49.9

Abbreviations:
NOx - Nitrogen Oxides
$PM_{2.5.}$ - Particulate Matter less than 2.5 microns in diameter
$PM_{10.}$ - Particulate Matter less than 10 microns in diameter
VOC - Volatile Organic Compounds

Table 2-5. Project Emission Inventory Data Output from SMOKE by Project Region (lbs/day)

Type	NO_X	VOC	PM_{10}	PM_{2_5}
Onsite	31.3	139.6	3.3	3.2
Offsite	187.3	87.4	203.7	46.7
Total	218.6	226.9	207.0	49.9

Abbreviations:
NOx - Nitrogen Oxides
$PM_{2.5.}$ - Particulate Matter less than 2.5 microns in diameter
$PM_{10.}$ - Particulate Matter less than 10 microns in diameter
VOC - Volatile Organic Compounds

Spatial displays of the gridded emissions data are presented below. We examined the gridded emissions in 4-km grid to verify accurate spatial allocation by SMOKE. Figures 2-2 through 2-5 displays gridded emissions for the Project inventory in the 4-km modeling grid.

Figure 2-2. Spatial Distribution of NO_x Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

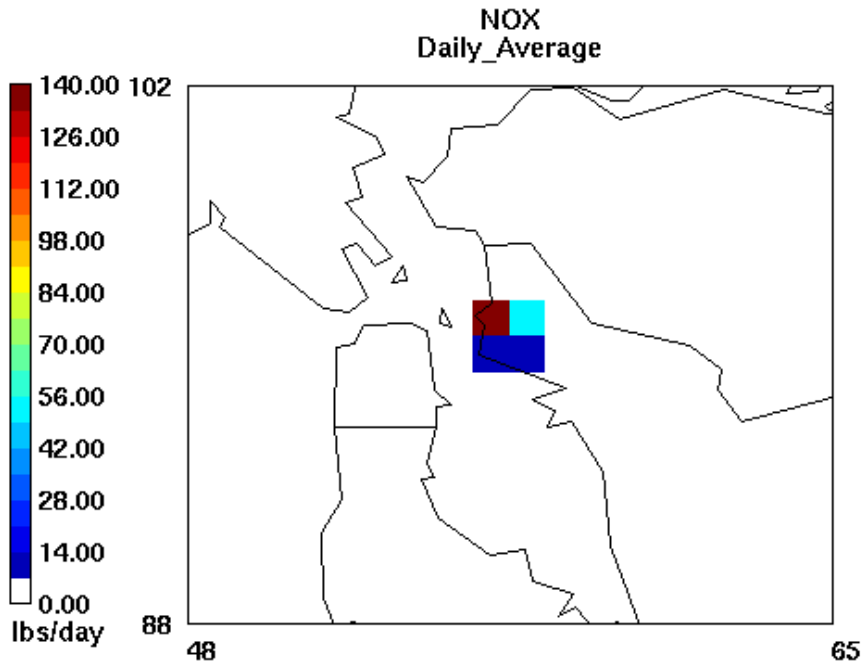


Figure 2-3. Spatial Distribution of VOC Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

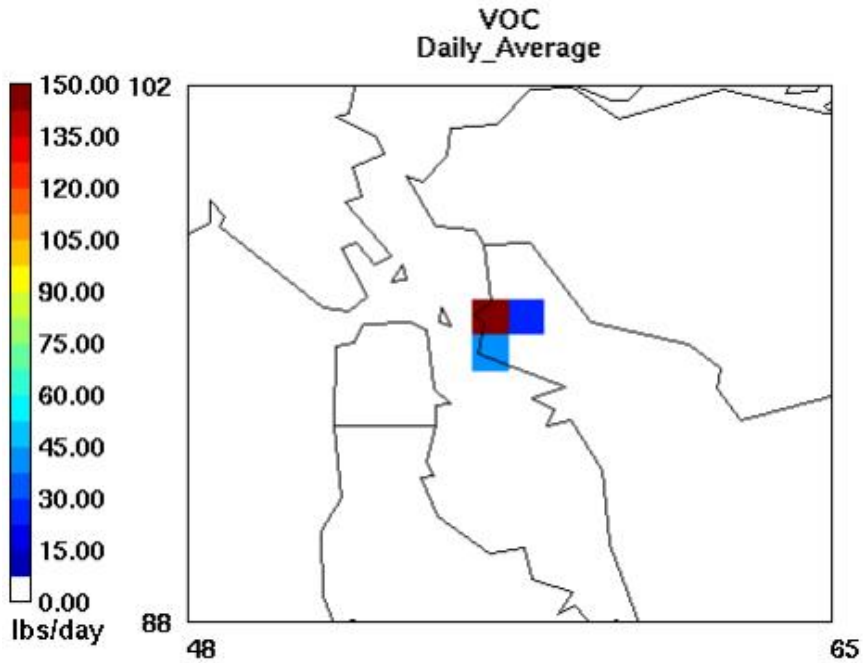


Figure 2-4. Spatial Distribution of PM_{10} Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

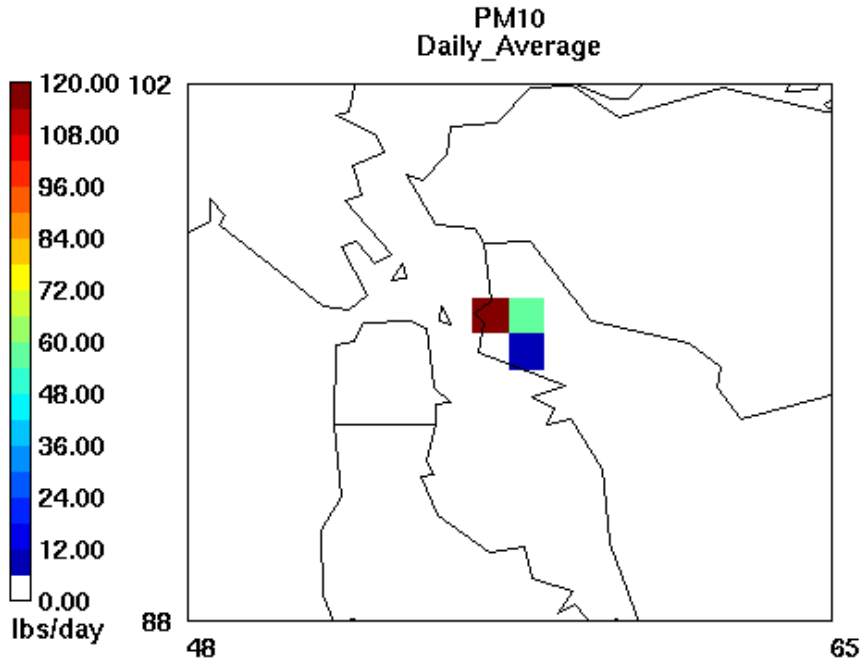
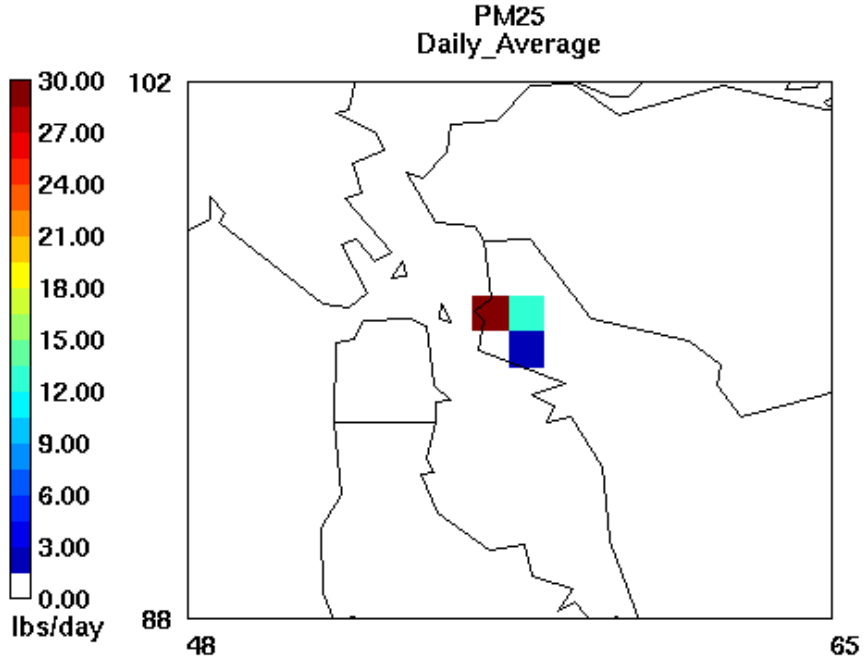


Figure 2-5. Spatial Distribution of $PM_{2.5}$ Emissions (in lbs/day) for the Project in the Northern California 4-km Domain



3. REFERENCES

/1/ Coats Jr., C.J., 1996. High-performance algorithms in the Sparse Matrix Operator Kernel Emissions (SMOKE) modeling system. Proc. Ninth AMS Joint Conference on Applications of Air Pollution Meteorology with AWMA. Amer. Meteor. Soc., Atlanta, GA, 584-588.

/2/ Coats Jr., C.J., Houyoux, M.R., 1996. Fast Emissions Modeling with the Sparse Matrix Operator Kernel Emissions (SMOKE) Modeling System. The Emission Inventory: Key to Planning, Permits, Compliance, and Reporting, Air & Waste Management Association. New Orleans, Louisiana.

/3/ EPA, 2007. Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5 and Regional Haze. Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC. EPA-454/B-07-002.

ATTACHMENT B
PGM INPUTS, OUTPUTS, AND ASSUMPTIONS

1. REGIONAL AIR QUALITY MODELING PLATFORM

The Northern California 2012 4-km CAMx modeling database and a projected 2035 emissions database was used in this assessment. The 2012 base case is based on a Photochemical Grid Model (PGM) modeling databases developed by the BAAQMD. The BAAQMD PGM database is tailored for California using California-specific input tools (e.g., the EMFAC[24] mobile source emissions model) and use a high-resolution 4-km horizontal grid to better simulate meteorology and air quality in the complex terrain and coastal environment of California. This contrasts with EPA's national modeling platforms[25] used for national rulemakings (e.g., transport rules such as CSAPR[26] or defining new NAAQS) that use a coarser 12-km horizontal grid resolution.

The BAAQMD selected the computational domain shown in Figure 1-1 below to keep consistency with the 2000 Central California Ozone Study (CCOS) (BAAQMD, 2009). The CCOS was established to understand and investigate the ozone formation in Central California, therefore the computational domain included all Central California and portions of Northern California.

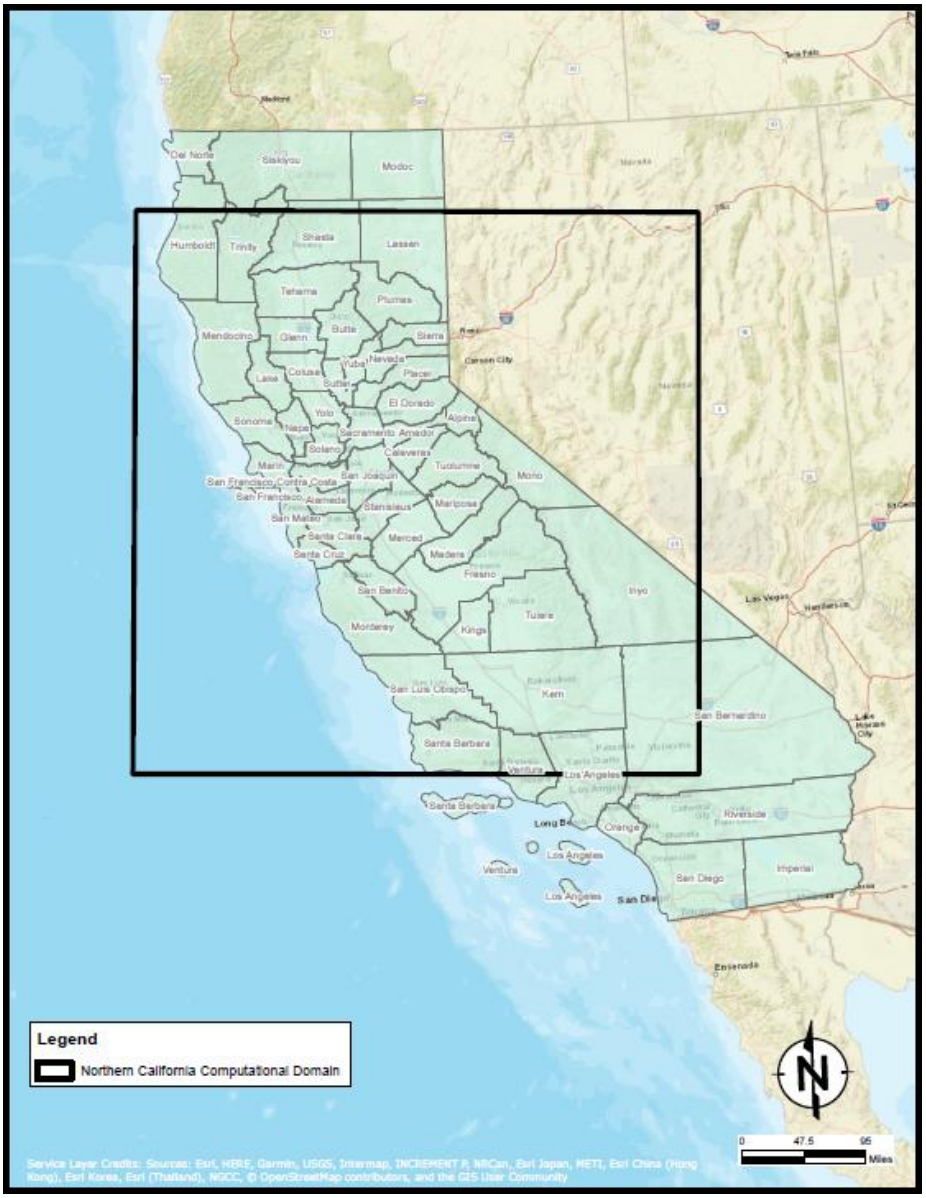
Details of the model inputs, configuration, and results are presented in Section 2 of this Attachment.

[24] https://www.arb.ca.gov/emfac/

[25] https://www.epa.gov/air-emissions-modeling/2014-2016-version-7-air-emissions-modeling-platforms

[26] https://www.epa.gov/csapr

Figure 1-1. Air quality modeling domain for Northern California[27]



2. REGIONAL GRID MODELING

In this section we describe the regional PGM modeling setup to assess the outcome of the Project emissions on the ambient $PM_{2.5}$ levels in the region. The 2012 base case modeling databases were developed by the BAAQMD for the Community Multiscale Air Quality (CMAQ) PGM. The CMAQ annual 2012 4-km modeling database and annual 2012 4-km Weather Research and Forecasting (WRF) meteorological model output files were obtained from the BAAQMD. The BAAQMD CMAQ and WRF 2012 4-km data were then processed to obtain 2012 4-km annual PGM modeling database for the Comprehensive Air Quality Model with extensions (CAMx). The following paragraphs described how

[27] https://ww3.arb.ca.gov/research/cabots/docs/9a-cabots-baaqmd-20170419.pdf

Ramboll developed the CAMx 2012 4-km annual database used in this study, starting with the BAAQMD CMAQ and WRF 2012 4-km data. Preparation of the Project emissions inputs for CAMx is discussed in Attachment A.

2.1 Model Inputs and Configuration

Ramboll converted the 2012 CMAQ 2-D and in-line point emissions files from BAAQMD to CAMx area-/point-source emissions files using the CMAQ2CAMx interface program.[28] Seasalt emissions were developed using an emissions processor that integrates published sea spray flux algorithms to estimate sea salt particulate matter emissions for input to CAMx. The CAMx sea salt emissions were then merged with area emissions files. We projected CAMx emissions data to 2035 using county, pollutant and source category-specific growth factors derived from ARB's California Emissions Projection Analysis Model (CEPAM) 2016 state implementation plan (SIP) inventory. CEPAM estimates emissions for a specific year based on growth and control factors. The growth factors account for county-specific economic activity profiles, population forecasts, and other socio/demographic activity. The control factors reflect the effects of adopted emission control rules.

The most commonly used prognostic meteorological models to provide meteorological fields for air quality modeling are the WRF model (Skamarock et al., 2005) and the Fifth-Generation Mesoscale Model (MM5; Grell et al, 1994). MM5, a nonhydrostatic, prognostic meteorological model developed in the 1970s by Pennsylvania State University and the National Center for Atmospheric Research (NCAR), has been widely used for urban- and regional-scale photochemical, fine particulate, and regional haze regulatory modeling studies. However, development of MM5 ceased in 2006 and WRF has become the new standard model for regulatory air quality applications in the US. WRF was jointly developed by NCAR and the National Center for Environmental Prediction in late 1990s. It has been under continuous development, improvement, testing and open peer-review and is used world-wide by hundreds of researchers and practitioners. BAAQMD adopted WRF version 3.8 for the 2012 simulations. For the current application, the meteorology remains unchanged for the future year simulation and BAAQMD WRF 2012 4-km model outputs were processed using the WRFCAMx[29] processor to generate the meteorological fields ready for CAMx. The WRF model employs a terrain-following coordinate system defined by pressure, using multiple layers that extend from the surface to 50 millibars (approximately 19 kilometers above ground level [AGL]). A layer averaging scheme is adopted for CAMx simulations to reduce the computational burden. Table 2-1 presents the mapping from the WRF vertical layer structure to the CAMx vertical layers.

[28] http://www.camx.com/download/support-software.aspx.

[29] WRFCAMx is available on the CAMx website (http://www.camx.com/download/support-software.aspx)

Table 2-1 Vertical layer structure for WRF and CAMx modeling.

WRF		CAMx			
Layer	Height (m)	Layer	Height (m)	Thickness (m)	Sigma[a]
50	19260	28	19260	2625	0.0000
49	16635				
48	14423				
47	12436	27	12436	1849	0.1339
46	10587				
45	9234				
44	8100	26	8100	960	0.3119
43	7140				
42	6324				
41	5629	25	5629	594	0.4630
40	5034				
39	4524				
38	4086	24	4086	376	0.5806
37	3710				
36	3387				
35	3097	23	3097	261	0.6668
34	2835				
33	2600				
32	2389	22	2389	191	0.7341
31	2198				
30	2028				
29	1873	21	1873	139	0.7863
28	1735				
27	1609				
26	1497	20	1497	102	0.8261
25	1396				
24	1304	19	1304	87	0.8471
23	1217				
22	1133	18	1133	81	0.8661
21	1052				
20	974	17	974	75	0.8840
19	899				
18	827				
17	758	16	758	66	0.9088
16	692	15	692	64	0.9165
15	628				
14	566	14	566	59	0.9312
13	507	13	507	57	0.9382
12	450	12	450	53	0.9450
11	398	11	398	50	0.9513
10	348	10	348	46	0.9573
9	302	9	302	44	0.9629
8	258	8	258	40	0.9682
7	218	7	218	38	0.9731
6	180	6	180	36	0.9777
5	144	5	144	32	0.9821
4	112	4	112	31	0.9861
3	81	3	81	29	0.9899
2	52	2	52	27	0.9935
1	25	1	25	25	0.9969
0	0	0	0	0	1.0000

[a] The sigma vertical coordinate system is used to simplify the equations solved by atmospheric models and is defined as sigma = $(p-p_T)/(p_S - p_T)$ where p is pressure and the subscripts T and S stand for the top and surface values of the model atmosphere, respectively.

The lateral boundary conditions (BCs) for the 4-km state-wide modeling grid were extracted from a global model simulation for the year 2012. The Model for Ozone and Related Chemical Tracers Version 4 (MOZART-4; Emmons et al., 2010) is a global chemical transport model developed jointly by NCAR, the Geophysical Fluid Dynamics Laboratory, and the Max Planck Institute for Meteorology. It simulates chemistry and transport of tropospheric gases and bulk aerosols. The MOZART-4 simulation with updated meteorological fields derived from the National Aeronautics and Space Administration's Goddard Earth Observing System Model Version 5 (GEOS-5)[30] were downloaded from the UCAR website[31] and the MOZART2CAMx processor was used to derive both the boundary and the initial conditions for the modeling. Five days of spin-up periods were used for the 4-km grids to minimize the influence of the initial conditions.

Additional data used in the air quality modeling include ozone column data from the Ozone Monitoring Instrument (OMI) which continues the Total Ozone Mapping Spectrometer (TOMS) record for total ozone and other atmospheric parameters related to ozone chemistry (OMI officially replaced the TOMS ozone column satellite data on January 1, 2006). OMI data are available every 24-hours and are obtained from the TOMS ftp site.[32] The CAMx O3MAP program reads the OMI ozone column text file data and interpolates to fill gaps and generated gridded daily ozone column input data. The OMI data is used in the CAMx (TUV) radiation models which is a radiative transfer model that develops clear-sky photolysis rate inputs for CAMx. The landuse file was generated with the WRFCAMx processor and modified to remove lakes and set coastal waters with a surf zone width of 50 m, this file was used to update the emissions database and provide more realistic representation of sea salt emissions.

Table 2-2 presents the CAMx configuration used for the modeling in this Project analysis. SAPRC07TC (Carter, 2010) is the chemistry mechanism used for California SIPs was used here. It includes additional model species to explicitly represent selected toxics and reactive organic compounds and uses numerical expressions of rate constants that are compatible with the current chemistry mechanism solver. The partitioning of inorganic aerosol constituents (sulfate, nitrate ammonium and chloride) between gas and aerosol phases is performed using the ISORROPIA module. The SOAP semi-volatile equilibrium scheme performs the organic aerosol-gas partitioning. These processes are described in more detailed in the CAMx user guide.

[30] http://www.acd.ucar.edu/wrf-chem/mozart.shtml

[31] https://www.acom.ucar.edu/wrf-chem/mozart.shtml

[32] ftp://toms.gsfc.nasa.gov/pub/omi/data/

Table 2-2. CAMx modeling configuration.

Science Option	Configuration	Notes
Model Code	CAMx v6.5	Released April 2018
Horizontal Grid	4-km 1-way nesting	
O3 and PM 4-km	185 x 185 grid cells	
Vertical Grid	28 vertical layers extending up to ~19 km AGL	Collapsed from 50 WRF/MM5 layers (see Table 3-1)
Initial Conditions	Extracted from the MOZART global model outputs	5-day spin-up for 4-km domain
Boundary Conditions	Extracted from the MOZART global model outputs	Boundary concentration set for 4-km domain extracted using MOZART2CAMx
Photolysis Rate	Photolysis rates lookup table	Derived from satellite measurements and TUV processor
Gas-phase Chemistry	SAPRC07TC	Solved by the Euler Backward Iterative (EBI) solver
Aerosol-phase Chemistry	ISORROPIA (inorganic aerosol) SOAP v2.1 (organic aerosol)	
Meteorological Input Preprocessor	WRFCAMx v4.7	
Advection	Piecewise Parabolic Method (PPM)	
Diffusion	Eddy diffusion algorithm	

2.2 Model Results

The future modeling scenario was simulated using the CAMx source apportionment technology. Both cumulative concentrations from all the sources and the concentrations from Project-specific emissions are derived from a single simulation following the previous section model configuration. The model results of hourly $PM_{2.5}$ concentrations were processed into aggregated metrics that are relevant to health effects.

The metrics relevant to the $PM_{2.5}$ health effects selected in this study are 24-hour annual average concentrations (see Attachment C). Figure 2-1 shows spatial plots of annual average and a single day episode maximum 24-hour average $PM_{2.5}$ concentrations from the base case. In the base case, the central portion of California shows annual $PM_{2.5}$ concentrations between 10 and 15 $\mu g/m^3$ with isolated regions in Glenn and Butte county that could reach up to 20 $\mu g/m^3$. Contributions of the Project emissions to annual average $PM_{2.5}$ are 0.0975 $\mu g/m^3$ at the most affected areas and represent a 0.92 percent increase over the base case concentrations at that location. Contributions to the maximum 24-hour average are 0.269 $\mu g/m^3$ at the most affected area and represent a 1.04 percent increase over the base case concentrations at that location. Figure 2-2 presents increases in quarterly average and maximum 24-hour average $PM_{2.5}$ due to the Project by $PM_{2.5}$ component at the

grid cell of maximum concentration change. It confirms that the $PM_{2.5}$ increases due to the Project are mostly due to primary PM components (referred to as "other" in the chart).

Figure 2-1. Results of the 4 km $PM_{2.5}$ Modeling Domain

$PM_{2.5}$ Concentrations from the Base Case Scenario (left panels); Increases in $PM_{2.5}$ due to the Project (center panel is modeling domain and right panel is local project area); Annual Averages (top panels); Maximum 24-hour Averages (bottom panels)

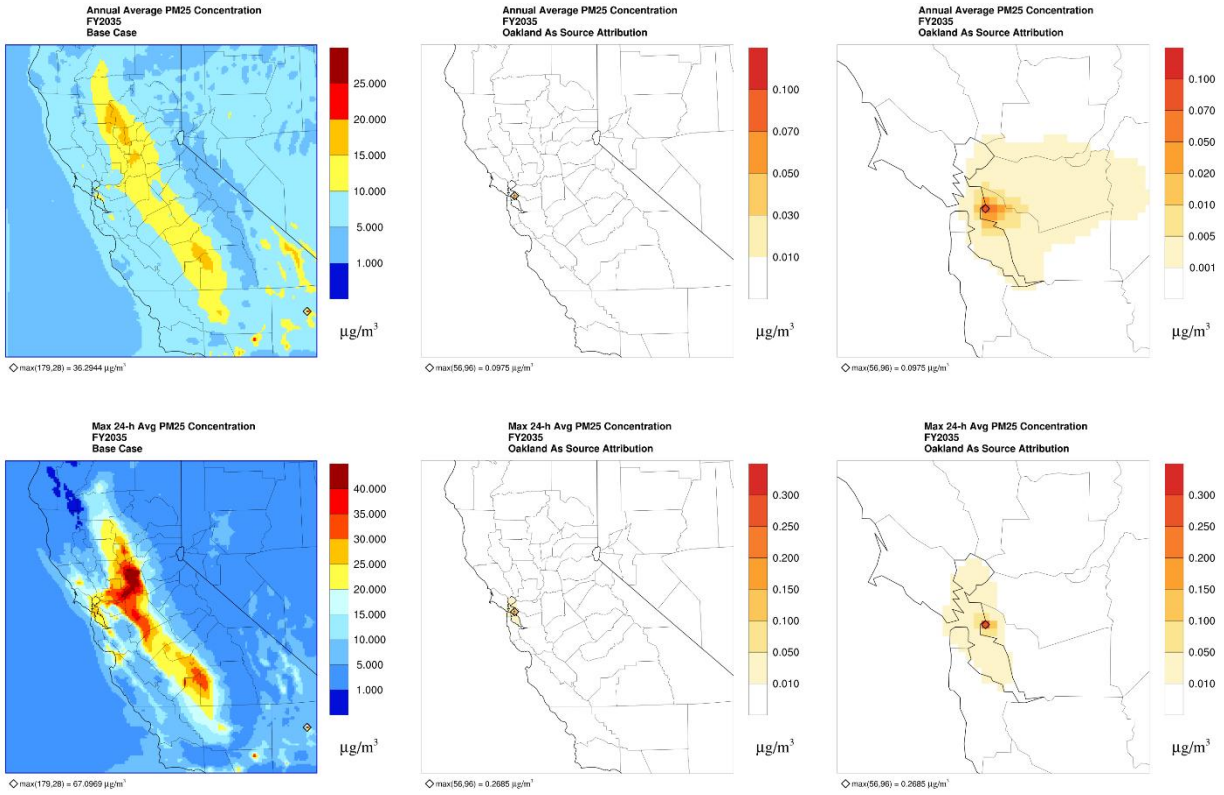
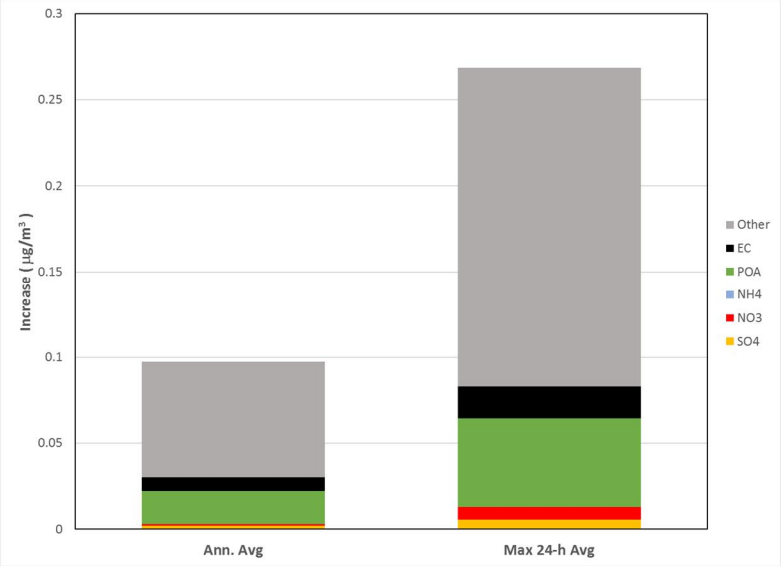


Figure 2-2. Increases in Annual Average and Episode Maximum 24-hour Average $PM_{2.5}$ Concentrations due to the Project by $PM_{2.5}$ Component: fine particulate sulfate (SO4), nitrate (NO3), ammonium (NH4), primary organic aerosol (POA), elemental carbon (EC), and other primary PM (Other); Where the Maximum Change due to Project Emissions Occurred



The metrics relevant to the ozone health effects selected in this study are consistent with the ozone NAAQS (see Attachment C). The model provides hourly concentrations that are further post-processed to produce maximum daily average 8-hour (MDA8) ozone concentrations for each day. Figure 2-3 displays spatial plots of the annual average MDA8 ozone for the 2035 emissions scenario and the corresponding annual average MDA8 increases to ozone concentrations due to the Project emissions. In the 2035 base case emissions scenario, the south eastern portion of the domain that includes Tulare, Kern, Inyo and Mono counties show the highest MDA8 annual average ozone concentration between 45 and 54 ppb with isolated regions, mostly in Kern, Tulare and San Bernardino counties with up to 54 ppb. The maximum increase in the annual average MDA8 ozone concentrations due to the Project is 0.0128 ppb and occurs in north Alameda County where it represents a 0.03 percent increase over the base case concentrations.

Figure 2-4 displays MDA8 ozone for the base case and increases in MDA8 ozone due to the project on August 9th of the simulation year, the day that the Project has the highest ozone contribution, which is reasonable given that this occurs in the middle of the summer when higher temperatures and increased solar radiation favour the formation of ozone. The highest MDA8 ozone contribution due to the Project is 0.118 ppb (Figure 2-4, right) that occurs in north-western Alameda county where it represents a 0.22 percent increase over the base case concentrations.

Figure 2-3. Annual Average MDA8 Ozone Concentrations from the Base Case Scenario (left) and Increases in Highest MDA8 Ozone Concentrations due to the Project (center for modeling domain and right for local project area) for the Annual Modeling of the 2035 Emissions Scenario

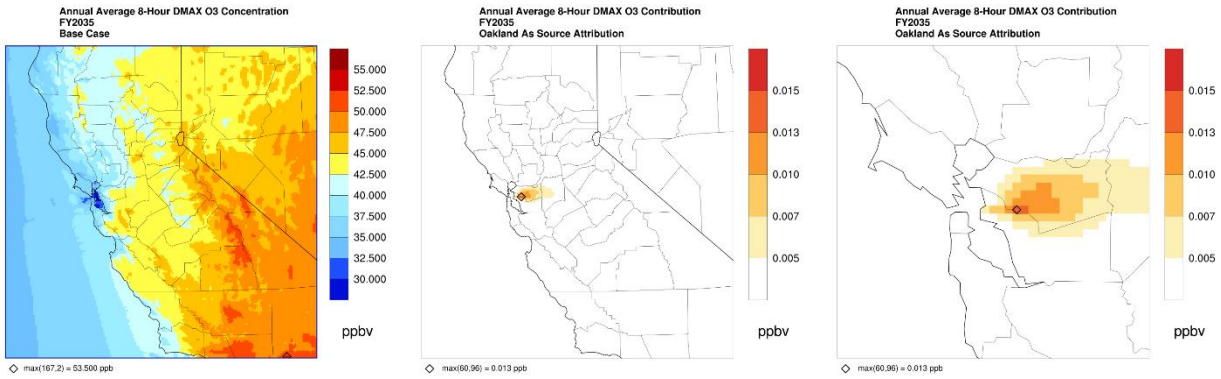
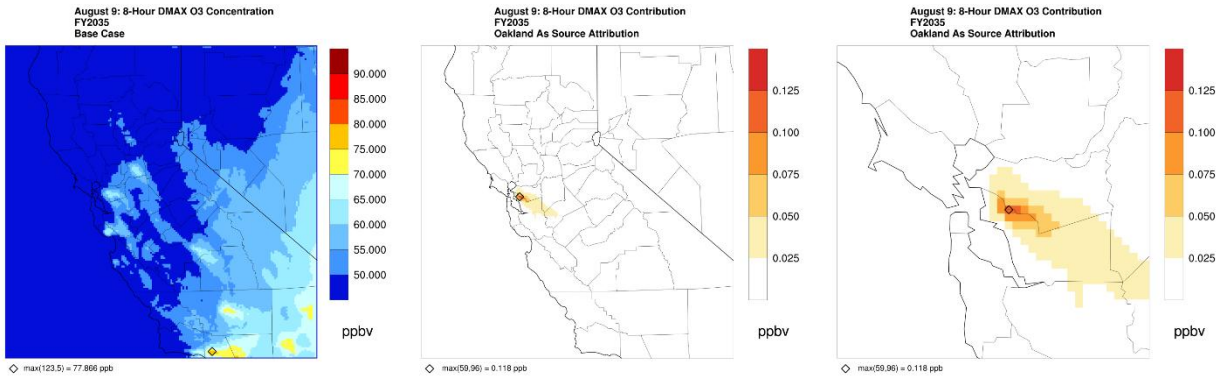


Figure 2-4. MDA8 Ozone Concentrations from the Base Case Scenario (left) and Increases in MDA8 Ozone Concentrations due to the Project (center for modeling domain and right for local project area) on August 9th, the Day with the Highest Project Ozone Contributions for the Annual Modeling of the 2035 Emissions Scenario



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ATTACHMENT C
BENMAP AND HEALTH EFFECTS

1. HEALTH EFFECTS ANALYSIS

The potential health effects of ozone and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) concentrations due to the Project's emissions were estimated using the Environmental Benefits Mapping and Analysis Program (BenMAP), Community Edition v1.4 (July 2018).[33] BenMAP, developed by the United States Environmental Protection Agency (USEPA), is a powerful and flexible tool that helps users estimate human health effects and economic benefits resulted from changes in air quality. BenMAP outputs include PM- and ozone-related health endpoints such as premature mortality, hospital admissions, and emergency room visits. BenMAP uses the following simplified formula to relate changes in ambient air pollution to certain health endpoints (USEPA, 2018)[34]:

Health Effect = Air Quality Change × Health Effect Estimate × Exposed Population × Background Health Incidence

- Air Quality Change - The difference between the starting air pollution level (the base) and the air pollution level after some change, such as a new source.
- Health Effect Estimate - An estimate of the percentage change in an adverse health effect due to a one unit change in ambient air pollution. Effect estimates, also referred to as concentration-response (C-R) functions, are obtained from epidemiological studies.
- Exposed Population - The number of people affected by the air quality change. The government census office is a good source for this information. This analysis uses data from PopGrid, which is an add-on program to BenMAP that allocates the block-level U.S. Census population to a user-defined grid.[35]
- Background Health Incidence - An estimate of the average number of people that suffer from some adverse health effect in a given population over a given period of time. For example, the health incidence rate might be the probability that a person will die in a given year. Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. BenMAP calculates background health incidence rates based on the available health statistics and population data, with preference given to individual-level data counts (e.g., mortality counts or hospital and emergency department discharges) at the County-level. For California counties, data were available at the individual-level. The background health incidence data are also based on different years depending on data availability. For example, hospital admissions and emergency department visits for California are based on 2011 data. For mortality background incidence rates, EPA obtained data for 2012-2014 from the Centers for Disease Control WONDER database (http://wonder.cdc.gov) and generated age-, cause-, and county-specific mortality rates as described in the BenMAP manual.[36] The projected mortality rates for the years 2015-2050 are then calculated using Census Bureau projected life tables.[36]

[33] http://www.epa.gov/air/benmap/

[34] The common function used for calculating health impacts is the following log-linear function: Health Effect = Background Health Incidence x [1 – exponential (Health Effect Estimate * Air Quality Change)] x Exposed Population

[35] https://www.epa.gov/sites/production/files/2015-04/documents/benmap-ce_user_manual_march_2015.pdf

[36] https://www.census.gov/programs-surveys/popproj/data/tables.html

The health endpoints analyzed in this study and the BenMAP results are presented in Section 2 of this attachment.

2. HEALTH EFFECTS ANALYSIS RESULTS

This section presents the health effects of the Project emissions on the population in the northern California domain, estimated by the BenMAP model. The Comprehensive Air Quality Model with extensions (CAMx) modeling results are processed to generate aggregated daily averages $PM_{2.5}$ and maximum daily 8-hour ozone appropriate for various health endpoints. The CAMx simulation results from the full year (January to December) are used to estimate the health effects of $PM_{2.5}$ and ozone. BenMAP translates increases in the pollutant concentration due to the Project emissions to changes in the incidence rate for each health effect using a C-R function derived from previously published epidemiological studies. BenMAP often provides multiple C-R functions based on different epidemiological studies for a given health endpoint. We used the USEPA default C-R functions when evaluating health effects. This analysis uses population data from PopGrid, which allocates the census population to each modeled 4x4 kilometer (km) grid cell.

The population used for both the quantified health effects and the background health incidence presented here is future year 2035, for consistency with the CAMx model run year, and more conservative than the Project build out year of 2027.

2.1 $PM_{2.5}$ Health Effects

Although there are a large number of potential health endpoints that could be included in the analysis as described above, we selected the key health endpoints that have been the focus of recent United States Environmental Protection Agency (USEPA) risk assessments (e.g., USEPA, 2010; USEPA, 2014). For example, the USEPA notes that health endpoints were selected based on consideration of at-risk populations (e.g. asthmatics), endpoints that have public health significance, and endpoints for which information is sufficient to support a quantitative concentration-response relationship (USEPA, 2014).

The health endpoints and associated C-R functions examined in this study are presented in Table 2-1. Each C-R function is based on a certain age range for the given health endpoint depending on the underlying epidemiological study on which it is based. Increases in the BenMAP-estimated health effect incidences and percent of background health incidence due to the Project emissions are presented in Table 2-2. Mean incidence rates are presented along with 2.5 and 97.5 percentiles to demonstrate the potential range in estimated health effects. These values reflect the total health effects across the Northern California model domain.

Table 2-1. Summary of $PM_{2.5}$ Health Endpoints Used in this Study

Health Endpoint	Age Range	Daily Metric	Seasonal Metric	Annual Metric	C-R Function Selected
Emergency Room Visits, Asthma	0-99	24-hr mean			Mar et al., 2010[1]
Mortality, All Cause	30-99	24-hr mean	Quarterly mean	Mean	Krewski et al., 2009[1]
Hospital Admissions, Asthma	0-64	24-hr mean	-	-	Sheppard, 2003[1]
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65-99	24-hr mean	-	-	Bell, 2012[1]

Table 2-1. Summary of $PM_{2.5}$ Health Endpoints Used in this Study

Health Endpoint	Age Range	Daily Metric	Seasonal Metric	Annual Metric	C-R Function Selected
Hospital Admissions, All Respiratory	65-99	24-hr mean	-	-	Zanobetti et al., 2009[1]
Acute Myocardial Infarction, Nonfatal	18-24	24-hr mean	-	-	Zanobetti et al., 2009[1]
Acute Myocardial Infarction, Nonfatal	25-44	24-hr mean	-	-	
Acute Myocardial Infarction, Nonfatal	45-54	24-hr mean	-	-	
Acute Myocardial Infarction, Nonfatal	55-64	24-hr mean	-	-	
Acute Myocardial Infarction, Nonfatal	65-99	24-hr mean	-	-	

[1] C-R functions available in BenMAP (USEPA, 2018)

The results show that the highest health effect is for all-cause mortality, with an estimated mean increased incidence of 1.54 deaths per year due to the Project emissions. Smaller mean increased incidences per year were estimated for other relevant $PM_{2.5}$-related health effects: 1.11 increase in incidence of asthma related emergency room visits, 0.42 increase in incidence of respiratory hospital admissions, and 0.18 increase in incidence of cardiovascular hospital admissions.

It should be noted, however, that the estimated increased incidence in those health effects are quite minor compared to the background health incidence values (shown in Table 2-2 as percent of Background Health Incidence). For example, for mortality, the increase of 1.54 deaths per year due to Project emissions represents 0.00060% of the total all-cause mortality for people ages 30 to 99.

Table 2-2. BenMAP-Estimated $PM_{2.5}$ Health Effects of the Project Emissions Across the Northern California Model Domain[1]

Health Endpoint[2]	Incidences			Background Health Incidence	Percent of Background Health Incidence[5] (%)
	2.5 Percentile[4]	Mean	97.5 Percentile[4]		
Emergency Room Visits, Asthma [0-99]	0.29	1.11	1.92	115,302	0.00096%
Mortality, All Cause [30-99] [3]	1.04	1.54	2.03	256,043	0.00060%
Hospital Admissions, Asthma [0-64]	0.033	0.088	0.14	13,394	0.00065%
Hospital Admissions, All Cardiovascular	0.13	0.18	0.23	148,633	0.00012%

(less Myocardial Infarctions) [65-99]					
Hospital Admissions, All Respiratory [65-99]	0.24	0.42	0.6	127,218	0.00033%
Acute Myocardial Infarction, Nonfatal [18-24]	0.000041	8.46E-05	0.00013	27	0.00031%
Acute Myocardial Infarction, Nonfatal [25-44]	0.0025	0.0051	0.0077	1,583	0.00032%
Acute Myocardial Infarction, Nonfatal [45-54]	0.0062	0.013	0.02	4,025	0.00032%
Acute Myocardial Infarction, Nonfatal [55-64]	0.011	0.023	0.034	6,762	0.00033%
Acute Myocardial Infarction, Nonfatal [65-99]	0.046	0.096	0.15	28,174	0.00034%

[1] Health effects are shown terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences) values.

[2] Affected age ranges are shown in square brackets.

[3] Since the mortality health endpoint uses an annual average concentration, results here reflect the use of average daily $PM_{2.5}$ emissions, instead of maximum daily $PM_{2.5}$ emissions. Resulting $PM_{2.5}$ concentrations are mostly from primary $PM_{2.5}$ emissions (see Attachment B), thus only average versus maximum primary $PM_{2.5}$ is used for this adjustment.

[4] The percentiles are generated in BenMAP using a Monte Carlo analysis and represent the statistical uncertainty in the incidence associated with the CRF, but do not include other potential sources of uncertainty (i.e., in the air modeling, in estimates of projected background incidence or populations). These confidence bounds are typically used by EPA to represent the 95% confidence intervals around the mean estimate.

[5] The percent of background health incidence uses the mean incidence.

2.2 Ozone Health Effects

As noted above, although a larger number of health endpoints could be evaluated, we selected the health endpoints based on recent USEPA risk assessments (USEPA, 2010; USEPA, 2014). The health endpoints and associated C-R functions examined in this study are presented in Table 2-3. Each C-R function is associated with a certain age range for the given health endpoint depending on the epidemiological study on which it is based. Increases in the BenMAP-estimated health effect incidences and percent of background health incidence due to the Project emissions are presented in Table 2-4. Mean incidence rates are presented along with 2.5 and 97.5 percentiles to demonstrate the potential range in estimated health effects. These values reflect the total health effects across the Northern California model domain.

Table 2-3. Summary of Ozone Health Endpoints Used in this Study.

Health Endpoint	Age Range	Daily Metric	Seasonal Metric	Annual Metric	C-R Function Selected
Hospital Admissions, All Respiratory	65 - 99	MDA8	-	-	Katsouyanni et al., 2009[1]
Mortality, Non-Accidental	0 - 99	MDA8	-	-	Smith et al., 2009[1]
Emergency Room Visits, Asthma	0 - 17	MDA8	-	-	Mar and Koenig, 2009[1]
Emergency Room Visits, Asthma	18 - 99	MDA8	-	-	Mar and Koenig, 2009[1]

[1] C-R functions available in BenMAP (USEPA, 2018)

For this Project, asthma-related emergency room visits are associated with the highest health effects due to the Project emissions in the northern California domain (1.20 incidences per year for adults ages 18 to 99 and 0.79 incidences per year for children ages 0 to 17). Hospital admissions due to respiratory issues for adults age 65-99 and non-accidental mortality have lower incidence increases (0.15 and 0.078 incidences per year, respectively).

The estimated increases in those health effect incidences are quite minor compared to the background health incidence (shown in Table 2-4 as percent of Background Health Incidence). For example, the increase in asthma emergency room visits represents 0.0020% of the total asthma-related emergency room visits for children.

Table 2-4. BenMAP-Estimated Mean Ozone Health Effects of the Project Emissions Across the Northern California Model Domain[1]

Health Endpoint[2]	Incidences			Background Health Incidence	Percent of Background Health Incidence[4] (%)
	2.5 Percentile[3]	Mean	97.5 Percentile[3]		
Hospital Admissions, All Respiratory [65-99]	-0.035[5]	0.15	0.33	127,218	0.00012%
Mortality, Non-Accidental [0-99]	-0.021[5]	0.078	0.18	170,592	0.000046%
Emergency Room Visits, Asthma [0-17]	0.14	0.79	1.43	39,464	0.0020%
Emergency Room Visits, Asthma [18-99]	0.33	1.20	2.06	75,838	0.0016%

[1] Health effects are shown terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences) values.

[2] Affected age ranges are shown in square brackets.

[3]The percentiles are generated in BenMAP using a Monte Carlo analysis and represent the statistical uncertainty in the incidence associated with the CRF, but do not include other potential sources of uncertainty (i.e., in the air modeling, in estimates of projected background incidence or populations). These confidence bounds are typically used by EPA to represent the 95% confidence intervals around the mean estimate.

[4] The percent of background health incidence uses the mean incidence.

[5] The negative lower bound of the confidence interval represents the statistical uncertainty in the CRF, which in this case is inclusive of a zero increase in the incidence.

2.3 Conclusion

The $PM_{2.5}$ and ozone concentration changes modeled by CAMx were converted to potential health effects on various health endpoints including premature mortality, hospitalizations, and emergency room visits, using the BenMAP health impact assessment model and USEPA defaults for health endpoints. Estimated changes in the health effect incidences are presented across the California grids in the northern California domain. Across the board, the estimated increases in those health effect incidences are quite minor compared to the background health incidence values with the largest $PM_{2.5}$ health effect (all-cause mortality) representing only 0.00060% of the total of all deaths, and the largest health effect for ozone (asthma related emergency room visits by adults) representing 0.0016% of all emergency room visits. For the $PM_{2.5}$-related health endpoints, the health effect on mortality is the highest (Incidence = 1.54).

Uncertainty

The approach and methodology of this analysis ensures that the uncertainty is of a conservative nature. In addition to the conservative assumptions built into the emissions noted above, there are a number of assumptions built into the application of C-R functions in BenMAP that may lead to an overestimation of health effects. For example, for all-cause mortality health effects from $PM_{2.5}$, these estimates are based on a single epidemiological study that found an association between $PM_{2.5}$ concentrations and mortality. While similar studies suggest that such an association exists, there remains uncertainty regarding a clear causal link. This uncertainty stems from the limitations of epidemiological studies, such as inadequate exposure estimates and the inability to control for many factors that could explain the association between $PM_{2.5}$ and mortality such as lifestyle factors like smoking or exposures to other air pollutants. Several reviews have evaluated the scientific evidence of health effects from specific particulate components (e.g., Rohr and Wyzga 2012; Lippmann and Chen, 2009; Kelly and Fussell, 2007). These reviews indicate that the evidence is strongest for combustion-derived components of PM including elemental carbon (EC), organic carbon (OC) and various metals (e.g., nickel and vanadium), however, there is still no definitive data that points to any particular component of PM as being more toxic than other components. The USEPA has also stated that results from various studies have shown the importance of considering particle size, composition, and particle source in determining the health effects of PM (USEPA, 2009). Further, USEPA (2009) found that studies have reported that particles from industrial sources and from coal combustion appear to be the most significant contributors to PM-related mortality, consistent with the findings by Rohr and Wyzga (2012) and others. This is particularly important to note here, as the majority of PM emissions generated from the Project are from brakewear, tirewear, and entrained roadway dust (see Attachment A), and not from combustion. Therefore, by not considering the relative toxicity of PM components, the results presented here are conservative.

Another uncertainty highlighted by the USEPA (2012) which applies to potential health effects from both $PM_{2.5}$ and ozone, is the assumption of a log-linear response between exposure and health effects, without consideration for a threshold below which effects may not be measurable. The issue of a threshold for $PM_{2.5}$ and ozone is highly debated and can have significant implications for health effects analyses as it requires consideration of current air pollution levels and calculating effects only for areas that exceed threshold levels. Without consideration of a threshold, effects of any change in air pollution below or above the threshold are assumed to adversely affect health. Although the USEPA traditionally does not consider thresholds in its cost-benefit analyses, the NAAQS itself is a health-based threshold level that the USEPA has developed based on evaluating the most current evidence of health effects.

For both the $PM_{2.5}$ and ozone health effects calculated, each of the pollutants may be a confounder of the other. Thus, while the C-R functions are from studies that evaluated the effects for each pollutant individually, both air pollutants could contribute to the health effect outcomes evaluated, and thus the overall health effects may be overstated.

As noted above, the health effects estimation using this method presumes that effects seen at large concentration differences can be linearly scaled down to small increases in concentration, with no consideration of potential thresholds below which health effects may not occur. This methodology of linearly scaling health effects is broadly accepted for use in regulatory evaluations and is considered as being health protective (USEPA, 2010). In summary, health effects presented in this report are conservatively estimated, and the actual effects may be zero.

3. REFERENCES

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AIR.4 Additional Information Regarding Potential Health Effects of Air Quality Impacts

MEMORANDUM

Date: February 14, 2020

To: Noah Rosen, Oakland Athletics

From: Michael Keinath
Megan Sutter

Subject: Supplemental Information for the Oakland Sports and Mixed-Use Project "Additional Information Regarding Potential Health Effects of Air Quality Impacts" Report

INTRODUCTION

The purpose of this document is to provide supplemental information for the "Additional Information Regarding Potential Health Effects of Air Quality Impacts" report (also referred to as the health impact assessment or "HIA") conducted for the proposed Oakland Waterfront Ballpark District Project at Howard Terminal (herein referred to as the "Project").

Since the analysis was originally completed in August 2019 (herein referred to as the "August HIA"), new information regarding Project specifics has become available and Ramboll has revised our emissions analysis conducted for the purposes of the California Environmental Quality Act (CEQA) Draft Environmental Impact Report (DEIR) accordingly. As a result, there are slight differences between the emissions used for the CEQA emissions analysis and the emissions used for the August HIA. These differences are primarily due to the addition of truck idling emissions surrounding the Port of Oakland, updated vehicle miles traveled (VMT), electric vehicle (EV) charging reductions, and a reduction to the annual operation of emergency generators. This memorandum provides a brief summary of the updates and revisions made to the CEQA emissions that differ from the August HIA and discusses the general effect of these updates on the HIA results.

While a full re-run of the photochemical grid model and BenMAP assessment could be performed with the current (updated) emissions inventory, related additional costs and time delays are not warranted in this case. In cases such as this, where overall emissions changes are small, and where there are minimal changes to the sources of emissions and spatial allocations as discussed below, it is appropriate to use a linear model, based on the refined modeling already completed, to estimate the corresponding changes in health effects. A full model re-run would not provide additional, meaningful information.

SUMMARY OF CEQA UPDATES AND REVISIONS TO EMISSIONS

Operational emissions from the proposed Project include mobile sources (exhaust and fugitive dust from on-road vehicles), stationary sources within the Project site (generators), energy sources (indirect emissions from electricity and direct emissions from natural gas), water and wastewater, solid waste disposal, and area sources (landscaping equipment, architectural coating, and consumer products). All operational emissions are modeled within the Project site, with the exception of mobile emissions which are modeled both onsite and offsite. Updates in this revised CEQA analysis include:

- Truck Idling. Addition of emissions due to truck delays surrounding the Port of Oakland due to traffic from the proposed Project.

- On-Road Exhaust and Fugitive Dust.
  - Updated VMT based on revised Fehr & Peers traffic data received November 15, 2019. The VMT in the updated CEQA analysis is 8.8% higher than in the August HIA.
  - EV charging reductions are capped based on the maximum charging capacity and number of EV trips that are available for charging for each activity type. For certain activities such as weeknight ballpark games, the Project is charger-limited (e.g., there are more EV trips than there is available charger capacity during prime business or activity hours), while for other activities the Project is EV-limited (e.g., there is more than enough charger capacity to charge the number of EVs expected to visit the site based on the fleet mix that would achieve statewide targets). The EV fleet penetration used to determine how many vehicles are available to charge was determined using the CARB VISION Model.[1] The vehicles assumed to be encouraged to enter the fleet by the Project are estimated by subtracting the CARB VISION Model Reference Scenario from the CARB VISION Model Cleaner Technologies and Fuels Scenario.
- Emergency Generators. Updated generator emissions to include refined generator list provided by the Project sponsor and reduced annual maintenance testing limit to 20 hours/year per Mitigation Measure AIR-2c.
- Unchanged Categories. The following categories of emissions have not changed from the August HIA:
  - Architectural Coating
  - Consumer Products
  - Hearths
  - Energy Use
  - TRU Operation

MAXIMUM DAY VS. AVERAGE DAY EMISSIONS

The August HIA emissions were calculated using maximum day emissions and conservatively assumed maximum daily emissions would occur over an entire year for all health endpoints excluding $PM_{2.5}$ mortality. Table 1 shows a comparison of maximum day emissions from the August HIA analysis and the updated CEQA analysis. Since the $PM_{2.5}$ mortality health endpoint uses an annual average concentration, Table 2 shows a comparison of average day $PM_{2.5}$ emissions between the two sets of emissions.

[1] CARB. VISION Scenario Planning. Available at: https://ww3.arb.ca.gov/planning/vision/vision.htm. Accessed: December 2019.

Table 1. Comparison of Maximum Day Emissions

Emission Category	August HIA				CEQA Update				Difference			
	ROG	NOx	PM_{10}	$PM_{2.5}$	ROG	NOx	PM_{10}	$PM_{2.5}$	ROG	NOx	PM_{10}	$PM_{2.5}$
	lb/day								%			
On-Road Mobile	87	187	204	47	106	213	233	54	21%	14%	14%	15%
Diurnal	4.6	--	--	--	5.6	--	--	--	22%	--	--	--
Hotsoak	12	--	--	--	14	--	--	--	21%	--	--	--
Idling Exhaust	1.4	1.5	0.0062	0.0053	1.6	1.6	0.0065	0.0056	11%	8%	5%	6%
Brakewear	--	--	48	21	--	--	55	24	--	--	14%	15%
Tirewear	--	--	11	2.6	--	--	12	3.0	--	--	14%	15%
Resting Loss	4.8	--	--	--	5.8	--	--	--	22%	--	--	--
Road Dust	--	--	143	21	--	--	164	25	--	--	15%	15%
Running Exhaust	7.6	110	2.0	1.8	9.0	125	2.3	2.1	19%	13%	13%	13%
Running Loss	33	--	--	--	40	--	--	--	21%	--	--	--
Starting Exhaust	24	75	0.27	0.25	29	86	0.32	0.29	21%	14%	15%	15%
Energy	2.1	19	1.5	1.5	2.1	19	1.5	1.5	0%	0%	0%	0%
Consumer Products	108	--	--	--	108	--	--	--	0%	--	--	--
Landscaping	7.5	2.9	1.4	1.4	7.5	2.9	1.4	1.4	0%	0%	0%	0%
Architectural Coatings	18	--	--	--	18	--	--	--	0%	--	--	--
Stationary Sources	3.7	9.2	0.41	0.33	2.1	6.2	0.26	0.26	-43%	-33%	-37%	-21%
TRU	0.059	0.44	0.0031	0.0029	0.059	0.44	0.0031	0.0029	0%	0%	0%	0%
Truck Idling	--	--	--	--	0.84	5.4	0.022	0.021	--	--	--	--
Total	227	219	207	50	245	246	236	57	8%	13%	14%	14%

Table 2. Comparison of Average Day $PM_{2.5}$ Emissions			
Emission Category	August HIA	CEQA Update	% Difference
	lbs/day		
On-Road Mobile	31	33	9%
Diurnal	--	--	--
Hotsoak	--	--	--
Idling Exhaust	0.0050	0.0053	6%
Brakewear	14	15	9%
Tirewear	1.8	1.9	9%
Resting Loss	--	--	--
Road Dust	14	15	9%
Running Exhaust	1.3	1.4	8%
Running Loss	--	--	--
Starting Exhaust	0.17	0.18	10%
Energy	1.5	1.5	0%
Consumer Products	--	--	--
Landscaping	0.68	0.68	0%
Architectural Coatings	--	--	--
Stationary Sources	0.045	0.036	-21%
TRU	7.2E-04	7.2E-04	0%
Truck Idling	--	0.013	--
Total	33	36	8%

Figure 1 and Figure 2 below illustrate the updates between the August HIA emissions and the updated CEQA analysis, for maximum daily emissions (for ROG, NOx, PM_{10}, and $PM_{2.5}$) corresponding to Table 1 above, as well as average day emissions for $PM_{2.5}$ corresponding to Table 2 above.

Figure 1. Comparison of Maximum Day Emissions

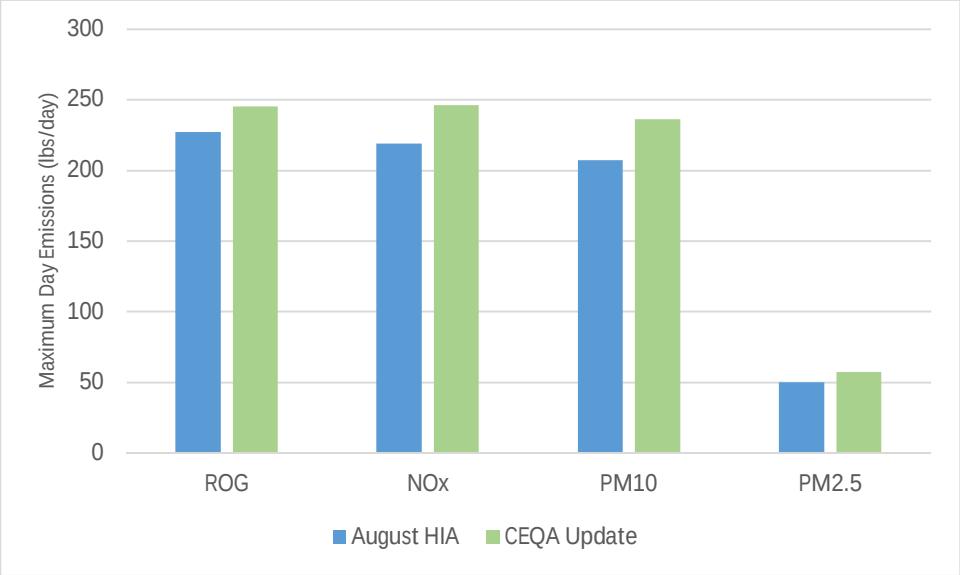
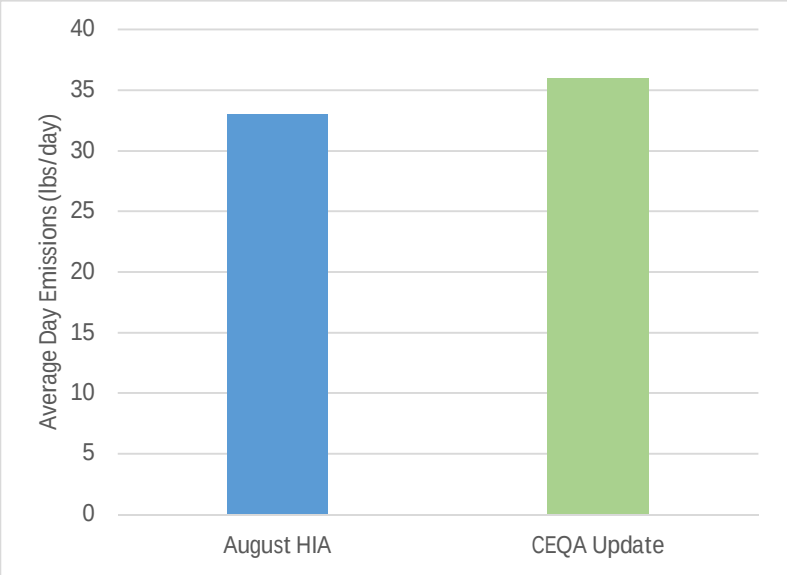


Figure 2. Comparison of Average Day $PM_{2.5}$ Emissions



SUMMARY OF CEQA UPDATES AND REVISIONS TO MODELED SOURCES

Operational emissions from the proposed Project were modeled as either onsite or offsite. Onsite emissions were spatially allocated over the Project site. Offsite emissions were spatially allocated proportionally based on the length of roadway within each grid cell. The sources that were updated in the revised CEQA analysis and not included in the August HIA include:

- Truck Idling. Addition of source for truck delays surrounding the Port of Oakland due to traffic from the proposed Project.
- On-Road Exhaust and Fugitive Dust. Addition of roadway segments near the Project site:

– Updated surface street segments were modeled as a result of updated traffic volumes received November 25, 2019. The traffic links modeled were updated to include all segments that exceeded 1,000 trips per day.

– Updated highway segments were modeled as a result of updated highway traffic volumes received November 12, 2019. The traffic links modeled were updated to include all highway segments that exceeded 1,000 trips per day.

Figure 3 shows the additional roadway segments (in yellow) that have been added to the CEQA analysis since the August HIA was completed.

Figure 3. Overlap of Model Grid Cells on Project Site with Updated Roadway Segments

RESULTS SUMMARY

While precise changes in Project-related $PM_{2.5}$ and ozone concentrations and resulting health effects depend on full photochemical grid modeling and BenMAP, health effects generally scale linearly with emissions, all other things being equal. $PM_{2.5}$ health effects would generally scale with the change in primary $PM_{2.5}$ emissions, while ozone health effects would generally scale with the sum of NOx and ROG emissions, the primary ozone precursors. Compared to the emissions used in the August HIA, the CEQA emissions have increased overall, with an increase of 14% for maximum day $PM_{2.5}$ emissions, 8% for average day $PM_{2.5}$ emissions, and 10% for the sum of maximum day NOx and ROG emissions.

If using the same emissions averaging methodology (maximum day for all endpoints except $PM_{2.5}$ mortality), the health effects would likely increase commensurately for all endpoints. Three examples of how this would affect different health endpoints are shown below:

- An 8% increase in average day $PM_{2.5}$ emissions would increase the mean $PM_{2.5}$ mortality from approximately 1.54 to 1.66 and the percent of background health incidence from approximately 0.00060% to 0.00065%.
- A 14% increase in maximum day $PM_{2.5}$ emissions would increase the mean number of emergency room visits for asthma from approximately 1.11 to 1.27 and the percent of background health incidence from approximately 0.00096% to 0.0011%.
- A 10% increase in maximum day NOx and ROG emissions would increase the mean number of ozone related asthma related emergency room visits from approximately 1.2 to 1.3 and the percent of background health incidence from approximately 0.0016% to 0.0018%.

The addition of truck idling would add a source near the Project site, increasing emissions near the Project site. This increase in emissions would be more than offset by the change in emissions for the Project generators for ROG, PM_{10}, and $PM_{2.5}$. The updates to the roadway model would add roadway segments in areas around the Project site which would disperse emissions over a greater area and likely decrease concentrations from roadways closer to the site. It would be conservative to keep the roadway model as is to conservatively model all emissions in the immediate Project vicinity, near local population centers, and potentially overstate actual outcomes. The approximate changes noted above conservatively assume no changes to the roadway links modeled.

CONCLUSION

With the changes to the emissions analysis conducted for the CEQA DEIR, the health effects from the August HIA would likely increase approximately 8 to 14%, but likely lower. As discussed above, the estimated increases in health effect incidences are quite minor compared to the previous results and the background health incidence rates with the largest $PM_{2.5}$ health effect (all-cause mortality) representing only 0.00065% of the total of all deaths (compared to 0.00060% in the August HIA), and the largest health effect for ozone (asthma related emergency room visits by adults) representing 0.0018% of all emergency room visits (compared to 0.0016% in the August HIA).

AIR.5 Potential Relocation of Existing Truck Activity at Howard Terminal to the Port Roundhouse Area

RAMBOLL

ENVIRONMENT
& HEALTH

DRAFT MEMORANDUM

Date: November 20, 2020

To: Hillary Gitelman, ESA

From: Michael Keinath
Megan Sutter
Libby Koolik

Subject: **Air Quality Analysis of the Potential Relocation of Existing Truck Activity at Howard Terminal to the Port Roundhouse Area**

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1. Purpose of Memorandum

As a supplemental analysis to the Air Quality Technical Report (AQTR) prepared for the Oakland Waterfront Ballpark District Project in Oakland, California (referred to hereafter as "the Project"), Ramboll evaluated potential criteria air pollutant (CAP) emissions, greenhouse gas (GHG) emissions, and health impacts associated with the potential relocation of existing truck activity at Howard Terminal as a result of the Project.

2. Potential Truck Relocation Zones

Currently the Howard Terminal supports 23 acres of truck parking and 4 acres of drayage truck yards for a total of 27 acres. With implementation of the project, the exact location for the relocation of existing truck activity is not known definitively. However, the Port of Oakland ("Port") has indicated that 15 acres of the nearby "Roundhouse" area could be used for relocated truck parking. The City of Oakland ("City") has indicated that 15 acres of truck parking will be available on the Oakland Army Base. Together, these 30 acres satisfy an existing Bay Conservation Development Commission (BCDC) permit requirement of both the City and the Port. The Roundhouse area, which is located approximately 200 meters west of the Howard Terminal site, is shown in **Figure H-1**.

In order to conservatively evaluate the impacts of relocated truck parking to sensitive receptors onsite at the Project and offsite in the neighboring community, we evaluated a scenario where all Howard Terminal truck activity (23 acres of parking and 4 acres of drayage truck yards) would be relocated to the 15 acre Roundhouse area (which is only 56% of the area, and 100% of the activity at the Howard Terminal site). This would determine the maximum potential impacts that this relocation would have on existing off-site and new on-site receptors. This is conservative because in reality, it is unlikely that all trucks parking at Howard Terminal currently would be able to relocate to the Roundhouse as it is a much smaller area (some fraction would likely relocate to appropriately zoned areas elsewhere in the city or region). Additionally, placing all activity at the Roundhouse

would represent the potential maximum (or near maximum) impact for new onsite sensitive receptors because it is in the immediate vicinity of the Project. The Roundhouse is upwind of onsite residential receptors, who would be exposed to both Project and truck relocation impacts.

Besides the onsite trucking activity that would be relocated due to the Project, the relocation of Port truck parking facilities would likely change trucking routes. It is too speculative to estimate the overall change in vehicle miles traveled by Port trucks as a result of this relocation, as some trucks may drive longer routes while others may drive shorter routes. However, to ensure that health risks from the Project would not be worsened by changing Port truck routes, truck routes to and from the Roundhouse were compared with truck routes to and from the Howard Terminal site. Should truck parking be relocated to the Roundhouse, both northbound and southbound traffic would use Adeline Street to navigate from I-880 to the Roundhouse, whereas current trucks would use Market Street to travel to and from Howard Terminal. Adeline Street puts trucks further from the Project site, leading to a reduction in truck route impacts for nearby offsite sensitive receptors that are affected by the Project. Receptors along Adeline Street were included in the modeled receptor grid and were analyzed in the health risk assessment. However, the majority of these receptors are industrial or other non-sensitive uses. Any other location on Port property would be further away than the Roundhouse; as a result, another location on Port property would have an even lesser impact on these offsite sensitive receptors. As such, this analysis is conservative for health impacts because it does not include any reduction from the change in trucking routes.

3. Emissions Methodology and Results

As discussed above, this analysis assumes the maximum possible activity that could shift to the Roundhouse is all of the activity currently at Howard Terminal; the amount of activity is therefore equivalent to the activity assumed in the existing conditions at Howard Terminal. The analysis of existing conditions at Howard Terminal assumes that the Project is not constructed and that existing truck activity at Howard Terminal continues. CAP and GHG emissions were quantified using 2018 Howard Terminal gate transaction data provided by Port of Oakland and represents all gate transactions. According to the Port data, emissions include truck time in the queue, in terminal idling, and in terminal driving. We assume that these emissions are constant over time since information regarding the model years of the trucks is not known; this is conservative since in reality, trucks are anticipated to get cleaner over time and thus emissions would go down. The emissions associated with the existing conditions are shown in **Table H-1**.

Existing emissions from Howard Terminal truck parking are not subtracted from the overall Project CAP emissions; therefore, these Roundhouse emissions are not additive to the Project, because they are not new emissions in the region but are just shifted emissions within the region.

Additionally, energy use for the relocated trucks would be the same as the existing operations at Howard Terminal and would not represent additional energy use due to the Project since it would just shift from one area of the region to another.

4. Health Risk Analysis Methodology

Although the emissions are constant between the existing operations at Howard Terminal and the Roundhouse relocation, as health risk impacts are dependent on location. Ramboll calculated health risks associated with the truck relocation to the Roundhouse, including excess lifetime cancer risk, non-cancer chronic hazard index (HI), and fine particulate matter ($PM_{2.5}$) concentration.

This HRA evaluates potential sensitive receptors using receptor locations and modeling methodology consistent with the Project AQTR. Model parameters for the Roundhouse activity were identical to those used for existing Howard Terminal trucking activities. The Roundhouse was modeled as an area source, consistent with the modeling parameters presented in **Table 62 of the AQTR**.

Emissions and exposure parameters assume constant activity for 30 years of exposure, beginning in 2020 (the first year of construction); this is consistent with the methodology used to estimate No Project Alternative health risk impacts included in the Project analysis.[1] In the Project Analysis for off-site receptors, health risks from the existing Howard Terminal truck activity were subtracted from the Project health impacts. The impacts from relocation to the Roundhouse are thus added back for off-site receptors to estimate the impact of relocating an equivalent amount of activity. Since on-site receptors would never be exposed to truck activity at Howard Terminal, no reduction is taken for the removal of trucks at Howard Terminal; however, the truck relocation to the Roundhouse is a new source and added in to estimate health risks to on-site receptors at the Project site.

Existing Howard Terminal truck activity was modeled as an area source covering the full Project site with release parameters similar to on-road haul trucks. Truck activity at the Roundhouse was also modeled as an area source (with the same release parameters) covering the Roundhouse site. Modeling parameters are shown in **Table 62 of the AQTR** and exposure parameters are shown in **Table 64 of the AQTR**. Emissions used to calculate health risks are shown in **Table 131 of the AQTR**.

5. Health Risk Analysis Results

Health impacts from truck relocation to the Roundhouse alone were evaluated to understand impacts from truck activity at the maximally exposed individual receptors (MEIR). To determine the MEIRs, net health impacts from the truck relocation to the Roundhouse (in isolation, not including Project) are estimated by identifying the sensitive receptor location with the maximum value for truck relocation health impacts.

The excess lifetime cancer risk, chronic HI, and $PM_{2.5}$ concentration at the off-site and on-site MEIR as a result of truck relocation to the Roundhouse is included in **Table H-2** of the attached summary results tables. **Table H-2** shows that the maximum possible impacts from the existing activity at the Roundhouse location are relatively low. Since it is assumed that emissions are constant each year, there is no specific maximum year for chronic HI and $PM_{2.5}$ concentrations.

The health impacts associated with the relocation of existing truck activities to the Roundhouse were added to Project construction and Project operations in order to estimate the combined health risk impacts of construction activities and Project operations for each exposure Scenario discussed in the Project. A breakdown of excess lifetime cancer risk at the Project + Truck Relocation MEIR as a result of existing truck relocation to the Roundhouse is included in **Table H-3** of the attached summary results tables, along with impacts from Project construction, operational generators, operational traffic, and removed existing truck activity at Howard Terminal. The table also shows the Scenario for which the maximum was identified. Similar breakdowns for chronic HI and $PM_{2.5}$ concentration are shown in **Table H-4** and **Table H-5**, respectively. These tables show the year for which the maximum occurred because chronic HI and $PM_{2.5}$ concentrations are annual impacts. The locations of the MEIR for the Project + Truck

[1] See the AQTR for a full discussion of the No Project Alternative health risk analysis.

Relocation are included as **Figure H-2**. Most of the MEIR locations for the Project + Truck Relocation are the same as locations for Project only; this is because the impacts are driven by Project-related sources; in other words, most of the risk comes from the Project.

6. Maritime Reservation Scenario

The impacts of the Roundhouse truck relocation were also evaluated for the Maritime Reservation Scenario. The overall approach used to determine the Maritime Reservation Scenario + Truck Relocation impacts matches the methodology explained for the Project + Truck Relocation analysis. The CAP and GHG emissions from the truck relocation to the Roundhouse are not impacted by the Maritime Reservation Scenario and are therefore equal to the emissions shown in **Table H-1**.

The health impacts associated with the relocation of existing truck activities to the Roundhouse were added to Maritime Reservation Scenario construction and operations in order to estimate the combined health risk impacts for each exposure Scenario discussed in the Maritime Reservation Scenario. A breakdown of excess lifetime cancer risk at the Maritime Reservation Scenario + Truck Relocation MEIR as a result of existing truck relocation to the Roundhouse is included in **Table H-6**, along with impacts from Maritime Reservation Scenario construction, operational generators, operational traffic, and removed existing truck activity at Howard Terminal. The table also shows the Scenario for which the maximum was identified. Similar breakdowns for chronic HI and $PM_{2.5}$ concentration are shown in **Table H-7** and **Table H-8**, respectively. These tables show the year for which the maximum occurred because chronic HI and $PM_{2.5}$ concentrations are annual impacts. The locations of the MEIR for the Maritime Reservation Scenario + Truck Relocation are included as **Figure H-3**. Most of the MEIR locations for the Maritime Reservation Scenario + Truck Relocation are the same as locations for Maritime Reservation Scenario only; this is because the impacts are driven by Maritime Reservation Scenario-related sources.

7. Project Variants

The impacts of the Roundhouse truck relocation were also evaluated for both the Power Plant Variant and the Gondola Variant. The overall approach used to determine the Variant + Truck Relocation impacts matches the methodology explained for the Project + Truck Relocation analysis.

The health impacts associated with the relocation of existing truck activities to the Roundhouse were added to the project and each variant's construction and operations in order to estimate the combined health risk impacts for each exposure. Results are summarized in **Tables H-9** through **H-11** for the Power Plant Variant, and **Tables H-12** through **H-14** for the Aerial Gondola Variant. Most of the MEIR locations for the Variant + Truck Relocation are the same as shown in the Air Quality Technical Report; this is because the impacts are driven by Project- or Variant-related sources. MEIR locations are shown in **Figures H-4** and **H-5** for the Power Plant Variant and Gondola Variant, respectively.

8. Grade Separation Alternative

The impacts of the Roundhouse truck relocation were also evaluated for the Grade Separation Alternative. The overall approach used to determine the Grade Separation Alternative + Truck Relocation impacts matches the methodology explained for the Project + Truck Relocation analysis.

The health impacts associated with the relocation of existing truck activities to the Roundhouse were added to the Project and Grade Separation Alternative construction and operations for both

the Market and Brush street options in order to estimate the combined health risk impacts for each option. Results are summarized in **Tables H-15** through **H-17**. Most of the MEIR locations for the Grade Separation Alternative + Truck Relocation are the same as shown in the Air Quality Technical Report; this is because the impacts are driven by Project- or Grade Separation-related sources. MEIR locations are shown in **Figure H-6**.

9. Cumulative Analysis

The impacts from truck relocation to the Roundhouse are added to each cumulative analysis in **Tables H-18** through **H-29**.

10. Conclusion

The analysis of truck relocation at the Roundhouse site represents an overall reasonable upper bound on Project health impacts for onsite sensitive receptors. Since impacts from the truck relocation would be expected to decrease with distance from the Project's MEIR and the Roundhouse is the closest Port property to onsite sensitive receptors, the analysis of truck relocation at the Roundhouse is the most conservative approach for these receptors. Were trucks to be relocated outside of Port property notwithstanding the identification of the Roundhouse in response to the BCDC requirement, the maximum impacts from truck relocation could be higher at off-site sensitive receptors. However, when combined with other Project impacts, it is unlikely that the overall offsite MEIR would change significance findings because the truck relocation would contribute less than ten percent of the total Project excess lifetime cancer risk impact. Additionally, there are only certain areas within West Oakland that are zoned to permit this type of truck parking between Howard Terminal and I-880. However, it is unlikely that all trucks parking at Howard Terminal currently would be able to relocate to this area since much of it is largely already occupied by other uses. The T overlay zone is approximately 70 acres in size, however only approximately 30 acres are currently unoccupied by buildings or roadways and occupied by parking lots or other open lots that could potentially be available for parking. It is not known whether truck parking from Howard Terminal could be accommodated on the 30 acres in the T overlay zone without building structured parking.

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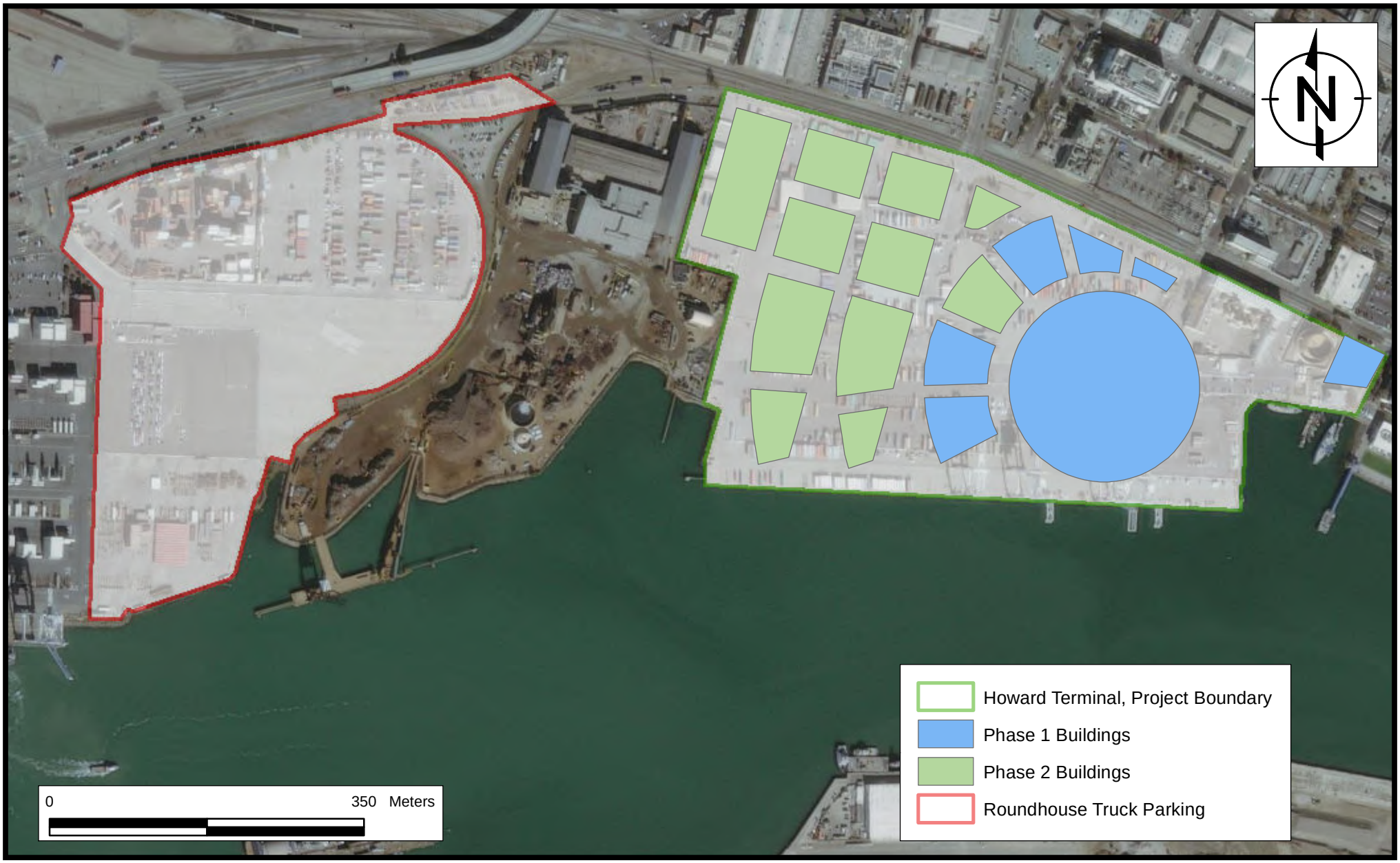

RAMBOLL

DRAFTED BY: EGR | DATE: 11/2/2020

Analysis of Potential Truck Relocation to Roundhouse Zoning Area
Project Location
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
H-1

06-40945B4A

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RAMBOLL

Analysis of Potential Truck Relocation to Roundhouse Area: Mitigated Project + Truck Relocation Maximally Exposed Individual Receptor (MEIR) Locations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
H-2

DRAFTED BY: EGR	DATE: 10/15/2020	1690010168

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Analysis of Potential Truck Relocation to Roundhouse Area: Mitigated Maritime Reservation Scenario + Truck Relocation Maximally Exposed Individual Receptor (MEIR) Locations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
H-3

DRAFTED BY: EGR | DATE: 10/16/2020

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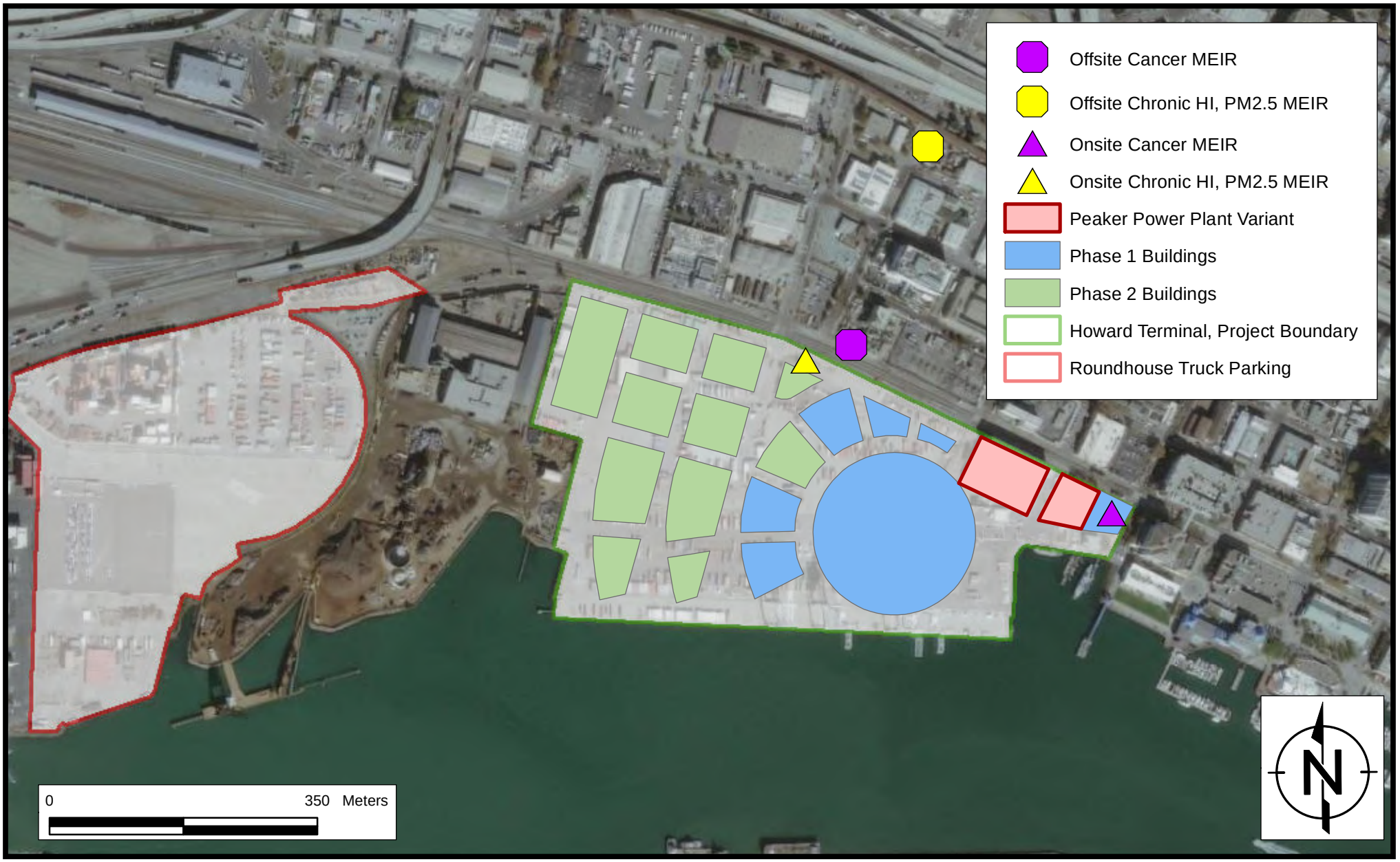

RAMBOLL

Analysis of Potential Truck Relocation to Roundhouse Area: Mitigated Power Plant Variant + Truck Relocation Maximally Exposed Individual Receptor (MEIR) Locations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
H-4

DRAFTED BY: EGR	DATE: 11/23/2020	1690010168

RAMBOLL

Analysis of Potential Truck Relocation to Roundhouse Area: Mitigated Gondola Variant + Truck Relocation Maximally Exposed Individual Receptor (MEIR) Locations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
H-5

DRAFTED BY: EGR | DATE: 11/23/2020

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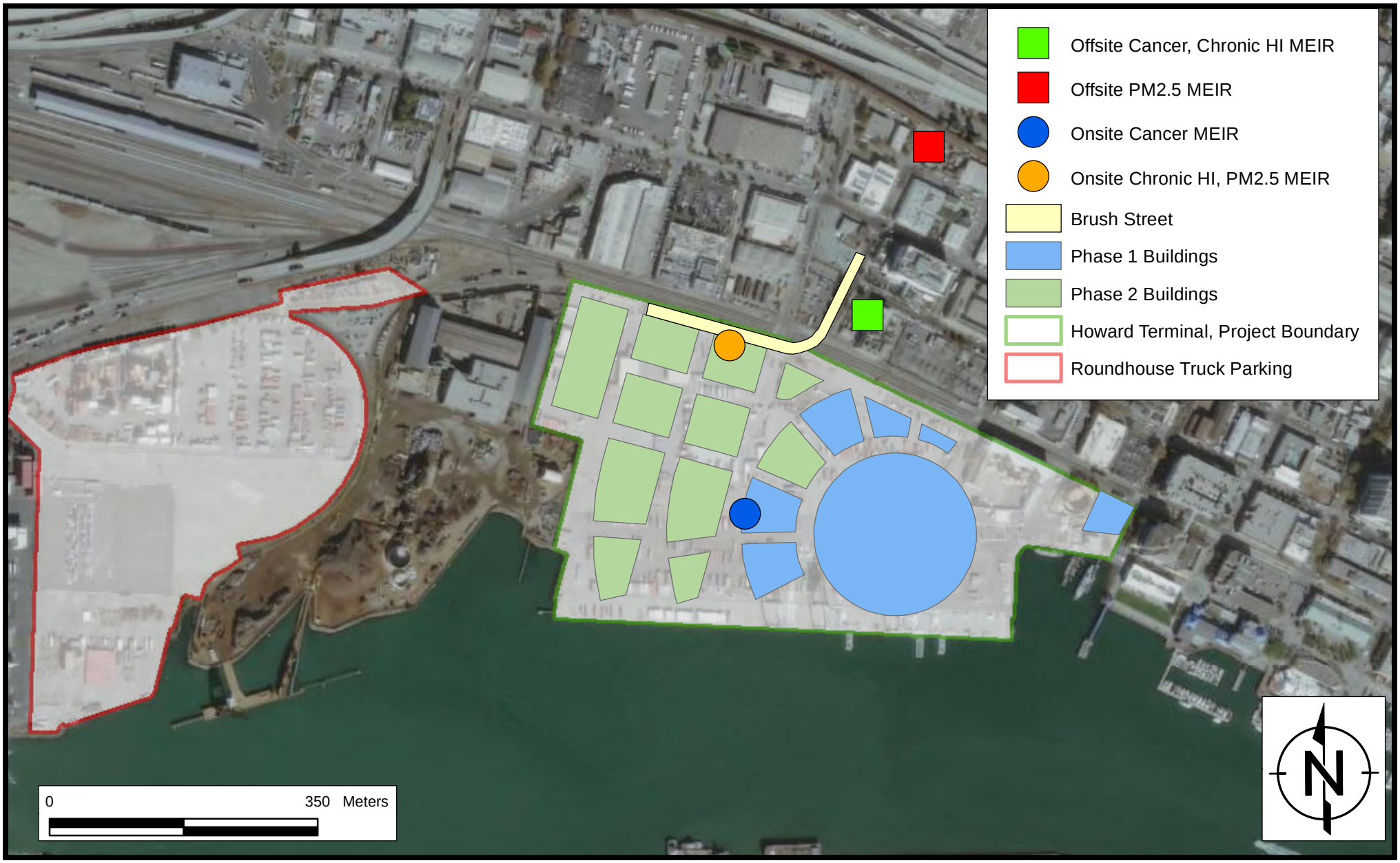

RAMBOLL

Analysis of Potential Truck Relocation to Roundhouse Area: Mitigated Grade Separation Alternative + Truck Relocation Maximally Exposed Individual Receptor (MEIR) Locations
Oakland Waterfront Ballpark District Project
Oakland, California

FIGURE
H-6

DRAFTED BY: EGR | DATE: 11/23/2020

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Table H-1
Summary of Emissions from the Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Emissions Source	CAP Emissions[1,2]								GHG Emissions[1,2]
	[ton/year]				[lb/day]				[MT CO_2e/yr]
	ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO_2e
Trucks	0.24	3.8	0.017	0.010	1.3	21	0.095	0.055	745
Total Emissions	**0.24**	**3.8**	**0.017**	**0.010**	**1.3**	**21**	**0.095**	**0.055**	**745**

Notes:

1. Howard Terminal gate transaction data and emissions inventory for 2018 provided by Port of Oakland and represents all gate transactions, as shown in the AQTR.
2. Existing truck activity and emissions calculated based on methodology in Port of Oakland 2017 Seaport Air Emissions Inventory (Ramboll 2018). Emissions from existing truck activity are based on the Howard Terminal truck trips (estimated from gate transactions) that are assumed to be relocated as a result of the Project.

Abbreviations:

AQTR - Air Quality Technical Report
CAP - Criteria Air Pollutant
CO_2e - carbon dioxide equivalent
GHG - greenhouse gas
lb - pounds
MT - metric ton
NO_x - nitrogen oxides
PM - particulate matter
ROG - reactive organic gases
yr - year

References:

CalEEMod® Version 2016.3.2 Available Online at: http://www.caleemod.com

Ramboll. 2018. Port of Oakland: 2017 Seaport Air Emissions Inventory. August. https://www.portofoakland.com/files/PDF/Port_Oakland_2017_Emissions_Inventory.pdf

Table H-2
Existing Truck Activity HRA at the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

MEIR Location		Excess Lifetime Cancer Risk[1] (in a million)	Chronic HI[2] (unitless)	$PM_{2.5}$ Concentration[3] ($\mu g/m^3$)
		Existing Truck Activity at the Roundhouse[4]		
Onsite	Impact	0.28	7.6E-05	5.9E-04
	UTMx (m)	562,680	562,680	562,680
	UTMy (m)	4,183,580	4,183,580	4,183,580
	Receptor Height (m)	1.8	1.8	1.8
Offsite	Impact	0.38	1.0E-04	8.0E-04
	UTMx (m)	563,080	563,080	563,080
	UTMy (m)	4,183,660	4,183,660	4,183,660
	Receptor Height (m)	1.8	1.8	1.8

Notes:

1. Lifetime excess cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year period. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-Site receptors are exposed to all Project construction and subsequent Project operations. On-Site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

The cancer risks were estimated using the following equation:

$Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

Where:

$Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
CF = Conversion Factor (mg/µg)
IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)
CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
ASF = Age Sensitivity Factor (unitless)

Table H-2
Existing Truck Activity HRA at the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes (continued):

2. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$
   Where:
   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

3. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emissions Rate (g/s)

Table H-2
Existing Truck Activity HRA at the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes (continued):

4. A portion of existing Howard Terminal Operations would be removed from the Project site if the Project is approved. In this case, the activity would relocate from Howard Terminal to the Roundhouse site. In this analysis, it is assumed that all emissions from the existing truck activity at Howard Terminal would fit within the 15 acres of space at the Roundhouse.

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
SCA - Standard Conditions of Approval
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

Table H-3
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	10	62	--	--	2.0	7.2	--	--
Operational Generators	191	4.1	592	9.4	0.040	0.15	1.5	0.049
Operational Traffic	0.48	0.88	0.51	2.0	0.11	0.88	0.058	3.5
Operational TRUs	0.030	0.018	0.023	0.035	0.036	0.018	0.0011	0.0086
Existing Howard Terminal Operation[7]	--	-2.2	--	-2.2	--	-2.2	--	-0.30
Truck Relocation to Roundhouse	0.22	0.38	0.65	0.38	0.14	0.38	0.014	0.19
Total Project Contribution	**201**	**65**	**593**	**10**	**2.3**	**6.5**	**1.6**	**3.5**

MEIR Location[8]								
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,080	562,940	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,660	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	38	1.8
Scenario[9]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk including relocation of existing truck activity to the Roundhouse site are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   CF = Conversion Factor (mg/µg)

   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$

   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, operating at 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, operating at 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.

Table H-3
Project Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
9. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-4
Project Chronic Hazard Index at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Lifetime Excess Chronic Hazard Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.019	0.034	--	--	6.8E-04	2.2E-04	--	--
Operational Generators	0.16	--	0.16	5.4E-04	3.1E-05	1.3E-05	3.1E-05	1.3E-05
Operational Traffic	4.8E-04	--	4.8E-04	0.0037	0.0014	0.0037	0.0014	0.0037
Operational TRUs	6.3E-06	--	6.3E-06	2.3E-06	2.5E-06	2.3E-06	2.5E-06	2.3E-06
Existing Howard Terminal Operation[7]	--	-5.9E-04	--	-8.1E-05	--	-8.1E-05	--	-8.1E-05
Truck Relocation to Roundhouse	1.8E-04	--	1.8E-04	5.2E-05	2.8E-05	5.2E-05	2.8E-05	5.2E-05
Total Project Contribution	**0.18**	**0.034**	**0.16**	**0.0042**	**0.0021**	**0.0039**	**0.0014**	**0.0037**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2021	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, operating at 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, operating at 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the chronic hazard index during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table H-4
Project Chronic Hazard Index at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-5
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.091	0.0079	--	--	0.0038	0.0025	--	--
Operational Generators	0.78	0.0027	0.78	0.0027	1.6E-04	6.6E-05	1.6E-04	6.6E-05
Operational Traffic	0.025	0.18	0.025	0.18	0.020	0.18	0.020	0.18
Operational TRUs	2.9E-05	1.1E-05	2.9E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05
Existing Howard Terminal Operation[7]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Truck Relocation to Roundhouse	0.0014	4.1E-04	0.0014	4.1E-04	2.2E-04	4.1E-04	2.2E-04	4.1E-04
Total Project Contribution	**0.89**	**0.19**	**0.80**	**0.19**	**0.024**	**0.19**	**0.020**	**0.18**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$

   Where:

   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)

   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)

   E = Emission Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, operating at 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, operating at 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table H-5
Project $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
TRU - Transportation Refrigeration Unit
TDM - Transportation Demand Measures
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan
OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-6
Maritime Reservation Scenario Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	15	77	--	--	3.6	8.4	--	--
Operational Generators	191	6.3	591	9.0	0.10	0.23	1.5	0.049
Operational Traffic	0.48	1.4	0.51	2.0	0.17	1.4	0.058	3.5
Operational TRUs	0.030	0.035	0.023	0.035	0.031	0.035	0.0011	0.0086
Existing Howard Terminal Operation[7]	--	-2.2	--	-2.2	--	-2.2	--	-0.30
Truck Relocation to Roundhouse	0.22	0.38	0.65	0.38	0.10	0.38	0.014	0.19
Total Project Contribution	**206**	**82**	**592**	**9.2**	**4.0**	**8.3**	**1.6**	**3.5**

MEIR Location[8]								
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,080	563,040	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,660	4,183,540	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	38	1.8
Scenario[9]	Scenario 2	Scenario 2	Scenario 3	Scenario 3	Scenario 2	Scenario 2	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk including relocation of existing truck activity to the Roundhouse site are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   CF = Conversion Factor (mg/µg)

   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$

   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, operating at 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, operating at 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.

Table H-6
Maritime Reservation Scenario Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
9. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-7
Maritime Reservation Scenario Chronic Hazard Index at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Lifetime Excess Chronic Hazard Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.049	0.058	--	--	0.0024	0.0064	--	--
Operational Generators	0.16	9.1E-04	0.16	5.3E-04	3.1E-05	3.7E-05	3.1E-05	1.3E-05
Operational Traffic	4.8E-04	0.0021	4.8E-04	0.0037	0.0011	0.0021	0.0014	0.0037
Operational TRUs	6.3E-06	9.3E-06	6.3E-06	2.3E-06	2.3E-06	9.3E-06	2.5E-06	2.3E-06
Existing Howard Terminal Operation[7]	--	-5.9E-04	--	-8.1E-05	--	-5.9E-04	--	-8.1E-05
Truck Relocation to Roundhouse	1.8E-04	1.0E-04	1.8E-04	5.2E-05	2.7E-05	1.0E-04	2.8E-05	5.2E-05
Total Project Contribution	**0.21**	**0.059**	**0.16**	**0.0042**	**0.0036**	**0.0066**	**0.0014**	**0.0037**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180	563,020	563,080	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920	4,183,640	4,183,660	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	1.8	1.8
Year	2027	2026	2028	2028	2027	2026	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, operating at 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, operating at 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the chronic hazard index during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.

Table H-7
Maritime Reservation Scenario Chronic Hazard Index at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
TDM - Transportation Demand Measures
TRU - Transportation Refrigeration Unit
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at:

Table H-8
Maritime Reservation Scenario $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
Project Contribution	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
Construction	0.23	0.28	--	--	0.0095	0.0035	--	--
Operational Generators	0.78	0.0044	0.78	0.0026	1.6E-04	6.5E-05	1.6E-04	6.5E-05
Operational Traffic	0.025	0.10	0.025	0.18	0.020	0.18	0.020	0.18
Operational TRUs	2.9E-05	4.3E-05	2.9E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05	1.1E-05
Existing Howard Terminal Operation[7]	--	-0.0046	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Truck Relocation to Roundhouse	0.0014	8.0E-04	0.0014	4.1E-04	2.2E-04	4.1E-04	2.2E-04	4.1E-04
Total Project Contribution	**1.0**	**0.31**	**0.80**	**0.19**	**0.030**	**0.19**	**0.020**	**0.18**

	MEIR Location[8]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2026	2028	2028	2027	2027	2028	2028

Notes:

1. The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$

   Where:

   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)

   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)

   E = Emission Rate (g/s)

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators at ground level, operating at 50 hrs/yr. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops, operating at 20 hrs/yr.
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Project, including the relocation of existing Port activity at the Roundhouse site.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Project.
7. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
8. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Table H-8
Maritime Reservation Scenario $PM_{2.5}$ Concentration at Off-Site and On-Site MEIR with Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Abbreviations:

µg - microgram
m - meter
MEIR - maximally exposed individual receptor
TRU - Transportation Refrigeration Unit
TDM - Transportation Demand Measures
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan
OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-9
Truck Relocation + Project + Peaker Power Plant Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Peaker Power Plant Construction[7]	--	0.81	--	--	--	0.057	--	--
Peaker Power Plant Generator[8]	0.041	0.049	0.080	0.10	0.10	0.0013	0.10	0.0014
Downwash Effects[9]	0.10	0.13	0.20	0.25	3.0	0.0022	3.0	0.0024
Project Contribution[10]	201	67	592	11	1.7	8.3	1.6	3.6
Existing Howard Terminal Operation[11]	--	-2.2	--	-2.2	--	-2.2	--	-0.30
Truck Relocation to the Roundhouse	0.22	0.38	0.65	0.38	0.014	0.38	0.014	0.19
Total Variant+Project Contribution	201	66	593	10	4.8	6.5	4.7	3.5

	MEIR Location[12]							
MEIR by Scenario	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
UTMx (m)	562,820	563,080	562,820	563,080	563,420	563,080	563,420	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,660	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	38	1.8	38	1.8
Scenario[13]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   CF = Conversion Factor ($mg/\mu g$)
   IF_{inh} = Intake Factor for Inhalation ($m^3/kg\text{-}day$)
   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops which are assumed to be tested and
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table H-9
Truck Relocation + Project + Peaker Power Plant Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. An additional generator is included in the Peaker Power Plant variant. The impacts from this generator are calculated from the year in which it goes into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts due to the Peaker Power Plant variant.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
13. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Because variant construction is completed in Phase 1, no variant construction impacts occur in Scenario 2. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-10
Truck Relocation + Project + Peaker Power Plant Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Chronic Health Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Peaker Power Plant Construction[7]	--	2.1E-04	--	--	--	--	--	--
Peaker Power Plant Generator[8]	2.6E-06	--	2.6E-06	1.3E-05	7.4E-08	1.9E-07	7.4E-08	1.9E-07
Downwash Effects[9]	6.4E-06	--	6.4E-06	3.1E-05	1.5E-07	3.2E-07	1.5E-07	3.2E-07
Project Contribution[10]	0.18	0.034	0.16	0.0045	0.0021	0.0039	0.0014	0.0037
Existing Howard Terminal Operation[11]	--	-5.9E-04	--	-3.5E-04	--	-8.1E-05	--	-8.1E-05
Truck Relocation to the Roundhouse	1.8E-04	1.0E-04	1.8E-04	9.3E-05	2.8E-05	5.2E-05	2.8E-05	5.2E-05
Total Variant+Project Contribution	**0.18**	**0.03**	**0.16**	**0.00**	**2.11E-03**	**0.0039**	**0.0014**	**0.0037**

	MEIR Location[12]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,100	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,700	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2021	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops which are assumed to be tested and
3. Values are shown as "--" to indicate that these sources do not contribute to the Chronic HI during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table H-10
Truck Relocation + Project + Peaker Power Plant Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. An additional generator is included in the Peaker Power Plant variant. The impacts from this generator are calculated from the year in which it goes into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash dispersion in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts due to the Peaker Power Plant variant.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-11
Truck Relocation + Project + Peaker Power Plant PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Peaker Power Plant Construction[7]	--	--	--	--	--	--	--	--
Peaker Power Plant Generator[8]	1.2E-05	4.0E-05	1.2E-05	4.0E-05	3.7E-07	9.4E-07	3.7E-07	9.4E-07
Downwash Effects[9]	3.1E-05	6.1E-05	3.1E-05	6.1E-05	7.6E-07	1.6E-06	7.6E-07	1.6E-06
Project Contribution[10]	0.89	0.19	0.80	0.19	0.024	0.19	0.020	0.18
Existing Howard Terminal Operation[11]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Truck Relocation to the Roundhouse	0.0014	4.1E-04	0.0014	4.1E-04	2.2E-04	4.1E-04	2.2E-04	4.1E-04
Total Variant+Project Contribution	**0.89**	**0.19**	**0.80**	**0.19**	**0.024**	**0.19**	**0.020**	**0.18**

	MEIR Location[12]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$
   Where:
   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)
   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)
   E = Emission Rate (g/s)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators at ground level, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators on rooftops which are assumed to be tested and
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table H-11
Truck Relocation + Project + Peaker Power Plant PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. An additional generator is included in the Peaker Power Plant variant. The impacts from this generator are calculated from the year in which it goes into operation (2024) onwards.
9. Downwash effects include additional impacts due to building downwash disperison in the Peaker Power Plant Variant, with the non-variant project downwash subtracted out.
10. Project impacts include the Project construction and operation, excluding impacts due to the Peaker Power Plant variant.
11. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
12. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
PM - particulate matter
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

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Table H-12
Truck Relocation + Project + Aerial Gondola Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	0.38	--	--	--	0.044	--	--
Gondola Generator[8]	2.2	0.51	0.63	8.8	0.026	0.07	0.078	0.090
Project Contribution[9]	201	67	592	5.0	2.1	8.3	1.6	3.6
Existing Howard Terminal Operation[10]	--	-2.2	--	-0.82	--	-2.2	--	-0.30
Truck Relocation to the Roundhouse	0.22	0.38	0.65	0.17	0.57	0.38	0.061	0.19
Total Variant+Project Contribution	**204**	**66**	**593**	**13**	**2.7**	**6.6**	**1.7**	**3.6**

	MEIR Location[11]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	563,420	563,080	562,820	563,640	562,940	563,080	563,420	563,180
UTMy (m)	4,183,440	4,183,660	4,183,580	4,183,380	4,183,440	4,183,660	4,183,440	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	37.8	1.8
Scenario[12]	Scenario 2	Scenario 1	Scenario 3	Scenario 3	Scenario 2	Scenario 1	Scenario 3	Scenario 3

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project construction and subsequent Project operations. On-site receptors are exposed to Phase 2 construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   CF = Conversion Factor (mg/µg)
   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)
   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
   ASF = Age Sensitivity Factor (unitless)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20
3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the Variant.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table H-12
Truck Relocation + Project + Aerial Gondola Excess Lifetime Cancer Risk at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Three additional generators are included in the Gondola variant. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Project impacts include the Project construction and operation, excluding impacts due to the Gondola variant.
10. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
11. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).
12. Three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Because variant construction is completed in Phase 1, no variant construction impacts occur in Scenario 2. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027.

Abbreviations:

ATCM - Airborne Toxic Control Measures
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
mg - miligram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate
µg - microgram

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-13
Truck Relocation + Project + Aerial Gondola Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Chronic Health Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	1.6E-04	--	--	--	--	--	--
Gondola Generator[8]	4.0E-05	--	4.0E-05	2.5E-04	7.6E-06	2.4E-05	7.6E-06	2.4E-05
Project Contribution[9]	0.18	0.034	0.16	0.0045	0.0021	0.0039	0.0014	0.0037
Existing Howard Terminal Operation[10]	--	-5.9E-04	--	-3.5E-04	--	-8.1E-05	--	-8.1E-05
Truck Relocation to the Roundhouse	1.8E-04	1.0E-04	1.8E-04	9.3E-05	1.2E-04	5.2E-05	1.2E-04	5.2E-05
Total Variant+Project Contribution	**0.18**	**0.034**	**0.16**	**0.0045**	**0.0022**	**0.0039**	**0.0015**	**0.0037**

	MEIR Location[11]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,080	562,820	563,100	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,700	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2021	2028	2028	2027	2027	2028	2028

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20
3. Values are shown as "--" to indicate that these sources do not contribute to Chronic HI during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction and operations.
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum Chronic HI attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table H-13
Truck Relocation + Project + Aerial Gondola Chronic Hazard Index at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Three additional generators are included in the Gondola variant. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Project impacts include the Project construction and operation, excluding impacts due to the Gondola variant.
10. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
11. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - Reference Exposure Level
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-14
Truck Relocation + Project + Aerial Gondola PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Construction + Operations		Operations Only		Construction + Operations		Operations Only	
	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]	On-Site MEIR[4,6]	Off-Site MEIR[5]
Gondola Construction[7]	--	--	--	--	--	--	--	--
Gondola Generator[8]	2.0E-04	8.6E-04	2.0E-04	8.6E-04	3.8E-05	1.2E-04	3.8E-05	1.2E-04
Project Contribution[9]	0.89	0.19	0.80	0.19	0.024	0.19	0.020	0.18
Existing Howard Terminal Operation[10]	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04	--	-6.4E-04
Truck Relocation to the Roundhouse	1.4E-03	4.1E-04	1.4E-03	4.1E-04	9.1E-04	4.1E-04	9.1E-04	4.1E-04
Total Variant+Project Contribution	**0.89**	**0.19**	**0.80**	**0.19**	**0.025**	**0.19**	**0.021**	**0.18**

	MEIR Location[11]							
MEIR by Scenario	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**	**On-Site MEIR[4,6]**	**Off-Site MEIR[5]**
UTMx (m)	562,820	563,180	562,820	563,180	563,020	563,180	563,020	563,180
UTMy (m)	4,183,580	4,183,920	4,183,580	4,183,920	4,183,640	4,183,920	4,183,640	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Year	2027	2027	2028	2028	2027	2027	2028	2028

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 construction emissions and subsequent Project operations.

   The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

   $C_i = E \times D_i$

   Where:

   C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)

   D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)

   E = Emission Rate (g/s)

2. The Unmitigated Variant reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hrs/yr. The Mitigated Variant reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20
3. Values are shown as "--" to indicate that these sources do not contribute to the $PM_{2.5}$ concentration during the year associated with the MEIR.
4. On-site Project MEIR was identified as the on-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction and
5. Off-site Project MEIR was identified as the off-site sensitive receptor location with the maximum $PM_{2.5}$ concentration attributed to the emissions associated with the Variant construction, operation, and traffic.
6. The mitigated on-site MEIR result reflects health risk following reductions from MERV filtrations that may be included in the Variant.

Table H-14
Truck Relocation + Project + Aerial Gondola PM2.5 Concentration at Off-Site and On-Site MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

7. Construction of the variant occurs during Phase 1 of the Project, before any residents move in, and so variant construction only impacts off-site receptors.
8. Three additional generators are included in the Gondola variant. The impacts from these generators are calculated from the year in which they go into operation (2024) onwards.
9. Project impacts include the Project construction and operation, excluding impacts due to the Gondola variant.
10. Existing Howard Terminal Operations would be removed from the Project site if the Project is approved. It is assumed that absent the Project, these operations would continue and thus, off-site receptors would be exposed to their impacts. However, if the Project is approved, the impacts from that activity are removed and therefore, are included as a reduction here. This reduction does not apply to on-site receptors since the on-site receptors of the Project would never be exposed to the existing Howard Terminal activities.
11. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
PM - particulate matter
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

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OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-15
Summary of Excess Lifetime Cancer Risks Associated with the Grade Separation Alternative and Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Impacts	Excess Lifetime Cancer Risk[1] (in a million)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Brush Street[4]		Market Street[4]		Brush Street[4]		Market Street[4]	
	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]
Overpass Grade Separation Alternative[6]								
Project Construction + Operation	592	65	592	65	2.1	4.2	2.1	6.1
Overpass Construction	--	147	--	97	--	26	--	15
Truck Relocation to Roundhouse	0.65	0.38	0.65	0.38	0.14	0.35	0.14	0.38
Total Impact	**593**	**212**	**593**	**162**	**2.3**	**30**	**2.3**	**22**
MEIR Location for Project + Overpass Grade Separation Alternative + Truck Relocation to the Roundhouse[7]								
UTMx (m)	562,820	563,080	562,820	563,080	562,940	563,100	562,940	563,080
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,660	4,183,440	4,183,700	4,183,440	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Scenario[8]	Scenario 3	Scenario 1	Scenario 3	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1
Underpass Grade Separation Alternative[6]								
Project Construction + Operation	592	65	592	65	2.1	4.2	2.1	6.1
Underpass Construction	--	147	--	97	0.014	32	0.014	19
Truck Relocation to Roundhouse	0.65	0.38	0.65	0.38	0.14	0.35	0.14	0.38
Total Impact	**593**	**212**	**593**	**163**	**2.3**	**37**	**2.3**	**25**
MEIR Location for Project + Underpass Grade Separation Alternative + Truck Relocation to the Roundhouse[7]								
UTMx (m)	562,820	563,080	562,820	563,080	562,940	563,100	562,940	563,080
UTMy (m)	4,183,580	4,183,660	4,183,580	4,183,660	4,183,440	4,183,700	4,183,440	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	1.8	1.8	1.8	1.8
Scenario[8]	Scenario 3	Scenario 1	Scenario 3	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1

Notes:

1. Excess lifetime cancer risk from construction and operations are combined since cancer risk is evaluated over a 30-year lifetime. Thus, the risk takes into account exposure to Project and Grade Separation Alternative emissions beginning during construction and continuing through operations. Off-site receptors are exposed to all Project and Grade Separation Alternative construction and subsequent Project operations. On-site receptors are exposed to Phase 2 and Grade Separation Alternative construction emissions and subsequent Project operations.

   The cancer risks were estimated using the following equation:

   $Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF_i \times ASF$

   Where:

   $Risk_{inh}$ = Cancer Risk for the Inhalation Pathway (unitless)
   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)
   CF = Conversion Factor ($mg/\mu g$)
   IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)
   CPF_i = Cancer Potency Factor for Chemical "i" $(mg/kg\text{-}day)^{-1}$
   ASF = Age Sensitivity Factor (unitless)

Table H-15
Summary of Excess Lifetime Cancer Risks Associated with the Grade Separation Alternative and Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hours per year. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20 hours per year. For the Grade Separation Alternative construction, the Unmitigated scenario assumes default off-road equipment fleet and the Mitigated scenario assumes the use of all Tier 4 construction off-road equipment (except cranes which are Tier 3). The mitigated on-site MEIR result reflects health risk reductions from MERV filtration that may be included in the Project.

3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime cancer risk for these scenarios.

4. The Project sponsor has indicated that the Grade Separation Alternative could occur on either Brush Street or Market Street but not both.

5. MEIRs were identified as the sensitive receptor location with the maximum total cancer risk attributed to the emissions associated with the combined Project construction, Project operation, and Grade Separation Alternative construction.

6. The Project sponsor has indicated that the Grade Separation Alternative could occur as either an overpass or an underpass but not both.

7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

8. For the Grade Separation Alternative, only two of the three exposure scenarios were modeled. Scenario 1 begins at the start of Project construction on 9/1/2020. Scenario 2 begins at the start of Phase 1 operation on 12/4/2023 and is exposed to both Phase 1 operation and Phase 2 construction followed by Full Buildout operation beginning on 9/2/2027. Scenario 3 evaluates all receptors, onsite and offsite, and begins at the beginning of Full Buildout operation on 9/2/2027, which is after the conclusion of the Grade Separation Alternative, and therefore not analyzed for this alternative.

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
µg - microgram
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-94612.s3.amazonaws.com/documents/oak063935.pdf

Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-16
Summary of Chronic Hazard Index Associated with the Grade Separation Alternative and Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Impacts	Chronic Hazard Index[1] (unitless)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Brush Street[4]		Market Street[4]		Brush Street[4]		Market Street[4]	
	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]
Overpass Grade Separation Alternative[6]								
Project Construction + Operation	0.18	0.014	0.18	0.023	0.0017	0.0010	0.0017	0.0015
Overpass Construction	--	0.13	--	0.074	--	0.023	--	0.013
Truck Relocation to Roundhouse	1.8E-04	--	1.8E-04	--	3.2E-05	--	3.2E-05	--
Total Impact	**0.18**	**0.14**	**0.18**	**0.10**	**0.0017**	**0.024**	**0.0017**	**0.015**
MEIR Location for Project + Overpass Grade Separation Alternative + Truck Relocation to the Roundhouse[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,100	562,920	563,080
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,700	4,183,660	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2022	2027	2022	2027	2022
Underpass Grade Separation Alternative[6]								
Project Construction + Operation	0.18	0.014	0.18	0.034	0.0017	0.0010	0.0017	0.0015
Underpass Construction	--	0.10	--	0.052	--	0.030	--	0.017
Truck Relocation to Roundhouse	1.8E-04	--	1.8E-04	--	3.2E-05	--	3.2E-05	--
Total Impact	**0.18**	**0.12**	**0.18**	**0.085**	**0.0017**	**0.031**	**0.0017**	**0.019**
MEIR Location for Project + Underpass Grade Separation Alternative + Truck Relocation to the Roundhouse[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,100	562,920	563,080
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,700	4,183,660	4,183,660
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2021	2027	2022	2027	2022

Notes:

1. The potential for exposure to result in adverse chronic non-cancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) from construction and operations to the non-cancer chronic REL for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient or HQ. To evaluate the potential for adverse chronic non-cancer health effects from simultaneous exposure to multiple chemicals, the hazard quotients for all chemicals are summed, yielding a hazard index or HI.

   The chronic HI for each receptor was estimated using the following equation:

   $HI_{inh} = C_i / cREL$

   Where:

   HI_{inh} = Chronic HI for the Inhalation Pathway (unitless)

   C_i = Annual Average Air Concentration for Chemical "i" ($\mu g/m^3$)

   cREL = Chronic Reference Exposure Level ($\mu g/m^3$)

Table H-16
Summary of Chronic Hazard Index Associated with the Grade Separation Alternative and Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hours per year. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20 hours per year. For the Grade Separation Alternative construction, the Unmitigated scenario assumes default off-road equipment fleet and the Mitigated scenario assumes the use of all Tier 4 construction off-road equipment (except cranes which are Tier 3). The mitigated on-site MEIR result reflects health risk reductions from MERV filtration that may be included in the Project.

3. Values are shown as "--" to indicate that these sources do not contribute to the excess lifetime chronic non-cancer risk for these scenarios.

4. The Project sponsor has indicated that the Grade Separation Alternative could occur on either Brush Street or Market Street but not both.

5. MEIRs were identified as the sensitive receptor location with the maximum total chronic HI attributed to the emissions associated with the combined Project construction, Project operation, and Grade Separation Alternative construction.

6. The Project sponsor has indicated that the Grade Separation Alternative could occur as either an overpass or an underpass but not both.

7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
REL - reference exposure level
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

OEHHA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Available online at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Table H-17
Summary of $PM_{2.5}$ Concentration Associated with the Grade Separation Alternative and Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Impacts	Excess $PM_{2.5}$ Concentration[1] ($\mu g/m^3$)							
	Unmitigated[2,3]				Mitigated[2,3]			
	Brush Street[4]		Market Street[4]		Brush Street[4]		Market Street[4]	
	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]	On-Site MEIR[5]	Off-Site MEIR[5]
Overpass Grade Separation Alternative[6]								
Project Construction + Operation	0.89	0.067	0.89	0.11	0.016	0.19	0.016	0.19
Overpass Construction	--	0.60	--	0.35	--	--	--	--
Truck Relocation to Roundhouse	0.0014	--	0.0014	--	2.5E-04	4.1E-04	2.5E-04	4.1E-04
Total Impact	**0.89**	**0.67**	**0.89**	**0.46**	**0.016**	**0.19**	**0.016**	**0.19**
MEIR Location for Project + Overpass Grade Separation Alternative + Truck Relocation to the Roundhouse[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,180	562,920	563,180
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,920	4,183,660	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2022	2027	2027	2027	2027
Underpass Grade Separation Alternative[6]								
Project Construction + Operation	0.89	0.067	0.89	0.16	0.016	0.19	0.016	0.19
Underpass Construction	--	0.49	--	0.24	--	--	--	--
Truck Relocation to Roundhouse	0.0014	--	0.0014	--	2.5E-04	4.1E-04	2.5E-04	4.1E-04
Total Impact	**0.89**	**0.56**	**0.89**	**0.40**	**0.016**	**0.19**	**0.016**	**0.19**
MEIR Location for Project + Underpass Grade Separation Alternative + Truck Relocation to the Roundhouse[7]								
UTMx (m)	562,820	563,100	562,820	563,080	562,920	563,180	562,920	563,180
UTMy (m)	4,183,580	4,183,700	4,183,580	4,183,660	4,183,660	4,183,920	4,183,660	4,183,920
Receptor Height (m)	7.8	1.8	7.8	1.8	4.8	1.8	4.8	1.8
Year	2027	2022	2027	2021	2027	2027	2027	2027

Notes:

1. $PM_{2.5}$ concentrations at off-site receptors include contributions from multiple phases of Project and Grade Separation Alternative construction and subsequent Project operations. $PM_{2.5}$ concentrations at on-site receptors include contributions from Phase 2 and Grade Separation Alternative construction emissions and subsequent Project operations.

The $PM_{2.5}$ concentration at each receptor was estimated using the following equation:

$C_i = E \times D_i$

Where:

C = Concentration of $PM_{2.5}$ at receptor "i" ($\mu g/m^3$)

D_i = Dispersion factor associated with unit emissions at receptor "i" ($\mu g/m^3$)/(g/s)

Table H-17
Summary of $PM_{2.5}$ Concentration Associated with the Grade Separation Alternative and Truck Relocation to the Roundhouse
Oakland Waterfront Ballpark District Project
Oakland, California

Notes, Continued:

2. The Unmitigated Project reflects default construction off-road equipment fleet and ATCM standard generators, which are assumed to be tested and maintained for up to 50 hours per year. The Mitigated Project reflects use of all Tier 4 construction off-road equipment (except cranes which are Tier 3) and Tier 4 emergency generators, which are assumed to be tested and maintained for up to 20 hours per year. For the Grade Separation Alternative construction, the Unmitigated scenario assumes default off-road equipment fleet and the Mitigated scenario assumes the use of all Tier 4 construction off-road equipment (except cranes which are Tier 3). The mitigated on-site MEIR result reflects health risk reductions from MERV filtration that may be included in the Project.

3. Values are shown as "--" to indicate that these sources do not contribute to the lifetime excess $PM_{2.5}$ concentration for these scenarios.

4. The Project sponsor has indicated that the Grade Separation Alternative could occur on either Brush Street or Market Street but not both.

5. MEIRs were identified as the sensitive receptor location with the maximum total $PM_{2.5}$ concentration attributed to the emissions associated with the combined Project construction, Project operation, and Grade Separation Alternative construction.

6. The Project sponsor has indicated that the Grade Separation Alternative could occur as either an overpass or an underpass but not both.

7. Potential MEIR locations were first screened to remove any receptors that were located on top of a freeway. Potential MEIR locations were then screened by removing those receptors not located in current residential areas (from City of Oakland Zoning Maps and visual confirmation of current land use).

Abbreviations:

µg - microgram
kg - kilogram
m - meter
MEIR - maximally exposed individual receptor
UTMx - Universal Transverse Mercator x-coordinate
UTMy - Universal Transverse Mercator y-coordinate

References:

City of Oakland Zoning and Estuary Policy Plan Maps. City of Oakland Planning and Building Department. Available online at: https://cao-
Downtown Oakland Specific Plan Preliminary Draft Plan, January 2019. Available online at: https://www.oaklandca.gov/documents/preliminary-draft-plan

Table H-18
Detailed Summary of 2024 West Oakland Cumulative Impacts at MRS + Truck Relocation MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Mitigated Project	Construction	2.0	0.0038	7.2	0.0025
	Operational Generators	0.040	1.6E-04	0.15	6.6E-05
	Operational Traffic	0.11	0.020	0.88	0.18
	Operational TRUs	0.036	1.1E-05	0.018	1.1E-05
	Existing Howard Terminal Operation	--	--	-2.2	-6.4E-04
Truck Relocation to Roundhouse		0.14	2.2E-04	0.38	4.1E-04
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.105
	Light Heavy Duty Trucks	0.53	0.005	0.715	0.009
	Heavy and Medium Duty Trucks	1.3	0.012	1.721	0.019
	Non-Truck Vehicles	1.1	0.119	1.523	0.244
Other	Ferries	18	0.018	12.180	0.011
	Schnitzer Ships	6.1	0.006	4.055	0.004
	Schnitzer Trucks	0.057	0.004	0.022	0.002
	Truck Related Business	3.1	0.002	1.849	0.001
Permitted	CASS	8.7E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	2.0E-06	0.022	0.000	0.031
	Dynegy	0.0033	0.000	0.010	0.001
	EBMUD	0.63	0.025	0.693	0.027
	Other Facilities	1.3	0.048	1.505	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	46	0.350	21.512	0.157
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.8	0.004	2.869	0.003
	Bunkering Tugs and Pumps	5.3	0.005	3.403	0.003
	Cargo Handling	7.3	0.009	6.487	0.008
	Drayage Trucks	1.2	0.021	2.438	0.026
	Dredging	13	0.013	8.771	0.009
	Road Dust	--	0.017	--	0.015
	Harbor Craft	97	0.076	54.344	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	0.9	0.001	1.002	0.001
	OGV Berthing	24	0.058	21.436	0.052
	OGV Maneuvering	35	0.038	26.918	0.031
Rail	Rail Lines	24	0.102	121.331	0.026
	Railyard	31	0.035	26.897	0.029
Street	Road Dust	--	1.166	--	1.746
	Light Heavy Duty Trucks	0.48	0.006	0.903	0.010
	Heavy and Medium Duty Trucks	0.66	0.014	1.195	0.051
	Non-Truck Vehicles	1.1	0.108	1.857	0.186
	Total	**324**	**2.4**	**332**	**3.1**

Table H-18
Detailed Summary of 2024 West Oakland Cumulative Impacts at MRS + Truck Relocation MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Health impact values are shown for the mitigated Project MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.
2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment
MEIR - maximally exposed individual receptor
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
$\mu g/m^3$ - micrograms per cubic meter

Table H-19
Summary of 2024 West Oakland Cumulative Impacts at MRS + Truck Relocation MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Mitigated Project	2.1	0.024	6.1	0.19
Truck Relocation to Roundhouse	0.14	2.2E-04	0.38	4.1E-04
Highway	2.9	0.19	4.0	0.38
Other	21	0.020	14	0.012
Permitted	1.9	0.14	2.2	0.15
Dynegy	0.0033	3.8E-04	0.010	8.2E-04
Schnitzer	53	0.36	26	0.16
Port	186	0.24	128	0.20
Rail	54	0.14	148	0.055
Street	2.2	1.3	4.0	2.0
Total	**324**	**2.4**	**332**	**3.1**

Notes:

1. Health impact values are shown for the mitigated Project MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table H-20
Summary of Cumulative Impacts at Project + Truck Relocation MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0023	0.076	0.0019	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	13	--	0.27
Major Streets[4,5]	4.1	--	0.060	2.9	--	0.029
Railways[4]	67	--	0.017	17	--	0.082
Project Construction	7.2	2.2E-04	0.0025	2.0	6.8E-04	0.0038
Project Operational Generators	0.15	1.3E-05	6.6E-05	0.040	3.1E-05	1.6E-04
Project Operational Traffic	0.88	0.0037	0.18	0.11	0.0014	0.020
Project Operational TRUs	0.018	2.3E-06	1.1E-05	0.036	2.5E-06	1.1E-05
Existing Howard Terminal Operation	-2.2	-8.1E-05	-6.4E-04	--	--	--
Truck Relocation to Roundhouse	0.4	5.2E-05	4.1E-04	0.1	2.8E-05	0.0002
Total	**97**	**0.0062**	**1.0**	**35**	**0.0076**	**1.0**

Notes:

1. Details for each source are shown in the preceding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

Table H-21
Detailed Summary of 2024 West Oakland Cumulative Impacts at MRS + Truck Relocation MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Mitigated Project	Construction	3.6	0.0095	8.4	0.0035
	Operational Generators	0.100	1.6E-04	0.23	6.5E-05
	Operational Traffic	0.17	0.020	1.38	0.18
	Operational TRUs	0.031	1.1E-05	0.035	1.1E-05
	Existing Howard Terminal Operation	--	--	-2.2	-6.4E-04
Truck Relocation to Roundhouse		0.10	2.2E-04	0.38	4.1E-04
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.105
	Light Heavy Duty Trucks	0.61	0.005	0.715	0.009
	Heavy and Medium Duty Trucks	1.5	0.012	1.721	0.019
	Non-Truck Vehicles	1.3	0.119	1.523	0.244
Other	Ferries	15	0.018	12.180	0.011
	Schnitzer Ships	4.9	0.006	4.055	0.004
	Schnitzer Trucks	0.034	0.004	0.022	0.002
	Truck Related Business	16.9	0.002	1.849	0.001
Permitted	CASS	9.6E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	3.0E-06	0.022	0.000	0.031
	Dynegy	0.0044	0.000	0.010	0.001
	EBMUD	0.66	0.025	0.693	0.027
	Other Facilities	1.3	0.048	1.505	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	26	0.350	21.512	0.157
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.9	0.004	2.869	0.003
	Bunkering Tugs and Pumps	4.1	0.005	3.403	0.003
	Cargo Handling	6.7	0.009	6.487	0.008
	Drayage Trucks	1.5	0.021	2.438	0.026
	Dredging	10	0.013	8.771	0.009
	Road Dust	--	0.017	--	0.015
	Harbor Craft	70	0.076	54.344	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	1.0	0.001	1.002	0.001
	OGV Berthing	22	0.058	21.436	0.052
	OGV Maneuvering	30	0.038	26.918	0.031
Rail	Rail Lines	39	0.102	121.331	0.026
	Railyard	28	0.035	26.897	0.029
Street	Road Dust	--	1.166	--	1.746
	Light Heavy Duty Trucks	0.63	0.006	0.903	0.010
	Heavy and Medium Duty Trucks	0.87	0.014	1.195	0.051
	Non-Truck Vehicles	1.4	0.108	1.857	0.186
	Total	**290**	**2.4**	**334**	**3.1**

Table H-21
Detailed Summary of 2024 West Oakland Cumulative Impacts at MRS + Truck Relocation MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Notes:

1. Health impact values are shown for the mitigated Project MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.
2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment
MEIR - maximally exposed individual receptor
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
$\mu g/m^3$ - micrograms per cubic meter

Table H-22
Summary of 2024 West Oakland Cumulative Impacts at MRS + Truck Relocation MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Mitigated Project	3.9	0.029	7.9	0.19
Truck Relocation to Roundhouse	0.10	2.2E-04	0.38	4.1E-04
Highway	3.4	0.19	4.0	0.38
Other	32	0.020	14	0.012
Permitted	2.0	0.14	2.2	0.15
Dynegy	0.0044	3.8E-04	0.010	8.2E-04
Schnitzer	31	0.36	26	0.16
Port	148	0.24	128	0.20
Rail	67	0.14	148	0.055
Street	2.9	1.3	4.0	2.0
Total	**290**	**2.4**	**334**	**3.1**

Notes:

1. Health impact values are shown for the mitigated Project MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table H-23
Summary of Cumulative Impacts at MRS + Truck Relocation MEIR Using BAAQMD Recommended Methods
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0082	0.076	0.8195	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	16	--	0.27
Major Streets[4,5]	4.1	--	0.060	3.6	--	0.029
Railways[4]	67	--	0.017	26	--	0.082
Project Construction	8.4	6.4E-03	0.0035	3.6	2.4E-03	0.0095
Project Operational Generators	0.23	3.7E-05	6.5E-05	0.100	3.1E-05	1.6E-04
Project Operational Traffic	1.38	0.0021	0.18	0.17	0.0011	0.020
Project Operational TRUs	0.035	9.3E-06	1.1E-05	0.031	2.3E-06	1.1E-05
Existing Howard Terminal Operation	-2.2	-5.9E-04	-6.4E-04	--	--	--
Truck Relocation to Roundhouse	0.4	1.0E-04	4.1E-04	0.1	2.7E-05	0.0002
Total	**99**	**0.0162**	**1.0**	**51**	**0.0090**	**1.0**

Notes:

1. Details for each source are shown in the preceding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

Table H-24

Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Peaker Power Plant + Truck Relocation to the Roundhouse MEIR

Oakland Waterfront Ballpark District Project

Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Project	Power Plant Construction	--	--	0.057	--
	Power Plant Generator	0.10	3.7E-07	0.0013	9.4E-07
	Downwash Effects	3.0	7.6E-07	0.0022	1.6E-06
	Project Contribution	1.7	0.024	8.3	0.19
	Existing Howard Terminal Operation	--	--	-2.2	-6.4E-04
	Truck Relocation to the Roundhouse	0.014	2.2E-04	0.38	4.1E-04
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.105
	Light Heavy Duty Trucks	0.78	0.005	0.715	0.009
	Heavy and Medium Duty Trucks	1.7	0.012	1.721	0.019
	Non-Truck Vehicles	1.5	0.119	1.523	0.244
Other	Ferries	20	0.018	12.180	0.011
	Schnitzer Ships	4.0	0.006	4.055	0.004
	Schnitzer Trucks	0.013	0.004	0.022	0.002
	Truck Related Business	2.0	0.002	1.849	0.001
Permitted	CASS	9.3E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	2.0E-06	0.022	0.000	0.031
	Dynegy	0.0663	0.000	0.010	0.001
	EBMUD	0.61	0.025	0.693	0.027
	Other Facilities	2.4	0.048	1.505	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	16	0.350	21.512	0.157
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.3	0.004	2.869	0.003
	Bunkering Tugs and Pumps	3.1	0.005	3.403	0.003
	Cargo Handling	5.6	0.009	6.487	0.008
	Drayage Trucks	2.2	0.021	2.438	0.026
	Dredging	9	0.013	8.771	0.009
	Road Dust	--	0.017	--	0.015
	Harbor Craft	54	0.076	54.344	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	0.8	0.001	1.002	0.001
	OGV Berthing	20	0.058	21.436	0.052
	OGV Maneuvering	26	0.038	26.918	0.031
Rail	Rail Lines	68	0.102	121.331	0.026
	Railyard	22	0.035	26.897	0.029
Street	Road Dust	--	1.166	--	1.746
	Light Heavy Duty Trucks	0.90	0.006	0.903	0.010
	Heavy and Medium Duty Trucks	1.57	0.014	1.195	0.051
	Non-Truck Vehicles	2.0	0.108	1.857	0.186
	Total	**272**	**2.4**	**332**	**3.1**

Table H-24

Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Peaker Power Plant + Truck Relocation to the Roundhouse MEIR

Oakland Waterfront Ballpark District Project

Oakland, California

Notes:

1. Health impact values are shown for the Project + Peaker Power Plant + Truck Relocation to the Roundhouse MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.
2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table H-25
Summary of 2024 West Oakland Cumulative Impacts at Project + Peaker Power Plant + Truck Relocation to the Roundhouse MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project	4.8	0.02	6.5	0.19
Highway	4.0	0.19	4.0	0.38
Other	22	0.020	14	0.012
Permitted	3.0	0.14	2.2	0.15
Dynegy	0.0663	3.8E-04	0.010	8.2E-04
Schnitzer	20	0.36	26	0.16
Port	123	0.24	128	0.20
Rail	90	0.137	148	0.05
Street	4.4	1.29	4.0	2.0
Total	**272**	**2.4**	**332**	**3.1**

Notes:

1. Health impact values are shown for the Project + Peaker Power Plant + Truck Relocation to the Roundhouse MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table H-26
Summary of Cumulative Impacts at Project + Peaker Power Plant + Truck Relocation to the Roundhouse MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0023	0.076	0.90	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	4.0	--	0.27
Major Streets[4,5]	4.1	--	0.060	4.4	--	0.029
Railways[4]	67	--	0.017	90	--	0.082
Power Plant Construction	0.057	--	--	--	--	--
Power Plant Generator	0.0013	1.9E-07	9.4E-07	0.10	7.4E-08	3.7E-07
Downwash Effects	0.0022	3.2E-07	1.6E-06	3.0	1.5E-07	7.6E-07
Project Contribution	8.3	0.0039	0.19	1.7	0.0021	0.024
Existing Howard Terminal Operation	-2.2	-8.1E-05	-6.4E-04	--	--	--
Truck Relocation to the Roundhouse	0.38	5.2E-05	4.1E-04	0.014	2.8E-05	2.2E-04
Total	**97**	**0.0062**	**1.0**	**104**	**0.0076**	**1.0**

Notes:

1. Details for each source are shown in the preceeding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter

Table H-27

Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Aerial Gondola + Truck Relocation to the Roundhouse MEIR

Oakland Waterfront Ballpark District Project

Oakland, California

Source Category	Specific Source	Onsite MEIR		Offsite MEIR	
		Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
		in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project Contributions[1]					
Project	Gondola Construction	--	--	--	--
	Gondola Generator	0.026	3.8E-05	0.11	1.2E-04
	Project Contribution	2.1	0.024	8.3	0.19
	Existing Howard Terminal Operation	--	--	-2.2	-6.4E-04
	Truck Relocation to the Roundhouse	0.57	9.1E-04	0.38	4.1E-04
Cumulative Contributions[1,2]					
Highway	Road Dust	--	0.053	--	0.105
	Light Heavy Duty Trucks	0.53	0.005	0.715	0.009
	Heavy and Medium Duty Trucks	1.3	0.012	1.721	0.019
	Non-Truck Vehicles	1.1	0.119	1.523	0.244
Other	Ferries	18	0.018	12.180	0.011
	Schnitzer Ships	6.1	0.006	4.055	0.004
	Schnitzer Trucks	0.057	0.004	0.022	0.002
	Truck Related Business	3.1	0.002	1.849	0.001
Permitted	CASS	8.7E-05	0.003	0.000	0.003
	CA Waste	--	0.009	--	0.010
	California Cereal	2.0E-06	0.022	0.000	0.031
	Dynegy	0.0033	0.000	0.010	0.001
	EBMUD	0.63	0.025	0.693	0.027
	Other Facilities	1.3	0.048	1.505	0.050
	Pinnacle	--	0.021	--	0.022
	Schnitzer Stationary Sources	46	0.350	21.512	0.157
	Sierra Pacific	--	0.010	--	0.011
Port	BNSF Railyard	2.8	0.004	2.869	0.003
	Bunkering Tugs and Pumps	5.3	0.005	3.403	0.003
	Cargo Handling	7.3	0.009	6.487	0.008
	Drayage Trucks	1.2	0.021	2.438	0.026
	Dredging	13	0.013	8.771	0.009
	Road Dust	--	0.017	--	0.015
	Harbor Craft	97	0.076	54.344	0.050
	Light Heavy Duty Trucks	--	--	--	--
	Non-Truck Vehicles	--	--	--	--
	OGRE Railyard	0.9	0.001	1.002	0.001
	OGV Berthing	24	0.058	21.436	0.052
	OGV Maneuvering	35	0.038	26.918	0.031
Rail	Rail Lines	24	0.102	121.331	0.026
	Railyard	31	0.035	26.897	0.029
Street	Road Dust	--	1.166	--	1.746
	Light Heavy Duty Trucks	0.48	0.006	0.903	0.010
	Heavy and Medium Duty Trucks	0.66	0.014	1.195	0.051
	Non-Truck Vehicles	1.1	0.108	1.857	0.186
	Total	**324**	**2.4**	**332**	**3.1**

Table H-27

Detailed Summary of 2024 West Oakland Cumulative Impacts at Project + Aerial Gondola + Truck Relocation to the Roundhouse MEIR

Oakland Waterfront Ballpark District Project

Oakland, California

Notes:

1. Health impact values are shown for the Project + Aerial Gondola MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

2. A "--" means that the source's impacts were not included in the West Oakland HRA.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table H-28
Summary of 2024 West Oakland Cumulative Impacts at Project + Aerial Gondola + Truck Relocation to the Roundhouse MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Source Category	Onsite MEIR[1]		Offsite MEIR[1]	
	Cancer Risk	$PM_{2.5}$	Cancer Risk	$PM_{2.5}$
	in a million	$\mu g/m^3$	in a million	$\mu g/m^3$
Project	2.7	0.025	6.6	0.19
Highway	2.9	0.19	4.0	0.38
Other	21	0.020	14	0.012
Permitted	1.9	0.14	2.2	0.15
Dynegy	0.0033	3.8E-04	0.010	8.2E-04
Schnitzer	53	0.36	26	0.16
Port	186	0.24	128	0.20
Rail	54	0.14	148	0.05
Street	2.2	1.3	4.0	2.0
Total	**324**	**2.4**	**332**	**3.1**

Notes:

1. Health impact values are shown for the Project + Aerial Gondola + Truck Relocation to the MEIR locations only. The cumulative contributions were provided in rasters from the BAAQMD for the West Oakland HRA for 2024.

Abbreviations:

HRA - health risk assessment

MEIR - maximally exposed individual receptor

$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter

$\mu g/m^3$ - micrograms per cubic meter

Table H-29
Summary of Cumulative Impacts at Project + Aerial Gondola + Truck Relocation to the Roundhouse MEIR
Oakland Waterfront Ballpark District Project
Oakland, California

Nearby Sources[1]	Offsite MEIR			Onsite MEIR		
	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration	Excess Lifetime Cancer Risk	Noncancer Chronic HI	$PM_{2.5}$ Concentration
	(in a million)	(unitless)	($\mu g/m^3$)	(in a million)	(unitless)	($\mu g/m^3$)
Existing Stationary Sources[2]	0.93	0.0023	0.076	0.0019	0.0055	0.60
Roadways[3]	0	--	0.11	0	--	0
Highways[4]	19	--	0.56	13	--	0.27
Major Streets[4,5]	4.1	--	0.060	2.9	--	0.029
Railways[4]	67	--	0.017	17	--	0.082
Gondola Construction	--	--	--	--	--	--
Gondola Generator	0.11	2.4E-05	1.2E-04	0.026	7.6E-06	3.8E-05
Project Contribution	8.3	0.0039	0.19	2.1	0.0021	0.024
Existing Howard Terminal Operation	-2.2	-8.1E-05	-6.4E-04	--	--	--
Truck Relocation to the Roundhouse	0.38	5.2E-05	4.1E-04	0.57	1.2E-04	9.1E-04
Total	**98**	**0.0062**	**1.0**	**36**	**0.0077**	**1.0**

Notes:

1. Details for each source are shown in the preceeding tables. If the cell is marked with "--", no risk was calculated. For roadways, highways, major streets, and railways, chronic HI is not calculated in the BAAQMD screening tools. For Gondola Construction, "--" indicates no risk was calculated as the MEIR corresponds to a scenario or year in which construction is already completed.
2. Consistent with BAAQMD guidance, Ramboll included all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
3. Per BAAQMD guidance, Ramboll searched for additional nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 ft of the offsite cancer or onsite cancer and $PM_{2.5}$ MEIRs.
4. Nearby major streets, highway, and railway cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
5. Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

Abbreviations:

µg - microgram
HI - hazard index
m^3 - cubic meter
MEIR - maximum exposed individual receptor
$PM_{2.5}$ - fine particulate matter less than 2.5 micrometers in diameter