

2201 VALLEY STREET PROJECT CEQA ANALYSIS

**City of Oakland
Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612**

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**URBAN
PLANNING
PARTNERS
INC.**

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I. EXECUTIVE SUMMARY

This CEQA document is prepared pursuant to California Resources Code Sections 21003, 21083, 21083.3, 21090, 21094.5, and 21166 and State of California Environmental Quality Act (CEQA) Guidelines Sections 15162, 15163, 15183, 15183.3, 15168, and 15180.

This section provides summary describing the project, the finding of the analysis included in this CEQA document, and the document's organization.

A. Project Overview

The 2201 Valley Street Project (project) proposes to redevelop two parcels at Grand Avenue and Valley Street in Uptown with an office tower. Table I-1, provides general project information.

Table I-1 General Project Information

Project Title	2201 Valley Street Project
Public Case File Number	PLN18-115
Lead Agency Name and Address	City of Oakland Bureau of Planning 250 Frank H. Ogawa Plaza, Suite 2114 Oakland, CA 94612
Staff Contact	Peterson Z. Vollmann (510) 238-6167 pvollmann@oaklandnet.com
Applicant	TMG Partners 1001 Bush Street, 26th Floor San Francisco, CA 94104 Contact: Denise Pinkston
Project Address	2201 Valley Street (2200 Telegraph Avenue, 2201 Valley Street)
Zoning Designation	CBD-P (Central Business District Pedestrian Retail Commercial Zone)
General Designation	CBD (Central Business District)
APNs	8-658-9-1 and 8-658-10
Lot Size	0.89 acres (38,605-square-feet)

The two parcels are currently occupied by a gas station and a surface parking lot. The office tower is 896,931 gross square feet with a maximum height of 420 feet plus mechanical rooftop screening. The tower includes 27 floors consisting of primarily office use, additional auxiliary uses, and ground-floor commercial/arts/retail. In addition, the

project accommodates approximately 350 vehicle parking spaces and 197 bicycle parking spaces. The project also provides several private open space areas on terraces and at the roof level.

B. Summary of Findings

An evaluation of the project is provided in the *Chapter V, CEQA Checklist*, below. This evaluation concludes that the project qualifies for an exemption from additional environmental review. The project was found to be consistent with the development intensity and land use characteristics established by the City of Oakland General Plan, and any potential environmental impacts associated with its development were adequately analyzed and covered by the analysis in the applicable Program EIRs, which are the 1998 Land Use and Transportation Element EIR¹ and the 2011 Central District Urban Renewal Plan Amendments EIR.²

The analysis included in this CEQA document supports the determination that each of the applicable CEQA streamlining and/or tiering code sections listed below, separately and independently, provide a basis for CEQA compliance as follows: (1) the proposed project qualifies for an exemption per Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan or Zoning); (2) the proposed project qualifies for streamlining provisions of CEQA under Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 (Streamlining for Infill Projects); and (3) the proposed project qualifies to tier off Program EIRS and EIRs prepared for redevelopment projects per CEQA Guidelines Section 15168 (Program EIRs) and Section 15180 (Redevelopment Projects) as none of the conditions requiring a supplemental or subsequent EIR, as specified in CEQA Guidelines Sections 15162 (Subsequent EIRs) and 15163 (Supplement to an EIR), are present.

The project would be required to comply with the applicable mitigation measures identified in the Program EIRs as modified, and in some cases wholly replaced, to reflect the City's current standard language and requirements of its SCAs, as well as any applicable City of Oakland SCAs (see Attachment A). With implementation of the applicable SCAs, the project would not result in a substantial increase in the severity of significant impacts that were previously identified in the Program EIRs or any new significant impacts that were not previously identified in the Program EIRs.

Based on the findings included in this CEQA document, no additional environmental documentation or analysis is required.

¹ City of Oakland Community and Economic Development Agency, 1997. Oakland General Plan Land Use and Transportation Element, Draft Environmental Impact Report, October.

² Oakland Redevelopment Agency, 2011. Draft EIR for the proposed amendments to the Central District Urban Renewal Plan, March.

C. Document Organization

This CEQA Analysis is organized into the following chapters:

Chapter I, Executive Summary: Provides a summary of the project and its findings; and summarizes the organization of the CEQA Analysis.

Chapter II, Background – Program Plans and EIRs: This chapter summarizes the previous environmental documents and their impacts, for which this CEQA Analysis is based upon.

Chapter III, Purpose and Summary of this Document: This chapter describes the several CEQA streamlining and/or tiering provisions and CEQA exemptions under which the project qualifies.

Chapter IV, Project Description: This chapter describes the project site, site development history, proposed development, and required approval process.

Chapter V, CEQA Checklist: This chapter summarizes the analysis, findings, and conclusions of previous Oakland Program EIRs as follows: Oakland’s 1998 General Plan Land Use and Transportation Element EIR (1998 LUTE EIR) and the Central District Urban Renewal Plan EIR and Amendments EIR (2011 Renewal Plan EIR). These are referred to collectively throughout this document as the Program EIRs. This chapter also provides analysis of each environmental technical topic and describes significance criteria, potential environmental impacts and their level of significance, SCAs relied upon to ensure that significant impacts would not occur, and mitigation measures recommended when necessary to mitigate identified impacts.

Attachments: The attachments include all of the applicable SCAs, consistency with applicable CEQA streamlining guidelines, and the technical analyses and data for shadow, wind, air quality and greenhouse gas emissions, and traffic noise.

II. BACKGROUND—PROGRAM PLANS AND EIRS

The project site is addressed in prior City of Oakland planning documents, including the following plans:

- 1998 General Plan Land Use and Transportation Element (LUTE)³
- 2011 Central District Urban Renewal Plan Amendments (Renewal Plan)⁴

In addition, the project site is located within the Downtown Specific Plan area; however, the plan is currently under development and anticipated to be adopted in 2019 or 2020. For this reason, the Downtown Specific Plan is not further mentioned in this CEQA Document.

An EIR was prepared and certified for each of these planning documents. The following Program EIRs were considered for this CEQA document (and herein are collectively referred to as the “Program EIRs”):

- 1998 Land Use and Transportation Element EIR⁵
- 2011 Central District Urban Renewal Plan Amendments EIR⁶

Each of these documents is summarized below and hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, California 94612.

1. 1998 Land Use and Transportation Element EIR

The City of Oakland certified the EIR for its General Plan Land Use and Transportation Element (LUTE) in 1998.⁷ The LUTE identifies policies for utilizing Oakland’s land as future changes take place and sets forth an action program to implement its land use policy through development controls and other strategies. The LUTE identifies five Showcase Districts targeted for continued growth; the project site is located within the Downtown Showcase District and is intended to promote a mixture of vibrant and unique land uses with around-the-clock activity, continued expansion of job opportunities, and growing residential population.

The 1998 LUTE EIR is considered a Program EIR per CEQA Guidelines Sections 15168 and 15183.3. As such, subsequent activities under the LUTE are subject to requirements under

³ City of Oakland, 1998. General Plan: Land Use and Transportation Element, March.

⁴ City of Oakland, 2012. Central District Urban Renewal Plan Amendments, April.

⁵ City of Oakland Community and Economic Development Agency, 1997. Oakland General Plan Land Use and Transportation Element, Draft Environmental Impact Report, October.

⁶ Oakland Redevelopment Agency, 2011. Draft EIR for the proposed amendments to the Central District Urban Renewal Plan, March.

⁷ City of Oakland, 1998. Land Use and Transportation Element, Final EIR, February.

each of the aforementioned CEQA Sections, which are described further in *Chapter V, CEQA Checklist*. Applicable mitigation measures identified in the 1998 LUTE EIR are largely the same as those identified in the other Program EIRs prepared after the 1998 LUTE EIR, either as mitigation measures or newer SCAs, the latter of which are described below in *Chapter V, CEQA Checklist*.

1998 Land Use and Transportation Element EIR Environmental Effects Summary

The 1998 LUTE EIR determined that development consistent with the LUTE would result in impacts that would be reduced to a less-than-significant level with the implementation of mitigation measures and/or SCAs. Mitigation is required for the following resource topics: aesthetics (views, architectural compatibility and shadow only); air quality (construction dust [including particulate matter less than 10 microns in diameter] and roadway emissions Downtown, odors); cultural resources (except as noted below as less than significant); hazards and hazardous materials; land use (use and density incompatibilities); noise (use and density incompatibilities, including from transit/transportation improvements); population and housing (induced growth, policy consistency/clean air plan); public services (except as noted below as significant); and transportation and circulation (intersection operations).

In the 1998 LUTE EIR, less-than-significant impacts were identified for the following resources: Aesthetics (scenic resources, light and glare); air quality (clean air plan consistency, roadway emissions in Downtown, energy use emissions, local/regional climate change); biological resources; cultural resources (historic context/settings, architectural compatibility); energy; geology and seismicity; hydrology and water quality; land use (conflicts in mixed use projects and near transit); noise (roadway noise Downtown and citywide, multi-family near transportation/transit improvements); population and housing (exceeding household projections, housing displacement from industrial encroachment); public services (water demand, wastewater flows, stormwater quality, park services); and transportation and circulation (transit demand). No impacts were identified for agricultural and forestry resources or mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 1998 LUTE EIR: air quality (regional emissions, roadway emissions Downtown); noise (construction noise and vibration in Downtown); public services (fire safety); transportation and circulation (roadway segment operations); wind hazards; and policy consistency (clean air plan). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

The remaining impacts for applicable resource topics identified in the 1998 LUTE EIR were found to have no significant impacts.

2. 2011 Central District Urban Renewal Plan Amendments EIR

The City of Oakland prepared and certified an EIR for the Proposed Amendments to the Central District Urban Renewal Plan (Renewal Plan) EIR in 2011 and amended or supplemented the 2011 Renewal Plan up to April 3, 2012. The 2011 Renewal Plan area generally encompasses the entire Downtown, which is approximately 250 city blocks (828 acres) in an area generally bounded by Interstate (I-) 980, Lake Merritt, 27th Street, and the Embarcadero. The project site is located within Uptown Activity Area of the Renewal Plan. The Oakland City Council adopted the Central District Urban Renewal Plan for the Project Area in June 1969.

The 2011 Renewal Plan EIR is considered a Program EIR per CEQA Guidelines Sections 15168 and 15183.3. As such, subsequent activities under the Renewal Plan are subject to requirements under each of the aforementioned CEQA Sections, which are described further in *Chapter V, CEQA Checklist*. Applicable mitigation measures identified in the 2011 Renewal Plan EIR are largely the same as those identified in the other various Program EIRs prepared after the 2011 Renewal Plan EIR, either as mitigation measures or newer SCAs, the latter of which are described below in *Chapter V*.

2011 Central District Renewal Plan EIR Environmental Effects Summary

The 2011 Renewal Plan EIR determined that development facilitated by the proposed amendments would result in impacts to the following resources that would be reduced to a less-than-significant level with the implementation of identified mitigation measures and/or SCAs: aesthetics (light/glare only); air quality (except as noted below as less than significant and significant); biological resources (except no impacts regarding wetlands or conservation plans); cultural resources (except as noted below as significant); geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality (stormwater and 100-year flooding only); noise (exceeding standards – construction and operations only); traffic/circulation (safety and transit only); utilities and service systems (stormwater and solid waste only).

Less-than-significant impacts were identified for the following resources in the 2011 Renewal Plan EIR: aesthetics (except as noted above as less than significant with standard conditions of approval); air quality (clean air plan consistency); hydrology and water quality (except as noted above as less than significant with standard conditions of approval); land use and planning; population and housing; noise (roadway noise only); public services and recreation; traffic/circulation (air traffic and emergency access); and utilities and service systems (except as noted above as less than significant with standard conditions of approval). No impacts were identified for agricultural or forestry resources, and mineral resources.

The 2011 Renewal Plan EIR determined that the proposed amendments combined with cumulative development would have significant unavoidable impacts on the following

environmental resources: air quality (toxic air contaminant exposure and odors); cultural resources (historic); and traffic/circulation (roadway segment operations). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

The remaining impacts for applicable resource topics identified in the 2011 Renewal Plan EIR were found to have no significant impacts.

III. PURPOSE AND SUMMARY OF THIS DOCUMENT

The purpose of this CEQA document is to evaluate the potential environmental effects of the project and to determine whether such impacts were adequately covered under the Program EIRs, referenced above, such that CEQA streamlining and/or tiering provisions and exemptions could be applied. The analysis herein incorporates information from the Program EIRs. It includes a CEQA Checklist (see *Chapter V*) and supporting documentation to provide comprehensive review and public information for the basis of the CEQA determination.

Based on the environmental evaluation, and as this CEQA Checklist, included in *Chapter V*, demonstrates, the project qualifies for several CEQA streamlining and/or tiering provisions and CEQA exemptions, each of which separately and independently provide a basis for CEQA compliance. These exemptions and applicable provisions of CEQA related to streamlining and/or tiering and CEQA exemptions—as well as applicable standard conditions of approval, and CEQA requirements related to aesthetic and parking are described below.

A. Community Plan Exemption

Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan or Zoning) allow streamlined environmental review for projects that are “consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project specific significant effects which are peculiar to the project or its site.” Section 15183(c) specifies that “if an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards..., then an EIR need not be prepared for the project solely on the basis of that impact.”

Based on the analysis conducted in this document, and pursuant to CEQA Guidelines Section 15183, the project qualifies for a community plan exemption. The project meets the requirements for a community plan exemption, as it is permitted in the zoning district where the project site is located and is consistent with the land uses envisioned for the site. This analysis considers the evaluation in the analysis in the 1998 LUTE EIR and 2011 Renewal Plan EIR for the overall project. This CEQA document concludes that the project would not result in significant impacts that (1) are peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or offsite effects in the Program EIRs; or (3) were previously identified as significant effects but are determined to have a more severe adverse impact than discussed in the Program EIRs. Findings

regarding the project’s consistency with the zoning are included as Attachment B to this document.

B. Qualified Infill Exemption

Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 (Streamlining for Infill Projects) allow streamlining for certain qualified infill projects by limiting the topics subject to review at the project level, if the effects of infill development have been addressed in a planning level decision, or by uniformly applicable development policies. An infill project is eligible if the project (1) is located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least 75 percent of the site’s perimeter; (2) satisfies the performance standards provided in CEQA Guidelines Appendix M; and (3) is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy.

No additional environmental review is required if the infill project would not cause any new specific effects or more significant effects, or if uniformly applicable development policies or standards would substantially mitigate such effects.

The analysis conducted indicates that the project qualifies for a qualified infill exemption and, pursuant to CEQA Guidelines Section 15183.3, is generally consistent with the required performance standards provided in CEQA Guidelines Appendix M, as evaluated in Attachment C: Infill Performance Standards, Per CEQA Guidelines 15183.3, of this document. This CEQA document supports that the project would not cause any new specific effects or more significant effects than previously identified in applicable planning level EIRs, and uniformly applicable development policies or standards (referred to herein as SCAs) would substantially mitigate the project’s effects. The project is proposed on a previously developed site in downtown Oakland and is surrounded by urban uses. Furthermore, the project is consistent with the land use, density, building intensity, and applicable policies for the site. The analysis herein considers the analysis in the 2011 Renewal Plan EIR and the 1998 LUTE EIR.

Cumulative level effects of infill development have been addressed in other planning level decisions of the LUTE and 1998 LUTE EIR and Redevelopment Plan and 2011 Redevelopment Plan EIR, or by uniformly applicable development policies (SCAs) which mitigate such impacts. Based on the streamlining provisions of CEQA Guidelines Sections 15183 and 15183.3, the project’s cumulative effect would be less than significant.

C. Program EIRs and Redevelopment Projects

CEQA Guidelines Section 15168 (Program EIRs) and Section 15180 (Redevelopment Projects) provide that the 1998 LUTE EIR and 2011 Renewal Plan EIR can be used as Program EIRs in support of streamlining and/or tiering provisions under CEQA. The 2011

Renewal Plan EIR is a Program EIR for streamlining and/or tiering provisions by CEQA Section 15168. The section defines the Program EIR as one prepared on a series of actions that can be characterized as one large project and are related geographically and by other shared characteristics. Section 15168 states that “subsequent activities in the Program EIR must be examined in the light of the Program EIR to determine whether an additional environmental document must be prepared.” If the agency finds that pursuant to CEQA Guidelines Section 15162, no new effects could occur, or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the Program EIR and no new environmental document would be required.

Further, CEQA Guidelines Section 15180 specifies that “if a certified redevelopment plan EIR is prepared, no subsequent EIRs are required for individual components of the redevelopment plan unless a subsequent EIR or supplement to the EIR would be required by Section 15162 or 15163.” The 2011 Renewal Plan EIR is considered a certified redevelopment plan.

Overall, based on an examination of the analysis, findings, and conclusions of the 1998 LUTE EIR and the 2011 Renewal Plan EIR, all of which are summarized in the CEQA Checklist in Chapter V of this document, the potential environmental impacts associated with the project have been adequately analyzed and covered in the Program EIRs. This analysis demonstrates that the project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162 or 15164, because the level of development now proposed for the site is within the broader development assumptions analyzed in the Program EIRs. Therefore, no further review or analysis under CEQA is required.

D. Previous Mitigation Measures and Current Standard Conditions of Approval

As described above, the CEQA Checklist provided in *Chapter V* of this document evaluates the potential project specific environmental effects of the project and evaluates whether such impacts were adequately covered by the Program EIRs previously described in *Chapter II, Background-Program Plans and EIRs*, to allow the above-listed provisions of CEQA to apply. The analysis conducted incorporates by reference the information contained in each of the Program EIRs. The project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the Program EIRs. Therefore, the mitigation measures are herein assumed to be included as part of the project, including those that have been modified to reflect the City’s current standard language and requirements, as discussed below.

1. Standard Conditions of Approval Application in General

The City of Oakland established its Standard Conditions of Approval (SCAs) and Uniformly Applied Development Standards after certification of the 1998 LUTE EIR. The City has also adopted an updated version of the SCAs from those included in the 2011 Renewal Plan EIR. The City's SCAs are incorporated into and applied to new and changed projects as conditions of approval, regardless of a project's environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances (e.g., Oakland Planning Code and Municipal Code, Creek Protection Ordinance, Stormwater Water Management and Discharge Control Ordinance, Tree Protection Ordinance, Grading Regulations, National Pollutant Discharge Elimination System [NPDES] permit requirements, Housing Element-related mitigation measures, California Building Code and Uniform Fire Code). The implementation of these policies and standards have been found to substantially mitigate environmental effects. The SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and would, substantially mitigate environmental effects.

Consistent with the requirements of CEQA, a determination of whether the project would have a significant impact was made prior to the approval of the project and, where applicable, SCAs and/or mitigation measures in the Program EIRs have been identified to mitigate those impacts. In some instances, exactly how the measures/conditions identified will be achieved awaits completion of future studies, an approach that is legally permissible where measures/conditions are known to be feasible for the impact identified; where subsequent compliance with identified federal, state, or local regulations or requirements apply; where specific performance criteria are specified and required; and where the project commits to developing measures that comply with the requirements and criteria identified.

2. Standard Conditions of Approval Application in this CEQA Document

Several SCAs would apply to the project because of its characteristics and are triggered by the City of Oakland's consideration of a discretionary action for the project. Because the SCAs are mandatory City requirements, the impact analyses for new and modified projects assumes that all applicable SCAs will be imposed and implemented by the project in question.

All mitigation measures and applicable SCAs for the project are listed in Attachment A: Standard Conditions of Approval and Reporting Plan, of this document. Some of the SCAs identified in this document apply to the project and were also identified in the 2011 Renewal Plan EIR and 1998 LUTE EIR prior to the City's application of SCAs.

Aesthetics and Parking Analysis

CEQA Section 21099(d) states, “Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment.”⁸ Accordingly, aesthetics and parking, for such projects, are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three of the following criteria:

- The project is in a transit priority area.⁹
- The project is on an infill site.¹⁰
- The project is residential, mixed-use residential, or an employment center.¹¹

The project meets each of the above three criteria because it: (1) is located within approximately 800 feet (less than 0.2 miles) of the 19th Street Oakland Bay Area Rapid Transit District (BART) Station as well as within 0.5 miles of the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (Alameda County Transit Route 6, 18, 51A, and 72/72M/72R); (2) is located on an infill site that is currently developed with a gas station and surface parking lot, and within a developed urban area of Oakland that includes commercial, office and residential uses; and (3) would be an employment center.

Therefore, this CEQA document does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA. The City of Oakland recognizes that the public and decision makers nonetheless may be interested in information pertaining to the aesthetic effects and may desire that such information be provided as part of the environmental review process. Parking is not generally considered for CEQA purposes; however, this information is provided solely for informational purposes and is not used to determine the significance of the environmental impacts of the project, pursuant to CEQA Section 21099(d).

⁸ CEQA Section 21099(d)(1).

⁹ CEQA Section 21099(a)(7) defines a “transit priority area” as an area within one-half mile of an existing or planned major transit stop. A “major transit stop” is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

¹⁰ CEQA Section 21099(a)(4) defines an “infill site” as a lot located within an urban area that has been previously developed, or a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses

¹¹ CEQA Section 21099(a)(1) defines an “employment center” as a project located on property zoned for commercial uses with a floor area ratio (FAR) of no less than 0.75 and located within a transit priority area.

IV. PROJECT DESCRIPTION

This chapter describes the proposed 2201 Valley Street Project (project) that is the subject of this CEQA document. This chapter provides a description of the project site and existing site conditions, discusses the project details and characteristics, and lists the required project approvals.

A. Project Site

A description of the project site, including its location site characteristics, surrounding land uses, and existing general plan and zoning designation, is provided below.

1. Location

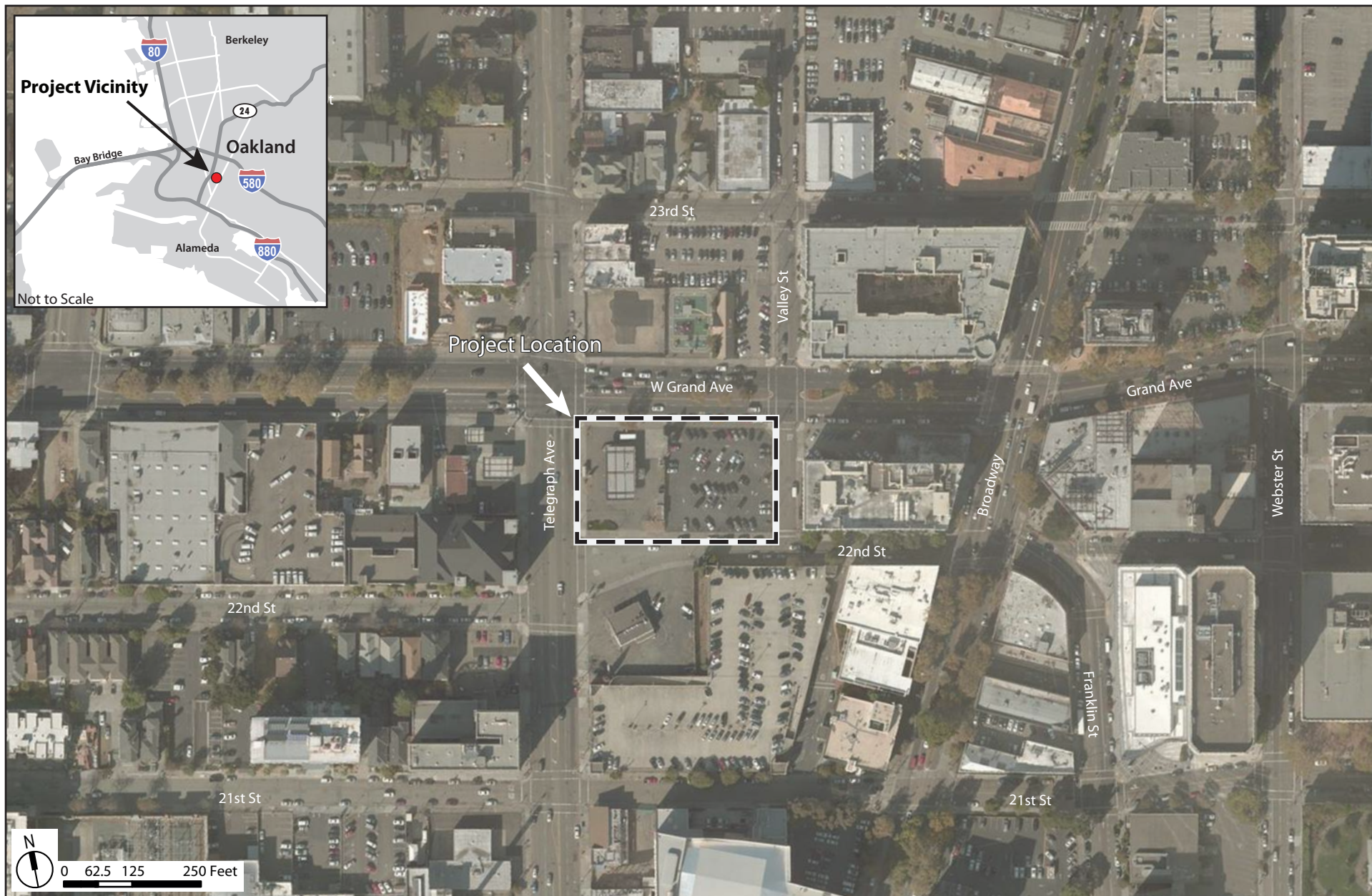
The project site is in Downtown Oakland and encompasses one full city block within the Uptown District. It is bounded by Telegraph Avenue to the west, 22nd Street to the south, Valley Street to the east, and West Grand Avenue to the north. The project site is within two blocks of the 19th Street Bay Area Rapid Transit District (BART) station and approximately ¼-mile east of Interstate 980. Figure IV-1 illustrates the location and context of the project site.

1. Existing General Plan and Zoning Designation

The City of Oakland General Plan¹² land use classification for the site, as established by the Land Use and Transportation Element, is Central Business District (CBD). The intent of the CBD designation is to encourage, support, and enhance the downtown area as a high-density, mixed-use urban center of regional importance and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation in Northern California. A discussion of the project's consistency with relevant land use policies is provided in *Section V.I, Land Use, Plans, and Policies*.

The zoning designation for the site is Central Business District Pedestrian Retail Commercial Zone (CBD-P). The CBD-P zone is intended to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses. Upper-story spaces are intended to be available for a wide range of office and residential activities. The maximum density allowed within both height areas is capped at a floor area ratio (FAR) of 20.0. A more detailed discussion of the project's consistency with relevant land use policies is provided in *Section V.I, Land Use, Plans, and Policies*.

¹² City of Oakland, March 1998. General Plan, Land Use and Transportation Element.



2201 Valley Street Project

Source: Microsoft, 2017.

Figure IV-1
Project Location and Vicinity Map

2. Surrounding Land Uses

A mix of land uses surround the project site that are separated from the site by at least the width of the adjoining road. To the north, existing uses include an unoccupied lot and preschool. Existing uses to the south include an unoccupied food and drink establishment (formerly Space Burger) and the Telegraph Plaza Parking Garage, a City-owned two-level parking structure with 351 spaces, which are both proposed to be redeveloped into the Eastline Project. To the east is the 2201 Broadway building (Breuner Building) which contains several offices, a restaurant, and a small surface parking lot. Existing uses to the west include a church (First Baptist Church of Oakland) and a gas station (Valero). A more detailed discussion of existing and planned land uses is provided in *Section V.I, Land Use, Plans, and Policies*.

The project site is across the street from several historic resources including the First Baptist Church of Oakland on Telegraph Avenue and the Breuner Building on Broadway. Several other historic resources are within a 1- to 2-block radius including the I. Magnin Building on Broadway and the Emporium-Capwell building on Telegraph Avenue. Additionally, three potential historic districts—the Cathedral District, the Uptown Shopping/Entertainment District, and 25th Street Garage District Areas of Primary Importance (APIs)—are located near the project area. A more detailed discussion of historic resources is provided in *Section V.D, Cultural Resources*.

3. Site Characteristics

The project site is urban in character and is currently developed and occupied by a gas station and parking lot. The train tracks for three BART lines (Richmond-Millbrae, Pittsburg/Bay Point-Millbrae, and Richmond-Fremont) traverse the site within below-grade tunnels. The approximately .89-acre (38,605-square-foot) block is comprised of the following two parcels:

- **2200 Telegraph Avenue** (Assessor's Parcel Number [APN] 8-658-9-1). This approximately 0.39 (16,752-square-foot) parcel fronts West Grand Avenue, Telegraph Avenue, and 22nd Street. It is currently developed with A & A Gas & Mart, a small, 1 story gas station. The gas station is accessible from 22nd Street, Telegraph Avenue, and West Grand Avenue.
- **2201 Valley Street** (APN 8-658-10). This approximately 0.5-acre (21,853-square-foot) parcel fronts on 22nd Street, Valley Street, and West Grand Avenue. It contains a Douglas Parking parking lot, a privately-owned surface parking lot with 74 spaces. The parking lot is only accessible from one entrance and exit on Valley Street.

All parcels on the project site are under single, private ownership. The gas station located on the project site at 2200 Telegraph Avenue has been listed on a hazardous waste and substances site list compiled pursuant to Government Code Section 65962.5 for two

separate incidents. The first instance is listed as completed as of January 27th, 2015, where the second is listed as active as of August 1st, 2017.

The BART tunnels and associated tunnel zone of influence¹³ adjacent to the tunnels traverse the site from the northwestern corner of West Grand Avenue and Telegraph Avenue to the southeast portion of 22nd Street between Valley Street and Telegraph Avenue, and are shown on Figure IV-2. The BART tunnels range from approximately 14–27 feet below ground. The BART tunnel zone of influence accounts for approximately a third of the total project site. Construction of any structures above or near the tunnels requires costly engineering measures to avoid placing excessive weight, or lateral stresses on the tunnels. The project proposes four oversized leaning columns, several trusses, and a building core away from the BART easement to address weight and lateral stress on the tunnels.

Sidewalks surround all four sides of the project site. Existing landscaping includes sparse vegetation and 1 mature tree along the perimeter of the existing gas station. There is a dedicated bike lane along Telegraph Avenue and a shared bike lane along West Grand Avenue.

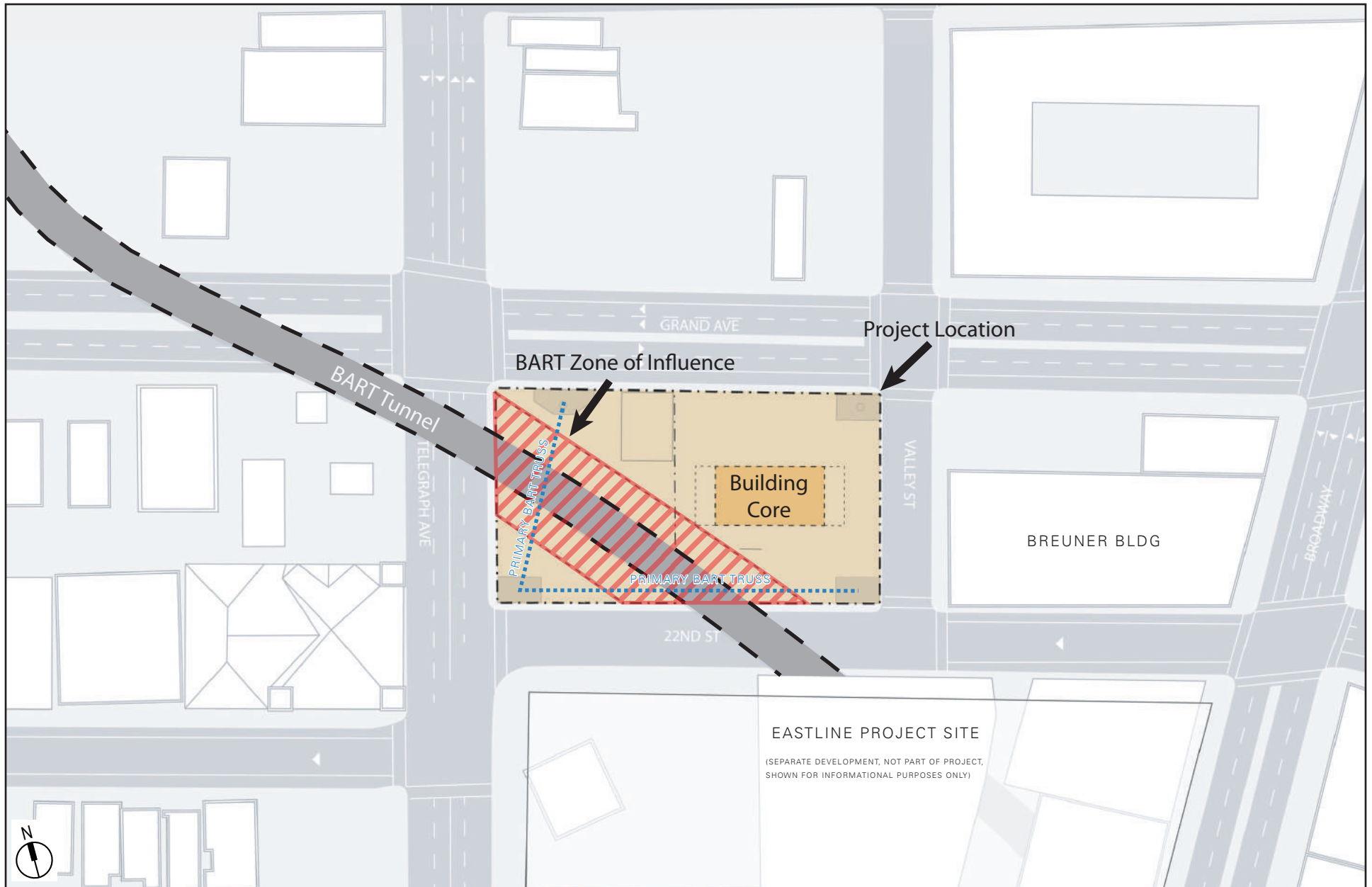
B. Project Characteristics

A description of the project, including the proposed development characteristics, circulation and parking, landscaping and streetscape, utilities and infrastructure improvements, and demolition and site preparation, is provided below.

1. Development Characteristics

The project would involve construction of a 420-foot-high building, with 27 floors and 896,931 gross square feet would fully encompass the lot area of approximately 38,605 square feet (0.89 acres). Uses on the site would include office, automobile parking, bike parking, retail, office lobby, and private open space. The project's site section is shown in Figure IV-3 and a rendering of the building is shown in Figure IV-4. Approximately 738,410 square feet would be dedicated to office space and would be the dominant use; approximately 16,805 square feet of ground floor space would be for commercial/arts/retail space; 108,865 square feet for auto parking; 6,000 square feet for the office lobby; and the rest of the space dedicated to other auxiliary and support uses. These project characteristics are summarized below in Table IV-1. An overview of the project site plan is also shown in Figure IV-5.

¹³ Zone of Influence is defined by BART as the area above a Line of Influence which is a line from the critical point of substructure at a slope of 1½ horizontal to 1 vertical (line sloping towards ground level).



2201 Valley Street Project

Source: Solomon Cordwell Buenz, 2018.

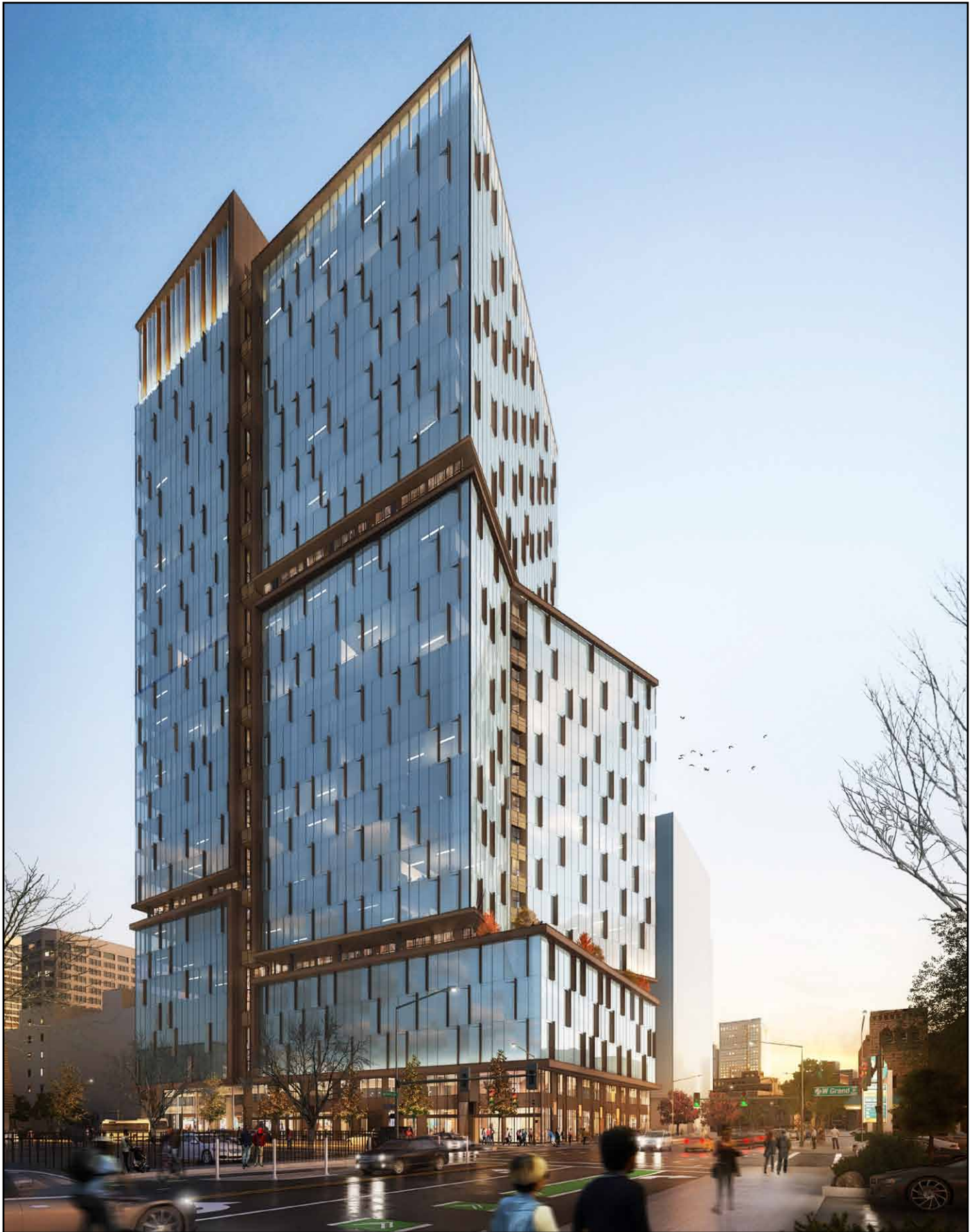
Figure IV-2
BART Zone of Influence



2201 Valley Street Project

Source: Solomon Cordwell Buenz, 2018.

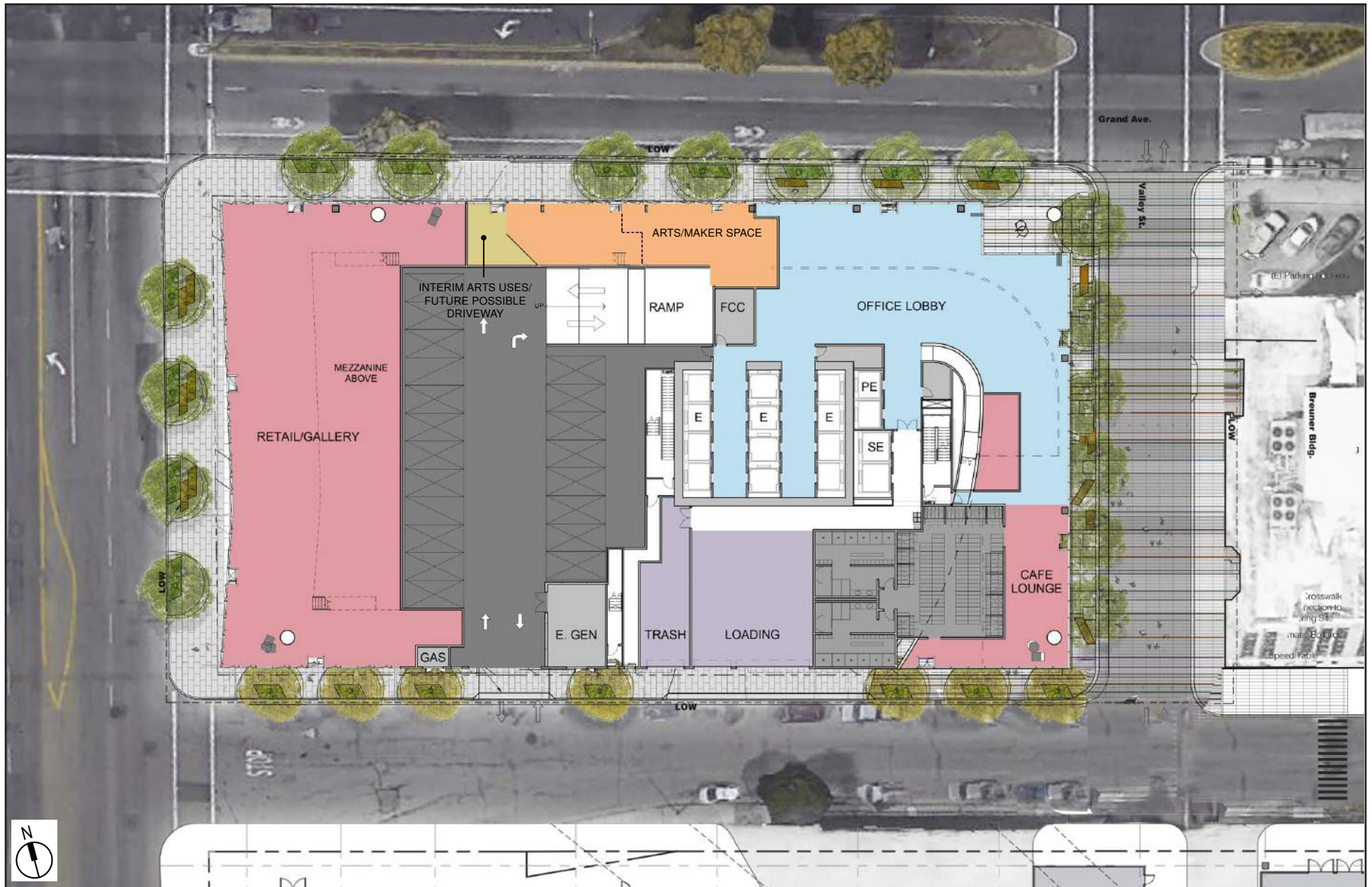
Figure IV-3
Site Section



2201 Valley Street Project

Source: Solomon Cordwell Buenz, 2018.

Figure IV-4
Project Rendering - North Facade



2201 Valley Street Project

Source: Solomon Cordwell Buenz, 2018.

Figure IV-5
Ground Floor and Landscaping Plan

Table IV-1 Project Characteristics

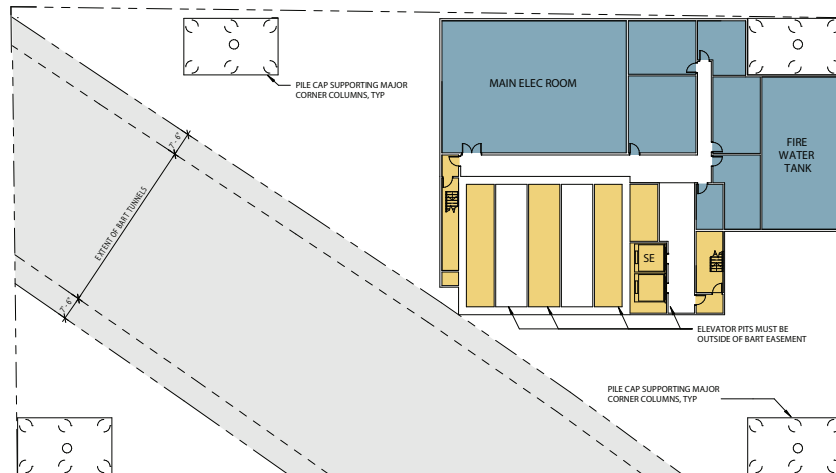
Lot	Project
Size	38,605
Floor-Area Ratio	19.85
Height	
Floors	27
Height in Feet	420 (at roof) / 465 (top of mechanical)
Proposed Uses	Area (gsf)
Residential	N/A
Office	738,410
Lobby	6,000
Commercial/Arts/Retail	16,805
Parking	108,865
Private Open Space	26,822
Support	26,851
Total GSF	896,931
Proposed Parking	Number of Spaces
Vehicle Parking Space	350
Bicycle Parking Spaces	197 (160 long term / 37 short term)

Note: gsf = gross square feet. The total gross square feet does not include private open space totals.

Sources: Solomon Cordwell Buenz, 2018.

The basement level would consist of auxiliary and utility uses and would be designed to avoid the BART Zone of Influence. The ground floor would consist of commercial/arts/retail spaces, an office lobby, a cafe lounge/bike storage area, a small amount of vehicle parking, other support uses such as truck bays and trash areas, and landscaping. Floors 2-4 would consist entirely of vehicular parking area. Floors 5-27 would consist of office space, with open space terraces on floors 5, 8, 17, and 27. The project floor plans are shown in Figures IV-6a, IV-6b, and IV-6c.

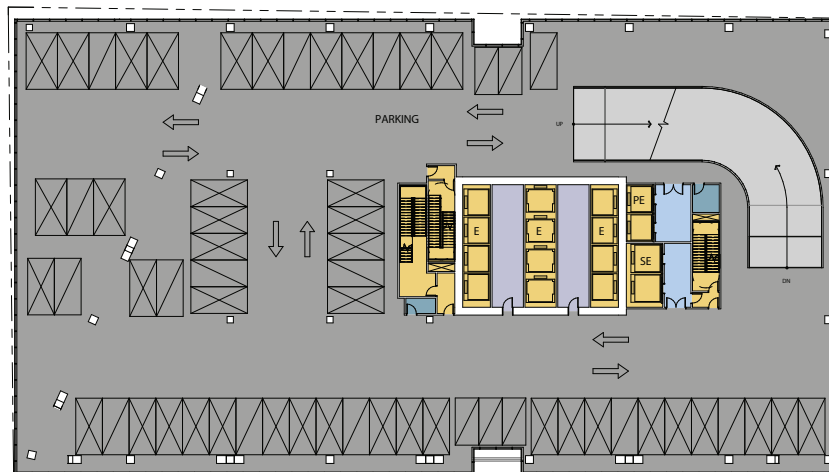
Basement Plan



Typical Office Levels 6-16



Typical Parking Levels 2-4



Legend

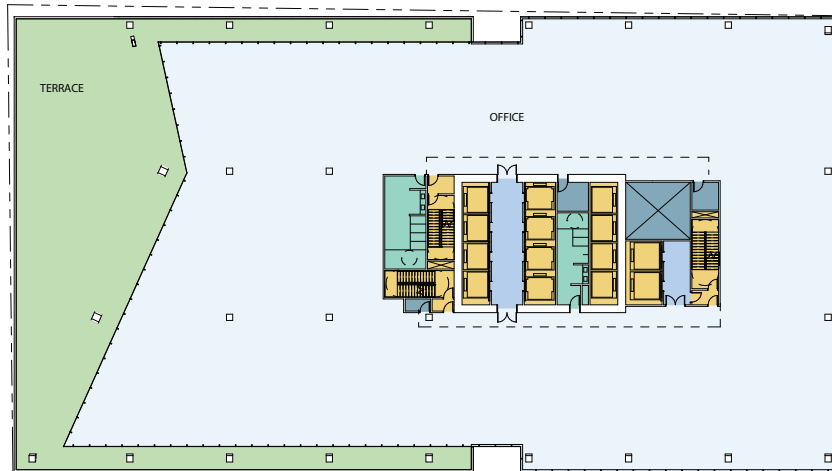
Parking	Lobby
Ramp	Mech
Storage	Office
Back of House	Restroom
Circulation	

2201 Valley Street Project

Source: Solomon Cordwell Buenz, 2018.

Figure IV-6a
Typical Floorplans

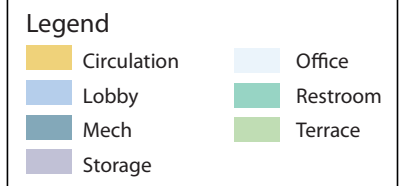
Office Plan Level 5



Office Plan Level 17



Office Plan Level 8



2201 Valley Street Project

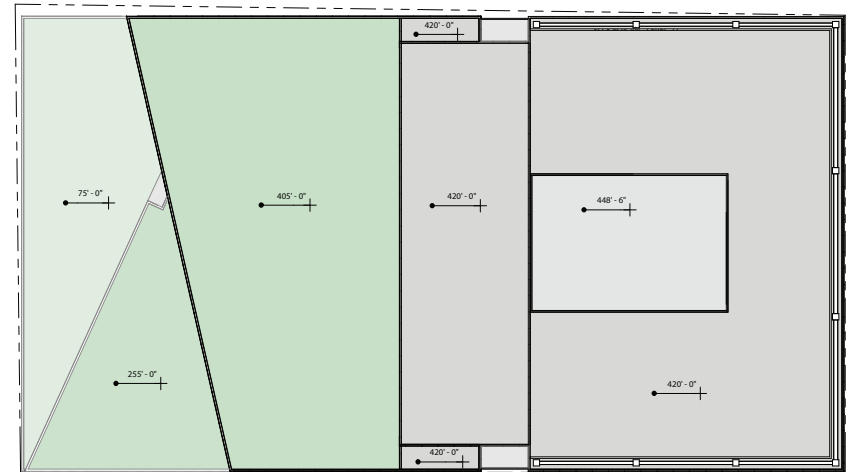
Source: Solomon Cordwell Buenz, 2018.

Figure IV-6b
Typical Floorplans

Typical Office Levels 18-26



Roof Plan



Office Plan Level 27



Legend			
 Amenity	 Office	 Restroom	
 Circulation	 Lobby	 Storage	
 Mechanical	 Terrace		

2201 Valley Street Project

Source: Solomon Cordwell Buenz, 2018.

Figure IV-6c
Typical Floorplans

2. Circulation and Parking

The project would have one vehicle access point along 22nd Street for entry and exit to the parking levels. The project also proposes to potentially add another parking garage exit along West Grand Avenue at a future date. The project would provide a limited amount of parking on the ground floor and three levels of dedicated parking above the ground level. A total of 350 automobile parking stalls would be provided. 160 long-term and 37 short-term bicycle parking spaces would be provided on the ground floor. Three full-truck loading bays would be located on the ground floor along 22nd Street. No changes to the existing street parking are currently proposed.

The two closest bus stations are located one block away from the project site at Broadway/West Grand Avenue and Telegraph Avenue/24th Street. The 19th Street BART Station is located approximately two and half blocks southeast of the project site.

3. Landscaping and Streetscape

The project includes landscaping and open space at the street level as well as on multiple building terraces and rooftops. The project would include three terraces along the façade of the building on the 5th, 8th, 17th, and 27th floors. These terraces and roof deck would provide up to 26,822 square feet of private open space.

The project may also include decorative paving on Valley Street between West Grand Avenue and 22nd Street, abutting the office lobby. During particular events, automatic bollards would raise along Valley Street, restricting vehicular access and allowing for safe pedestrian access. These events would feature public seating areas, art installations, landscaping, and a place for surrounding patrons to gather for events.

The final landscaping and open space plans would be subject to City approval. An overview of the landscaping and open space amenities for the ground floor is also shown in Figure IV-5.

4. Utilities and Infrastructure Improvements

Utility services are currently provided to existing buildings surrounding the project site and would be readily available to serve the project. Water supply and treatment, and wastewater treatment are provided to Oakland by EBMUD. The project site is currently served by sanitary sewer and water lines. Minor connections to these existing lines would be required to serve a new structure on the project site. The project applicant, the project design, and occupants of the project site would be required to comply with the waste reduction and recycling regulations outlined in Oakland Municipal Code Chapter 15.34.

The project is required by City of Oakland standards to earn LEED Silver, but will aim for LEED Gold rating. Water efficiency elements include low flow fixtures beyond code requirements, greywater and rainwater recycling, on-site water purification, native

plantings, and use of recycled water for all irrigation. Energy efficiency features rooftop solar panels, high-performance façade to let light in and keep heat out, mixed-mode ventilation and daylighting, integrated smart controls, and LED lighting and shading.

5. Demolition and Site Preparation

Other than the BART tunnels, all existing structures, site improvements and landscaping on the project site are planned to be demolished/removed. The current structures include the approximately 16,900-square-foot gas station lot and approximately 21,900-square-foot privately-owned surface parking lot with 74 spaces. In addition to buildings and parking lots, the 1 tree along West Grand Avenue would be removed and replaced.

Excavation for the one subterranean level of utilities and building foundations would extend approximately 28 feet below the existing ground surface and require removal of approximately 9,500 cubic yards of soil off-site.

Construction Operations and Schedule

It is expected that project construction would begin as early as 2020 and last approximately 29 months, ending in 2022 when building occupation is anticipated. Construction equipment would include excavators, graders, rubber-tired dozers, tractors, loaders, backhoes, cranes, forklifts, tractors, loaders, drill rigs, and pumps.

C. Discretionary Actions

It is anticipated that this CEQA document will provide environmental review of all discretionary approvals and actions required for the project. A number of permits and approvals would be required before project development could be initiated. As lead agency for the project, the City of Oakland would be responsible for the majority of these approvals. The City would require a series of discretionary actions associated with approval of the project, which are described below. Other agencies would have some authority related to the project and its approvals.

1. City of Oakland

Key discretionary actions required by the City of Oakland are outlined below.

a. Planning Commission

Environmental Review and CEQA determination, Regular Design Review, Vesting Tentative Parcel Map for lot merger, Conditional Use Permit, and Variances for maximum average floorplate above 85 feet, maximum floorplate diagonal, maximum lot coverage, and loading bays.

b. Building Department

Demolition permit, Grading permit, and other related on- and off-site work permits (e.g., public right-of-way improvements, and tie backs) as well as encroachment permits.

c. Building Services Division

Approval of Post-Construction Stormwater Control Plan demonstrating compliance with Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP).

d. Oakland Public Works – Tree Division

Pursuant to the City's Protected Trees Ordinance, the project applicant would be required to obtain an approved Tree Removal Permit prior to removal of (or construction activity near) a "Protected Tree," as defined in Oakland Municipal Code. Tree permits would require approval by the Public Works, Tree Division.

2. Actions by Other Agencies

Key discretionary actions required by other agencies beyond the City of Oakland are outlined below.

a. Alameda County Environmental Health (ACEH)

Approval for any proposed remedial action and required clearances.

b. Bay Area Air Quality Management District (BAAQMD)

Issuance of permits for installation and operation of the emergency generator. Acceptance of notice of asbestos abatement and demolition activities, if any.

c. East Bay Municipal Utility District (EBMUD)

Grant a Special Discharge Permit to discharge construction dewatering to the sanitary sewer and/or approval of new service requests and new water meter installations.

d. Federal Aviation Administration (FAA)

Prior to construction, applicant will submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, providing notification of the construction of a structure over 200 feet in height. FAA will issue a notice determining whether the proposed construction is an obstruction.

e. San Francisco Bay Area Rapid Transit District (BART)

Issuance of any encroachment permits for the BART property in the BART Zone of Influence and compliance with BART Zone of Influence procedures.

V. CEQA CHECKLIST

Overview

This CEQA Checklist summarizes the potential environmental impacts that could result from approval and implementation of the project. The analysis in this CEQA Checklist also summarizes the impacts and findings of Program EIRs that covered, specifically or as part of the cumulative analyses; the environmental effects of the project and that are still applicable to the project. As previously indicated, the Program EIRs include the 1998 LUTE EIR and 2011 Renewal Plan EIR. Given the timespan between the preparations of these EIRs, there are variations in the specific environmental topics addressed and significance criteria; however, as discussed above in *Chapter III, Purpose and Summary of this Document*, and throughout this Checklist, the overall environmental effects identified in each are largely the same and any significant differences are noted.

This CEQA Checklist hereby incorporates by reference the discussion and analysis in the Program EIRs for all potential environmental impact topics; however, only those environmental topics that could have a potential project-level environmental impact are included herein. The EIR significance criteria have been consolidated and abbreviated in this CEQA Checklist for administrative purposes; where appropriate, the significance criteria have been updated to reflect current City of Oakland significance criteria established after the Program EIRs were prepared and that now apply to the project.

This CEQA Checklist provides a determination of whether the project would result in:

- Equal or Less Severity of Impact Previously Identified in Program EIRs
- Substantial Increase in Severity of Previously Identified Significant Impact in Program EIRs
- New Significant Impact

Where the severity of the impacts of the project would be the same as or less than the severity of the impacts described in the Program EIRs, the checkbox for Equal or Less Severity of Impact Previously Identified in Program EIRs is checked. The checkboxes for Substantial Increase in Severity of Previously Identified Significant Impact in Program EIRs or New Significant Impact are checked if there are significant impacts that are one or more of the following:

- Peculiar to project or project site (per CEQA Guidelines Sections 15183 or 15183.3)
- Not identified in the previous EIR (Program EIRs) (per CEQA Guidelines Sections 15183 or 15183.3), including off-site and cumulative impacts (per CEQA Guidelines Section 15183)

- Due to substantial changes in the project (per CEQA Guidelines Section 15162 and 15168)
- Due to substantial changes in circumstances under which the project will be undertaken (per CEQA Guidelines Section 15162)
- Due to substantial new information not known at the time the Program EIRs were certified (per CEQA Guidelines Sections 15162, 15183, or 15183.3)

The project is required to comply with applicable mitigation measures identified in the Program EIRs as modified, and in some cases wholly replaced, to reflect the City's current standard language and requirements of its SCAs and with City of Oakland SCAs.¹⁴ The project sponsor has agreed to incorporate and/or implement the required mitigation measures and/or SCAs as part of the project. This CEQA Checklist includes references to the applicable SCAs, a list of the SCAs is included in Attachment A, and this list is incorporated by reference into the CEQA Checklist. If the CEQA Checklist (including Attachment A) inaccurately identifies or fails to list an SCA, the applicability of that SCA to the project is not affected. If the language describing a mitigation measure or an SCA included in the CEQA Checklist (including Attachment A) is inaccurately transcribed, the language set forth in the Program EIRs or City of Oakland SCAs shall control.

Attachments

The following attachments are included at the end of this CEQA Checklist:

- A. Standard Conditions of Approval and Reporting Program
- B. Project Consistency with Community Plan or Zoning, per CEQA Guidelines Section 15183
- C. Infill Performance Standards, per CEQA Guidelines Section 15183.3
- D. Shadow Study
- E. Wind Study
- F. Air Quality and Greenhouse Gas Emissions Estimates and Health Risk Analysis
- G. Traffic Noise Outputs

¹⁴ These are development standards that are incorporated into projects as SCAs, regardless of a project's environmental determination, pursuant, in part, to CEQA Guidelines Section 15183. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, substantially mitigate environmental effects. In reviewing project applications, the City determines which of the SCAs are applied, based on the zoning district, community plan, and the type(s) of permit(s)/approvals(s) required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which SCA applies to each project.

A. Aesthetics, Shadow, and Wind

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Have a substantial adverse effect on a public scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway; substantially degrade the existing visual character or quality of the site and its surroundings; or create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Sections 25980 through 25986); or cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or, cast shadow on an historical resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
Would the project: related to appropriate uses; or			
e. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.	■	□	□

1. Program EIR Findings

Scenic vistas, scenic resources, visual character, light and glare, and shadow were analyzed in the Program EIRs, which found that the effects to these topics would be less than significant. The 2011 Renewal Plan EIR, which analyzed aesthetics, wind, and shadow, found all impacts to these topics to be less than significant with applicable SCAs.

The 1998 LUTE EIR identified impacts related to scenic resources as less than significant. The LUTE EIR identified potentially significant impacts to visual character by new development that could block views, cast shadows, appear visually incongruous with adjacent low-rise development. Mitigation measures that are functionally equivalent to the SCAs were identified to reduce certain potential aesthetic effects to less-than-significant levels. The 1998 LUTE EIR also identified potentially significant and unavoidable impacts related to wind hazards. Mitigation Measure N.1 of the 1998 LUTE EIR requires site specific studies and incorporation of specific design elements to reduce impacts related to wind hazards. However, wind impacts were identified as significant and unavoidable, recognizing that in some instances wind may not be reduced to a less-than-significant level, even with implementation of feasible wind reducing design elements.

Since certification of the Program EIRs, the CEQA statutes have been amended related to assessment of aesthetics impacts. CEQA Section 21099(d) states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment."¹⁵ Accordingly, aesthetics is no longer considered in determining if a project

¹⁵ CEQA Section 21099(d)(1).

has the potential to result in significant environmental effects for projects that meet all three of the following criteria:

- a. The project is in a transit priority area¹⁶
- b. The project is on an infill site¹⁷
- c. The project is residential, mixed-use residential, or an employment center¹⁸

The project meets all three criteria: (1) it is located 0.2 mile from the 19th Street BART Station in a transit priority area; (2) the project site is an infill site within the urban area of the city of Oakland and is currently developed with commercial uses; and (3) the project is an employment center project. Thus, this CEQA document does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA. Nonetheless, the City of Oakland recognizes that the public and decision makers may be interested in information pertaining to the aesthetic effects of a project and may desire that such information be provided as part of the environmental review process.

Because the project meets these criteria as described above, the information below related to aesthetics is provided solely for informational purposes and is not used to determine the significance of the environmental impacts, pursuant to CEQA.

2. Project Analysis

Scenic Vistas, Scenic Resources, Visual Character, and Light and Glare (Criterion 1.a)

The project involves construction of a 420-foot high, 27-story-office tower on a site that is generally flat and contains limited views of Downtown Oakland and the Oakland Hills. Under current conditions (2018), the site is occupied by a gas station and a surface parking lot. The surrounding area is an eclectic urban environment with a combination of building types and architectural styles and a mix of old and new landscaping. Building heights significantly vary with the tallest being 28 stories, with high-rises concentrated east of Broadway and lower-rise buildings west of Telegraph Avenue.

¹⁶ CEQA Section 21099(a)(7) defines a “transit priority area” as an area within one-half mile of an existing or planned major transit stop. A “major transit stop” is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

¹⁷ CEQA Section 21099(a)(4) defines an “infill site” as a lot located within an urban area that has been previously developed, or a vacant site where at least 75 percent of the perimeter of the site adjoins or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

¹⁸ CEQA Section 21099(a)(1) defines an “employment center” as a project located on property zoned for commercial uses with a FAR of no less than 0.75 and located within a transit priority area.

Scenic Vistas and Resources

The Open Space, Conservation, and Recreation (OSCAR) element of the City of Oakland General Plan identifies views of downtown and Lake Merritt, the Oakland Hills, and panoramic views from Skyline Boulevard and Grizzly Peak Road as scenic resources that need to be protected. Given the urban nature of the project's area, views through and from the project site are primarily limited to the immediate developments adjacent to the site due to the flat topography and varied heights of buildings in the area. Therefore, similar to the findings of the Program EIRs, the project would not significantly affect any scenic vistas or scenic resources.

State Scenic Highway

The project site is approximately 1.1 miles south of the State Scenic Highways segment of I-580 that terminates at State Route (SR) 24. Because the I-580/SR-24 interchange is elevated and the project would be one of the tallest developments in Downtown Oakland, it would be visible to motorists on the designated scenic highway. However, the project is not expected to damage view of scenic resources for motorists on I-580/SR-24 because its size and scale would not substantially interfere with the view from the I-580/SR 24 interchange. Therefore, the project would not impact State Scenic Highways and associated resources under CEQA.

Visual Character

The project would construct a 27-story office tower, consistent with the zoning for the site that does not have a maximum height limit, consistent with the intensity of development evaluated in the LUTE EIR. Such changes were anticipated under the LUTE EIR which found that high rise development could potentially block views, cast shadows, appear visually incongruous with adjacent low-rise development. The recommended mitigation measures required the City to prepare and adopt development standards that support the preferred skyline design. The City has since adopted such standards as part of its zoning updates. As discussed above, the project complies with the City's development standards and zoning. As a result, the project's impacts related to visual character would not be significant.

Light and Glare

Development facilitated by the project would result in additional lighting. While new sources of light would be installed as part of new buildings and site improvements, these new lighting sources would be consistent with typical light and glare conditions for non-residential uses and would not create new sources of substantial light and glare which would substantially and adversely affect nighttime views in the area. In addition, implementation of SCA-AES-1: Lighting (#19), which would require exterior lighting fixtures to be adequately shielded to a point below the light bulb and reflector to prevent

unnecessary glare onto adjacent properties, would further reduce impacts on visual quality and character associated with lighting and glare.

Shadow (Criteria 1.b through 1.d)

Overview

As described in the 2011 Renewal Plan EIR, the anticipated development in the Renewal Plan Area would not have significant impacts to shade and shadow, and thus, no mitigation measures or SCAs were required. The 1998 LUTE EIR found that high rise development could potentially cast shadows and the recommended mitigation measures required the City to prepare and adopt development standards that support the preferred skyline design. The City has since adopted such standards as part of its zoning updates. As discussed above, the project complies with the City's development standards and zoning.

To ensure the project would not result in significant impacts related to shade and shadow, an updated and site-specific shadow study was completed based on the City of Oakland's significant threshold criteria. The shadow study is provided in Attachment D: Shadow Study, and is summarized below.

Under the City of Oakland thresholds of significance, a project would have a significant shadow impact if it were to:

- Introduce landscape that would cast substantial shadows on existing solar collectors;
- Cast a shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
- Cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or
- Cast a shadow on an historic resource such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its designation as an historic resource.

The shadow analysis (see Attachment D) prepared for the project shows shadows that would be cast by the project at 9:00 a.m., 12:00 p.m., and 3:00 p.m., during the following times:

- Summer Solstice (June 21st): Exhibit E.1-A1, E.1-A2, and E.1-A3
- Spring/Fall Equinoxes (March 20th and September 22nd): Exhibit E.2-A1, E.2-A2, and Exhibit E.2-A3
- Winter Solstice (December 21st): Exhibit E.3-A1, E.3-A2, and E.3-A3.

Additionally, graphics showing the extents of the net new shading that would be generated by future projects together with the proposed project near the project site are also presented in Attachment D (See Exhibits E.1-B1-B3 for cumulative conditions on the Summer Solstice; Exhibits E.2-B1-B3 for cumulative conditions on the spring/fall equinoxes; and Exhibits E.3-B1-B4 for cumulative conditions on the winter solstice).

The shadow study shows that between the hours of 9:00 a.m. and 3:00 p.m., the project would generally cast new shadow throughout the year as follows: westward to across the I-980 freeway and Martin Luther King Jr. Way, northwest to the corner of MLK and 25th Streets, northeast to the intersection of Broadway and 26th Street, eastward across Webster Street, and southwest across 22nd Street.

Landscape

The project would not introduce any new shadow from landscape features that would affect any existing solar collectors or historic resources.

Solar Collectors

- 426 25th Street: A portion of the rooftop of the building would receive net new shadow from the project; however, the extents of new shadow created would not reach the location of existing solar panels.
- 420 West Grand Avenue: The rooftop solar collectors on the building (see number 5 on all Exhibits) would receive new shading on its rooftop year-round, between approximately 1:00 p.m. through 3:00 p.m. While the project would cast new shade upon nearby solar collectors located on this building, the shade would only affect the building's solar collectors during the latter part of the afternoons throughout the year, typically when lower levels of solar panel efficiency are present due to lower solar angles. In particular, the project's shadow would also be casted on a large percentage of the building's solar collectors during fall through spring months; however, these fall through spring months are typically when smaller amounts of sunlight are present, resulting in reduced solar collector efficiency regardless of the project. In addition, the project's new shade would least affect the building's solar collectors during summer, when solar panels receive a high amount of sunlight and are most efficient.

For these reasons, the presence of new shading cast by the project would not substantially impair the functioning of nearby solar collectors and would not be a significant impact.

Parks and Open Spaces

The project would not introduce any net new shadow that would affect any public parks or open spaces.

Historic Resources

There are two known historic resources (2201 Telegraph [First Baptist Church] and 415 24th Street) and two known historic API's (Cathedral District API and 25th Street Garage API) in the area that could be affected by the project.

- First Baptist Church/Cathedral District API: The church (see number 5 on all Exhibits for the location of the historic resource site) and Cathedral District, which due to its location west and near the project site, would generally receive new shading from approximately early March through early October, between approximately 9:00 a.m. through 11:15 a.m. The main historic-defining character of the church, in relation to shadow, belongs to the stained-glass windows that face 21st Street, Telegraph Avenue, and West Grand Avenue. Although new shading as a result of the project would be cast on the stained-glass windows facing Telegraph Avenue and West Grand Avenue, this would only diminish direct lighting into the church during the morning hours from early March through early October. In addition, natural lighting would still come through the stained-glass windows located on 21st Street and adjacent to West Grand Avenue year-round and would not affect their historic and visual character. Lastly, no new net shadow would be cast on the church during the winter months. Therefore, new project shading would not affect the historic-defining character element of this resource. No shadows generated by the project would shade any of other the buildings listed as historically significant within the Cathedral District API (see numbers 1, 2, 3, and 4 on all Exhibits for the location of these historic resource sites). Thus, intermittent shadows would not change affect the historical features or the character of the district.
- 415 24th Street/25th Street Garage District API: The 415 24th Street building (see number 7 on all Exhibits for the location of the historic resource site) and 25th Street Garage District, which, due to their location northeast and near the project site would receive new shading from approximately early November through early February, between approximately 2:15 p.m. through 3 p.m. The Oakland Cultural Heritage Survey designates the building at 415 24th Street as “B+a1+”, meaning that it is of major importance, with potential to be of highest importance, and located in an API. The building’s general character-defining trait is its age, architecture, and historical importance. While the project would cast new shadow on the building from early November through early February, this shadow would not materially alter the physical characteristics, including architecture, of the building that conveys its historical significance. Shadows cast in the 25th Street Garage District API would not degrade the historical status of the collection of auto garage buildings with decorative facades as intermittent shadows would not affect the historical features or the character of the district.

For these reasons, the presence of new shading cast by the project would not substantially affect historical resources and would not be a significant impact.

Cumulative Effects

The cumulative conditions in the shadow study assess the project's potential impacts, in addition to other projects in the vicinity that could cast shadow on receptor sites. The cumulative projects considered in this cumulative analysis include:

- 2126 Martin Luther King Jr Way
- 585 22nd Street
- 2225 Telegraph (Moxy Hotel)
- 2100 Telegraph (max envelope)
- 2250 Telegraph
- 459 23rd Street
- 456-466 23rd Street
- 2538 Telegraph
- 2401 Broadway
- 2270 Broadway
- 2305 Webster
- 2315 Valdez

Many of these cumulative projects would generate new shadow that would overlap with the shadow cast by the project, primarily the 2100 Telegraph project. The 2100 Telegraph project would mostly generate shadow in the same areas as the project on the 420 West Grand Avenue solar panels, 2201 Telegraph (First Baptist Church), and 415 24th Street. The interaction between the shading profiles of the project and other cumulative projects is shown as a part of Attachment D: Shadow Study in Exhibits E.1-B1, E.1-B2, E.1-B3, E.2-B1, E.2-B2, E.2-B3, E.3-B1, E.3-B2, and E.3-B3). Because the of the net new shadow generated by the 2100 Telegraph project would overlap with shadow of the project at certain times and dates, the project would not result in any cumulative impacts.

Shadow Summary

The project would not introduce any net new shadow from landscape features that would affect any existing solar collectors or historic resources. While the project would cast shade on solar collectors, as described above, the new shadows would not substantially or materially impair their functionality because the shade would only affect the solar collectors during a time of year when generally lower levels of solar panel efficiency are present due to lack of sunlight and lower solar angles. While the project's shadow would result in a sizeable decrease in panel performance over the affected period, there would be no impact over more than half of the times where solar panel efficiency and output would be greatest (such as in late spring, summer, and early fall). As such, on an annualized basis, the presence of new shading would not substantially impair the functioning of the solar panels. The project would not cast shadows on any parks or open spaces. Lastly, while the project would cast shadows on historic resources, new shade

would not materially affect their historical significance. As such, the project would not have any significant impacts relating to shade and shadow.

Wind (Criterion 1.e)

The 1998 LUTE EIR found that development in the Downtown Showcase District (in which the project site is located) could result in significant and unavoidable impacts to wind. The following mitigation was included to minimize wind impacts:

LUTE EIR Mitigation Measure N.1: The City shall require the project sponsors to incorporate specific design elements in the final siting and designs for the high rises that could reduce ground-level winds within the Downtown Showcase District.

The LUTE EIR findings recognize that new development in this district may not be able to reduce wind impacts to below the City's thresholds. If a project would result in winds exceeding 36 miles per hour (mph) **for more than one (1) hour during daylight hours over a one-year period**, the impact is considered significant. As part of the City's approval of the LUTE EIR, a statement of overriding consideration was adopted related to wind and new development in the Downtown Showcase District.

In response to Mitigation Measures N.1 and consistent with the City of Oakland CEQA Thresholds of Significance Guidelines (requires a wind analysis if the project site is located Downtown and the proposed height exceeds 100 feet), a wind study was prepared for the project to evaluate its wind effects and is included in Attachment E. The wind study assessed the project and potential mitigating design variations at 60 locations within a 1,600-foot radius of the project site, primarily along sidewalks and public rights-of-way for the following scenarios:

- Existing Conditions,
- Existing Conditions Plus Project, and
- Cumulative Conditions Plus Project

The results of the wind analysis are summarized in Table V.A-1 and described below. See Attachment E for the detailed analysis.

Under **Existing Conditions**, the wind speed does not exceed the City's hazard wind threshold.

Under **Existing Conditions Plus Project**, the project could increase wind to speeds and a duration that exceeds the City's hazard wind threshold. Consistent with Mitigation Measure N.1 from the LUTE EIR, this scenario was rerun multiple times to incorporate wind mitigating design elements including, 6-foot tall parapets along terrace levels 5, 8, and 17; a porous screen wall around the parking garage; 4-foot deep bump outs along terrace levels 8 and 17; a 6-foot deep porous canopy at 45 feet in height at the ground level; an 8-foot deep canopy at 12 feet in height at terrace levels 5 and 17; and off-site

landscaping. In conjunction with the City’s design review of the project, they are also considering the wind mitigating design elements and which ones to incorporate into the final building design.

Table V.A-1 Summary of Wind Hazards

Scenario	Number of Wind Exceedances	Sensor Locations Exceeded	City of Oakland Hazard Wind Speed Threshold (mph)*	Projected Wind Speed (mph)	Number of Hours in Exceedance of one hour
Existing Conditions	0	none	36	n/a	n/a
Existing Conditions + Project	4	#5	36	39.1	3
		#16	36	37.2	1
		#26	36	39.6	3
		#36	36	38.2	2
Existing Conditions + Project + Potential Mitigations	3	#5	36	37.7	2
		#26	36	38.3	2
		#36	36	36.7	2
Cumulative Conditions + Project	0	none	36	--	--

Notes:

*..Wind impacts are considered significant if it is projected that a project would exceed 36 mph for more than one (1) hour over a one-year period.

Source: Attachment E

One of the potential measures involves off-site improvements—planting 4 trees in the Grand Avenue median between Telegraph Avenue and Valley Street, as shown in Attachment E. The wind study found that the four additional median trees reduce the total number of wind hazard exceedances locations, from four to three. The project sponsor will cover the cost of the trees and install the off-site median trees with City approval, and if necessary, enter into a maintenance agreement. Alternatively, if the City desires, the project sponsor will provide funding for the City to purchase and install the trees. If the City determines planting of off-site trees in the Grand Avenue median is not feasible or desired, planting of the median or any other off-site trees will not be required.

The medial trees and other off-site landscaping, if any, must be shown in the landscape plans consistent with SCA-AES-4: Landscaping Plan (#18) and all off-site trees shall follow City of Oakland Tree Planting Guidelines and City of Oakland Master Street Tree List.

Under **Cumulative Conditions Plus Project**, the wind study considered cumulative development project conditions within a 1,600-foot radius of the project site.¹⁹ Proposed and approved projects assumed in the cumulative wind study include:

- 2305 Webster Street
- 2270 Broadway
- 2100 Telegraph
- 2015 Telegraph
- 2016 Telegraph
- 1900 Broadway
- 2225 Telegraph (Moxy Hotel)
- Kaiser Plaza at 325 22nd Street

Under **Cumulative Conditions Plus Project**, the wind conditions would not exceed the hazard wind threshold (see Table V.A-1).

Consistent with the findings of Impact N.1 of the 1998 LUTE EIR the project's wind impacts would be minimize by the implementation of the wind mitigating building design elements and/or the median trees, but not to a less-than-significant level.

While the project would result in wind impacts that would be significant and unavoidable, this finding is consistent with the conclusions of the LUTE EIR.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any new or more severe significant impacts related to aesthetics, shadow, or wind. The project would be required to implement SCA-AES-1: Lighting (#19) and Mitigation Measure N.1 of the 1998 LUTE EIR. In addition, implementation of the following SCAs would further reduce impacts of the project to aesthetics, shadow, and wind, including: SCA-AES-2: Trash and Blight Removal (#16), SCA-AES-3: Graffiti Control (#17), SCA-AES-4: Landscape Plan (#18), SCA-AES-5: Public Art for Private Development (#20), and SCA-UTIL-4: Underground Utilities (#86). Please see Attachment A for a full description of these mitigation measures and SCAs.

¹⁹ 1700 Webster Street, which is currently under construction, is included in the wind analysis as an existing building.

B. Air Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. During project construction result in average daily emissions of 54 pounds per day of ROG, NO _x , or PM _{2.5} or 82 pounds per day of PM ₁₀ ; during project operation result in average daily emissions of 54 pounds per day of ROG, NO _x , or PM _{2.5} , or 82 pounds per day of PM ₁₀ ; result in maximum annual emissions of 10 tons per year of ROG, NO _x , or PM _{2.5} , or 15 tons per year of PM ₁₀ ; or	■	<input type="checkbox"/>	<input type="checkbox"/>
b. For new sources of Toxic Air Contaminants (TACs), during either project construction or project operation expose sensitive receptors to substantial levels of TACs under project conditions resulting in (a) an increase in cancer risk level greater than 10-in-1-million, (b) a noncancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM _{2.5} of greater than 0.3 microgram per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100-in-1 million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM _{2.5} of greater than 0.8 microgram per cubic meter; or expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100-in-1-million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM _{2.5} of greater than 0.8 microgram per cubic meter.	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR, which analyzed air quality, found most impacts to be less than significant with implementation of applicable SCAS; impacts related to exposure from diesel particulate matter and odors were found to be significant and unavoidable, even with implementation of SCAS.

1998 LUTE EIR identified mitigation measures to reduce the impact of criteria pollutant emissions from construction equipment and stationary sources to a less-than-significant level; however, the 1998 LUTE EIR found that increased criteria pollutant emissions from increased traffic, including reduced emissions after implementation of identified mitigation measures, would result in a significant and unavoidable impact. The 1998 LUTE EIR did not quantify or address cumulative health risks, as such analysis was not required when that EIR was prepared.

2. Project Analysis

The project is in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD adopted thresholds of significance to assist lead agencies in the evaluation and mitigation of air quality impacts under CEQA.²⁰ The BAAQMD's thresholds – which were utilized by the City of Oakland in establishing its own thresholds of significance – established levels at which emissions of ozone precursors (i.e., reactive organic gases [ROGs] and nitrogen oxides [NO_x]), suspended particulate matter, carbon monoxide, toxic air contaminants (TACs), and odors could cause significant air quality impacts. Two fractions of particulate matter emissions are regulated based on aerodynamic resistance: those with diameters equal to or less than 10 microns (PM₁₀) and those with diameters equal to or less than 2.5 microns (PM_{2.5}). The BAAQMD's thresholds of significance adopted by the City of Oakland that are used in this CEQA document are summarized in Table V.B-1 below.

This air quality analysis considers the maximum development potential for the project site. The maximum allowable FAR is 20.0, which allows a maximum of 902,740 gross square feet of development. This maximum development potential for the site is analyzed as a worst-case scenario, resulting in a more conservative analysis; thus, the impacts of the at 896,931 square feet, 5,809 less than the project, may be slightly reduced compared to these analyses. In no case would the impacts of the project be great than the maximum development potential scenario.

Criteria Air Pollutants (Criterion 2.a)

The BAAQMD currently recommends using the most recent version of the California Emissions Estimator Model (CalEEMod version 2016.3.2) to estimate construction and operational emissions of criteria air pollutants and precursors for a project. CalEEMod uses widely accepted models for emission estimates combined with appropriate default data for a variety of land use projects that can be used if site-specific information is not available. The default data (e.g., type and power of construction equipment) are supported by substantial evidence provided by regulatory agencies and a combination of statewide and regional surveys of existing land uses. The primary input data used to estimate

²⁰ Bay Area Air Quality Management District (BAAQMD), 2017. CEQA Air Quality Guidelines, May.

Table V.B-1 City of Oakland’s Thresholds of Significance

Impact Analysis	Pollutant	Threshold of Significance
Regional Air Quality (Construction)	ROG	54 pounds/day (average daily emission)
	NO _x	54 pounds/day (average daily emission)
	Exhaust PM ₁₀	82 pounds/day (average daily emission)
	Exhaust PM _{2.5}	54 pounds/day (average daily emission)
Regional Air Quality (Operation)	ROG	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	NO _x	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	Exhaust PM ₁₀	82 pounds/day (average daily emission) 15 tons/year (maximum annual emission)
	Exhaust PM _{2.5}	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
Local Community Risks and Hazards (Operation and/or Construction)	Fugitive dust (PM ₁₀ and PM _{2.5})	Best management practices (BMPs)
	Exhaust PM _{2.5} (project)	0.3 µg/m ³ (annual average)
	TACs (project)	Cancer risk increase > 10 in one million Chronic hazard index > 1.0
	Exhaust PM _{2.5} (cumulative)	0.8 µg/m ³ (annual average)
	TACs (cumulative)	Cancer risk > 100 in one million Chronic hazard index > 10.0

Notes: µg/m³ = micrograms per cubic meter

Source: BAAQMD, 2017. CEQA Air Quality Guidelines. May.

emissions associated with construction and operation of the project are summarized in Table V.B-2. To be conservative, pollutant emissions were estimated in CalEEMod for the maximum project development scenario. A copy of the CalEEMod report for the project, which summarizes the input parameters, assumptions, and findings, is provided in Attachment F, Air Quality and Greenhouse Gas Emissions Estimates and Health Risk Analysis.

Criteria Air Pollutants from Construction

Project construction activities would generate criteria air pollutant emissions that could adversely affect regional air quality. Construction activities would include demolition, site preparation, grading, building construction, paving, and applications of architectural coatings. The primary pollutant emissions of concern during project construction would be ROG, NO_x, PM₁₀, and PM_{2.5} from the exhaust of off-road construction equipment and on-road vehicles related to worker vehicles, vendor trucks, and haul trucks. In addition, fugitive dust emissions of PM₁₀ and PM_{2.5} would be generated by soil disturbance and demolition activities and fugitive ROG emissions would result from the application of architectural coatings and paving. Emissions of ROG, NO_x, PM₁₀, and PM_{2.5} during project

construction were estimated using the CalEEMod input parameters and are summarized in Tables V.B-2 and V.B-3.

Table V.B-2 Summary of CalEEMod Land Use Input Parameters

Land Use Type	CalEEMod Land Use Type	Units	Unit Amount
Existing Conditions			
Gasoline Station	Gasoline/Service Station	Pumps	10
Parking Lot	Parking Lot	Spaces	74
Maximum Development Potential Scenario			
Office	General Office Building	Square Feet	739,360
Retail	Regional Shopping Center	Square Feet	26,740
Parking Garage	Enclosed Parking with Elevator	Spaces	350

Table V.B-3 Summary of CalEEMod Construction Input Parameters for the Maximum Development Potential Scenario

CalEEMod Input Category	Construction Assumptions and Changes to Default Data
Construction Phase	CalEEMod applies default equipment usage and construction phase lengths based on the findings of a survey of construction projects less than 5 acres. The survey results are organized in CalEEMod based on lot acreage size. While the project is approximately 0.89 acres, the multi-story development projects included in the construction survey were approximately 3 acres. Therefore, the default equipment usage and construction phase lengths for a 3-acre lot were used to estimate the total hours of equipment operation (and associated emissions) required to construct the project. A drill rig (for pile driving) was added to the default construction equipment list. Construction was assumed to begin in 2020.
Material Movement	Approximately 9,500 cubic yards of soil is expected to be hauled off-site.
Demolition	The existing structures, which include an approximately 16,900-square-foot gas station lot and approximately 21,900-square-foot surface parking lot, would be demolished and hauled off-site.

Notes: Demolition and material movement information provided by the project sponsor. Default CalEEMod data was used for all other parameters not described.

Source: See Attachment F.

Because construction of the project would require a demolition permit and exceed the screening criterion for general office buildings listed in the BAAQMD's CEQA Guidelines, construction of the project would be required to implement the City's enhanced control measures for construction emissions described under SCA-AIR-1: Dust Controls – Construction Related (#21). In accordance with SCA-AIR-2, the evaluation assumed that all off-road diesel equipment would be equipped with engines certified to meet the California

Air Resources Board’s (CARB’s) Tier 4 emission standards, which have incorporated best available control technologies into the engine design to reduce emissions of ROG, NO_x, PM₁₀, and PM_{2.5}.

Project construction would begin as early as June 2020 and last approximately 29 months. The total emissions estimated during construction were averaged over the total working days (633 days) and compared to the City’s thresholds of significance. The project’s estimated emissions for ROG, NO_x, and exhaust PM₁₀ and PM_{2.5} both before and after applying the Tier 4 engine requirements under SCA-AIR-2: Diesel Particulate Matter Controls – Construction Related (#23) are shown in Table V.B-4 and were below the applicable thresholds and, therefore, would have a less-than-significant impact on regional air quality.

Table V.B-4 Estimated Construction Emissions for the Maximum Development Potential Scenario with and without SCA-AIR-2 (Pounds per Day)

Emissions Scenario	ROG	NOx	Exhaust PM ₁₀	Exhaust PM _{2.5}
Project Construction without SCA-AIR-2				
Total Emissions	14.1	14.6	0.48	0.45
Thresholds of Significance	54	54	82	54
Exceed Threshold?	No	No	No	No
Project Construction with SCA-AIR-2				
Total Emissions	13.4	7.4	0.05	0.04
Thresholds of Significance	54	54	82	54
Exceed Threshold?	No	No	No	No

Source: See Attachment F.

The generation of fugitive dust PM₁₀ and PM_{2.5} from soil disturbance and demolition activities could adversely affect local air quality. Neither BAAQMD nor the City has a quantitative threshold of significance for fugitive dust PM₁₀ and PM_{2.5} emissions; however, the BAAQMD considers implementation of best management practices (BMPs) to control dust during construction sufficient to reduce potential impacts to a less-than-significant level. Implementation of the enhanced dust-control measures described under SCA-AIR-1 would satisfy the BAAQMD’s requirement for BMPs during construction. Because implementation of dust-control measures under SCA-AIR-1 would satisfy the BAAQMD’s threshold of significance, the impact on local air quality from dust generated during project construction would be less than significant.

According to the Phase I Environmental Site Assessment²¹ for the project site, the existing building does not likely contain asbestos materials; therefore, the project does not need to comply with demolition requirements described under the City's SCA #27: Asbestos in Structures. In addition, because naturally-occurring asbestos has not been mapped in the vicinity of the project, the dust mitigation measures for asbestos described under the City's SCA #28: Naturally-Occurring Asbestos would not apply to the project. With implementation of SCA-AIR-1, construction of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to criteria pollutant emissions that were not identified in the Program EIRs.

Criteria Air Pollutants from Operations

Project operation would generate criteria air pollutant emissions that could potentially affect regional air quality. The primary pollutant emissions of concern during project operation would be ROG, NO_x, and exhaust PM₁₀ and PM_{2.5} from mobile sources, energy use, area sources (e.g., consumer products and architectural coatings), and stationary sources. Project emissions were estimated for 2022, which is the earliest expected year of operation. Since statewide vehicle emission standards are required to improve over time in accordance with the Pavley (Assembly Bill 1493) and Low-Emission Vehicle regulations (Title 13, California Code of Regulations, and Section 1961.2), estimating emissions for the earliest year of operation provides the maximum expected annual emissions. Additional project-specific information used to calculate operation emissions in CalEEMod, including changes to default data, is summarized in Table V.B-5.

Estimated emissions from the existing land uses on the project site were subtracted from the estimated maximum annual and average daily emissions during project operation. The estimated maximum annual emissions and average daily emissions during the operational phase of the project are compared to the City's thresholds of significance in Table V.B-6. The estimated emissions for ROG, NO_x, and exhaust PM₁₀ and PM_{2.5} were below the thresholds and, therefore, would have a less-than-significant impact on regional air quality. As a result, operation of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to criteria pollutant emissions during operation that were not identified in the Program EIRs.

²¹ PES Environmental Services, Inc., 2017. Phase I Environmental Site Assessment, 2200 Telegraph Avenue, Oakland, California. June 19.

Table V.B-5 Summary of CalEEMod Operation Input Parameters for the Maximum Development Potential Scenario

CalEEMod Input Category	Operation Assumptions and Changes to Default Data
Vehicle Trips	Daily trip rates for each type of land use were adjusted according to the project traffic analysis (see <i>Section V.M, Transportation</i>). These trip estimates account for a 46.9 percent trip reduction based on the City of Oakland's Transportation Impact Review Guidelines for development in an urban environment within 0.5 mile of a BART station.
Fleet Mix	Because the project is not expected to generate new bus or mobile home trips, these vehicle types were removed from the fleet mix. Based on this assumption, the default ratio of vehicle types representing each land use were maintained and scaled up.
Stationary Sources	In accordance with the California Building Code, an emergency generator would be required for the project. It was assumed that a 350-horsepower diesel generator would be used for non-emergency operation up to 50 hours per year (for routine testing and maintenance).

Note: Default CalEEMod data used for all other parameters not described.

Source: See Attachment F.

Table V.B-6 Estimated Operation Emissions for the Maximum Development Potential Scenario

Emissions Scenario	Maximum Annual Emissions (Tons)				Average Daily Emissions (Pounds)			
	ROG	NOx	Exhaust PM ₁₀	Exhaust PM _{2.5}	ROG	NOx	Exhaust PM ₁₀	Exhaust PM _{2.5}
Existing Operations								
Total Existing Emissions	0.45	2.03	0.01	0.01	2.49	11.12	0.05	0.05
Project Operations								
Area	3.40	<0.01	<0.01	<0.01	18.64	<0.01	<0.01	<0.01
Energy	0.08	0.71	0.05	0.05	0.43	3.87	0.29	0.29
Mobile	0.79	5.03	0.02	0.02	4.30	27.58	0.14	0.13
Generator	0.01	0.04	<0.01	<0.01	0.08	0.22	0.01	0.01
Total Project Emissions	4.28	5.78	0.08	0.08	23.45	31.67	0.44	0.43
Net Project Emissions	3.8	3.8	0.1	0.1	21.0	20.6	0.4	0.4
Thresholds of Significance	10	10	15	10	54	54	82	54
Exceed Threshold?	No	No	No	No	No	No	No	No

Source: See Attachment F.

Toxic Air Contaminants (Criterion 2.b)

Project construction would generate diesel particulate matter (DPM) and $PM_{2.5}$ emissions from the exhaust of off-road diesel construction equipment and on-road vehicles (worker, vendor, and haul trucks) accessing the project site. Similarly, project operations would generate DPM and $PM_{2.5}$ emissions from testing and maintenance of an emergency generator. DPM and $PM_{2.5}$ from diesel-powered engines are a complex mixture of soot, ash particulates, metallic abrasion particles, volatile organic compounds, and other components that can contribute to a range of health problems. In 1998, CARB identified DPM from diesel-powered engines as a TAC based on its potential to cause cancer and other adverse health effects.²²

The emissions of DPM and $PM_{2.5}$ from diesel exhaust during project construction and operation could pose a health risk to nearby sensitive receptors. The term sensitive receptor refers to a location where individuals are more susceptible to poor air quality. Sensitive receptors include schools, convalescent homes, and hospitals because the very young, the old, and the infirm are more susceptible than the rest of the public to air-quality-related health problems. Residential areas are also considered sensitive to poor air quality because people are often at home for extended periods, thereby increasing the duration of exposure to potential air contaminants. The BAAQMD recommends evaluating the potential health risks to sensitive receptors within 1,000 feet of a project that could be exposed to TACs, such as DPM and $PM_{2.5}$.

Generation of TAC Emissions during Construction

The annual average concentrations of DPM and exhaust $PM_{2.5}$ concentrations during construction of the maximum development potential were estimated within 1,000 feet of the project using the U.S. Environmental Protection Agency's Industrial Source Complex Short Term (ISCST3) air dispersion model. For this analysis, emissions of exhaust PM_{10} were used as a surrogate for DPM, which is a conservative assumption because more than 90 percent of DPM is less than 1 micron in diameter. The input parameters and assumptions used for estimating emission rates of DPM and $PM_{2.5}$ from off-road diesel construction equipment and on-road vehicles (worker, vendor, and haul trucks) accessing the project site are included in Attachment F.

Daily emissions from construction were assumed to occur over a typical 8-hour period between 9:00 a.m. and 5:00 p.m. Monday through Friday. The exhaust from off-road equipment was represented in the ISCST3 model as a series of volume sources with a release height of 5 meters to represent the mid-range of the expected plume rise from frequently used construction equipment. On-road vehicles accessing the project site were

²² California Air Resources Board (CARB), 1998. Initial Statement of Reasons for Rulemaking; Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant. June.

represented in the ISCST3 model as a series of line-area sources with a release height of 3 meters for exhaust emissions.

A uniform grid of receptors spaced 10 meters apart with receptor heights of 1.8 meter (for ground-level receptors) and 6 meters (for second-story receptors) was placed around the project site as a means of developing isopleths (i.e., concentration contours) that illustrate the dispersion pattern from the various emissions sources. The ISCST3 model input parameters included 1 year of BAAQMD meteorological data from the Oakland Sewage Treatment Plant weather station located about 2.5 miles northwest of the project site.

The air dispersion model was used to estimate annual average concentrations of DPM and PM_{2.5}, both before and after applying the requirement under SCA-AIR-2 to use Tier 4 engines. Based on the results of the air dispersion model (Attachment F), potential health risks were evaluated for the maximally exposed individual student (MEIS) on the ground floor of a pre-school about 95 feet north of the project site, and the maximally exposed individual resident (MEIR) located at a second-story apartment, about 120 feet northeast of the project site. The annual average concentrations of DPM and PM_{2.5} at the MEIS and MEIR are summarized in Table V.B-7.

Table V.B-7 Annual Average TAC Concentrations During Construction of the Maximum Development Potential Scenario

Sensitive Receptor	Annual Average Concentration (µg/m ³)	
	DPM	Exhaust PM _{2.5}
Project Construction <i>without</i> SCA-AIR-2		
Maximally Exposed Individual Resident	0.085	0.080
Maximally Exposed Individual Student	0.106	0.103
Project Construction <i>with</i> SCA-AIR-2		
Maximally Exposed Individual Resident	0.004	0.004
Maximally Exposed Individual Student	0.004	0.004

Note: µg/m³ = micrograms per cubic meter
Source: See Attachment F.

In accordance with guidance from the BAAQMD²³ and the Office of Environmental Health Hazard Assessment (OEHHHA),²⁴ a health risk assessment was conducted to calculate the

²³ Bay Area Air Quality Management District (BAAQMD), 2012. Recommended Methods for Screening and Modeling Local Risks and Hazards, May.

²⁴ Office of Environmental Health Hazard Assessment (OEHHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February.

incremental increase in cancer risk and chronic hazard index (HI) to sensitive receptors from DPM emissions during construction. Analysis of acute non-cancer health hazards from construction activity is not recommended by BAAQMD, nor has a reference exposure level been approved by OEHHA and CARB. The annual average concentration of DPM at the MEIR was used to conservatively assess potential health risks to nearby sensitive receptors.

It was conservatively assumed that the MEIR and MEIS would be exposed to an annual average DPM concentration over the entire estimated duration of construction, which is about 2.4 years (29 months). At the MEIR location, the incremental increase in cancer risk from on-site DPM emissions during construction was assessed for a young child exposed to DPM for 2.4 years starting from infancy in the third trimester of pregnancy. At the MEIS location, the incremental increase in cancer risk from on-site DPM emissions during construction was assessed for a pre-school child exposed to DPM for 2.4 years starting at the age of 2. These exposure scenarios represent the most sensitive individuals who could be exposed to adverse air quality conditions in the vicinity of the project site. The input parameters and results of the health risk assessment are included in Attachment F.

Estimates of the health risks at the MEIR and MEIS from exposure to DPM and $PM_{2.5}$ concentrations during construction of the maximum development potential, both before and after applying the Tier 4 engine requirements under SCA-AIR-2, are summarized and compared to the City's thresholds of significance in Table V.B-8. The estimated chronic HI for DPM and annual average $PM_{2.5}$ concentration from construction emissions without SCA-AIR-2 were below the City's thresholds; however, the excess cancer risk exceeded the City's thresholds without SCA-AIR-2. Implementation of SCA-AIR-2 would reduce the excess cancer risk by about 96 percent and the risk level would not exceed the City's threshold of significance. Therefore, with implementation of SCA-AIR-2, the project's emissions of DPM and $PM_{2.5}$ during construction would have a less-than-significant impact on nearby sensitive receptors. Overall, construction of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to the generation of TAC emissions that were not identified in the Program EIRs.

Generation of TAC Emissions during Operation

To operate an emergency generator, the project would be required to comply with the BAAQMD's permit requirements for a stationary source. In accordance with BAAQMD's Regulation 2-5, New Source Review of Toxic Air Contaminants, the BAAQMD does not issue permits for generators that would result in an excess cancer risk greater than 10 in 1 million or a chronic HI greater than 1.0. These health standards are also enforced through the City's SCA-AIR-3: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#25).

Table V.B-8 Health Risks from Construction of the Maximum Development Potential Scenario

Sensitive Receptor	Diesel Particulate Matter		Exhaust PM _{2.5}
	Cancer Risk (per million)	Chronic Hazard Index	Annual Average Concentration (µg/m ³)
Construction Emissions (without SCA-AIR-2)			
Maximally Exposed Individual Resident	25.1	0.02	0.08
Maximally Exposed Individual Student	22.1	0.01	0.10
Construction Emissions (with SCA-AIR-2)			
Maximally Exposed Individual Resident	1.2	<0.01	<0.01
Maximally Exposed Individual Student	0.8	<0.01	<0.01
Thresholds of Significance	10	1	0.3

Note: µg/m³ = micrograms per cubic meter

Bold and shaded text indicates exceedance of threshold.

Source: See Attachment F.

Conservatively assuming the project's emergency generator would result in the BAAQMD's maximum permissible excess cancer risk of 10 in 1 million due to emissions of DPM, the BAAQMD's Risk and Hazards Emissions Screening Calculator (Beta Version)²⁵ was used to estimate the equivalent screening-level health risks values for chronic HI and annual average PM_{2.5} concentrations. The calculator applies similar methods used to establish the emission threshold levels for TACs reported in the BAAQMD's Regulation 2-5. The health risk screening values from the project's emergency generator were then refined based on the distance from the project to the MEIR and MEIS using the BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool.²⁶ The conservative screening-level health risks to sensitive receptors associated with operation of the emergency generator are summarized and compared to the City's thresholds of significance in Table V.B-9. The estimated excess cancer risk and chronic HI for DPM and the annual average PM_{2.5} concentration from operation of the emergency generator were below the City's thresholds of significance; therefore, the project's emissions of DPM and PM_{2.5} during operation of an emergency generator would have a less-than-significant impact on nearby sensitive receptors and no further actions are required to address health risks under the City's SCA-AIR-3. As a result, operation of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to the generation of TAC emissions that were not identified in the Program EIRs.

²⁵ Bay Area Air Quality Management District (BAAQMD), 2016. Risk and Hazards Emissions Screening Calculator (Beta Version).

²⁶ Bay Area Air Quality Management District (BAAQMD), 2012. Diesel Internal Combustion Engine Distance Multiplier Tool, June 13.

Table V.B-9 Health Risks from Operation of an Emergency Generator at the Project Site

Sensitive Receptor	Diesel Particulate Matter		Exhaust PM_{2.5}
	Cancer Risk (per million)	Chronic Hazard Index	Annual Average Concentration (µg/m³)
Maximally Exposed Individual Resident	6.4	<0.01	0.01
Maximally Exposed Individual Student	8.5	<0.1	0.02
Thresholds of Significance	10	1.0	0.3
Exceed Threshold?	No	No	No

Notes: µg/m³ = micrograms per cubic meter

Source: BAAQMD, 2016. *Risk and Hazards Emissions Screening Calculator (Beta Version)*.

Cumulative TAC Emissions

In addition to a project's individual TAC emissions during construction and operation, the potential cumulative health risks to sensitive receptors from existing and reasonably foreseeable future sources of TACs were evaluated. Based on the proximity to existing and future sources of TACs, cumulative health risks were estimated at the MEIR to represent the worst-case-exposure scenario for existing sensitive receptors in the project vicinity. The BAAQMD's online screening tools were used to provide conservative estimates of how much existing and foreseeable future TAC sources would contribute to cancer risk, HI, and PM_{2.5} concentrations. The individual health risks associated with each source were summed to find the cumulative health risk at the MEIR.

Based on the BAAQMD's Stationary Source Screening Analysis Tool,²⁷ nine existing stationary sources of TAC emissions were identified within 1,000 feet of the MEIR (Table V.B-10). According to BAAQMD, one of the stationary sources (BAAQMD Plant 3927) has been closed and does not pose potential health risks or hazards to nearby sensitive receptors. Preliminary health risk screening values at the MEIR from the stationary sources were determined using the Stationary Source Screening Analysis Tool and Risk & Hazard Stationary Source Inquiry Form.²⁸ The BAAQMD's Gasoline Dispensing Facility Distance Multiplier Tool and the Diesel Internal Combustion Engine Distance Multiplier Tool were used to refine the screening values associated with two of the existing stationary sources to represent the attenuated health risks that can be expected with increasing distance from gas stations and diesel engines, respectively.

²⁷ Bay Area Air Quality Management District (BAAQMD), 2012. Stationary Source Screening Analysis Tool. Available at: <http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools>, May 30.

²⁸ Bay Area Air Quality Management District (BAAQMD), 2016. Risk & Hazard Stationary Source Inquiry Form. Data requests submitted to Allison Kirk of the BAAQMD on December 13, 2016.

Table V.B-10 Summary of Cumulative Health Risks at the MEIR

Sources	Source Type	Cancer Risk (10 ⁻⁶)	Chronic Hazard Index	PM _{2.5} (µg/m ³)
Maximum Development Potential Scenario				
Construction <i>without</i> SCA-AIR-2	Diesel Exhaust	25.1	0.01	<0.01
Construction <i>with</i> SCA-AIR-2	Diesel Exhaust	1.2	<0.01	<0.01
Emergency Generator	Diesel Generator	5.8	<0.01	0.01
Existing Stationary Sources				
Hanzel Auto Body Works (3927)	Not Reported	NA	NA	NA
Oakland Valero Service Center (G10551)	Gas Station	0.7	<0.01	NA
Johnson Plating Works Inc (3490)	Not Reported	0.1	<0.01	<0.01
Q&S Automotive (12434)	Not Reported	<0.1	<0.01	<0.01
Weatherford BMW (5385)	Not Reported	<0.1	<0.01	0.04
Essex Portfolio (19971)	Diesel Generator	1.0	<0.01	<0.1
State of California Department of Transportation (14195)	Diesel Generator	2.7	<0.01	<0.1
Pacific Bell Telephone (19999)	Diesel Generator	0.8	<0.01	<0.1
Oakland Center 21 (19514)	Diesel Generator	0.1	<0.01	<0.01
Existing Mobile Sources				
West Grand Avenue (20,211 AADT)	Major Roadway	17.4	NA	0.34
Telegraph Avenue (14,448 AADT)	Major Roadway	2.6	NA	0.05
Broadway (19,291 AADT)	Major Roadway	3.0	NA	0.05
Future Stationary Sources				
459 23rd Street, Oakland, CA	Diesel Generator	3.1	<0.01	0.01
2100 Telegraph Ave, Oakland, CA	Diesel Generator	1.5	<0.01	<0.01
2270 Broadway, Oakland, CA	Diesel Generator	1.5	<0.01	<0.01
2305 Webster St, Oakland, CA	Diesel Generator	0.9	<0.01	<0.01
2016 Telegraph Ave, Oakland, CA	Diesel Generator	0.5	<0.01	<0.01
2 Kaiser Plaza, Oakland, CA	Diesel Generator	0.4	<0.01	<0.01
2015 Telegraph Ave, Oakland, CA	Diesel Generator	0.5	<0.01	<0.01
2315 Valdez, Oakland, CA	Diesel Generator	0.5	<0.01	<0.01
2044 Franklin Street, Oakland, CA	Diesel Generator	0.5	<0.01	<0.01
2401 Broadway, Oakland, CA	Diesel Generator	0.6	<0.01	<0.01
Cumulative Health Risks <i>without</i> SCA-AIR-2		69	<0.1	0.5
Cumulative Health Risks <i>with</i> SCA-AIR-2		45	<0.1	0.5
Cumulative Thresholds of Significance		100	10.0	0.8
Exceed Cumulative Threshold?		No	No	No

Notes: µg/m³ = micrograms per cubic meter; NA = not applicable

Sources: Health risk screening values derived from the BAAQMD's Tools and Methodologies. Available at: <http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools>, accessed March 2018.

Average annual daily traffic (AADT) volumes reported by Alameda CTC (2014).

Based on review of 2020 average annual daily traffic (AADT) volumes forecasted by Alameda County Transportation Commission (ACTC),²⁹ there are three major roadways with an AADT volume greater than 10,000 vehicles per day within 1,000 feet of the project site. The maximum potential health risks at the MEIR from mobile emissions along the major roadways were estimated using the BAAQMD's Roadway Screening Analysis Calculator.³⁰

There are ten proposed residential and/or office developments within 1,000 feet of the MEIR, which could involve the operation of emergency diesel generators, as shown in Table V.B-10. The BAAQMD does not issue permits for stationary sources that result in an excess cancer risk greater than 10 in 1 million or a chronic HI greater than 1.0 at the source of emissions. Conservatively assuming each proposed generator would result in a maximum excess cancer risk of 10 in 1 million due to emissions of DPM, the BAAQMD's Risk and Hazards Emissions Screening Calculator (Beta Version) was used to estimate the equivalent screening-level health risks values for chronic HI and annual average PM_{2.5} concentrations. The health risk screening values from the future generators were then refined based on the distance from each source to the MEIR using the BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool.

Estimates of the cumulative health risks at the MEIR are summarized and compared to the City's cumulative thresholds of significance in Table V.B-10. The excess cancer risk, chronic HI, and annual average PM_{2.5} concentrations at the MEIR were below the City's cumulative thresholds of significance both before and after applying the City's Tier 4 engine requirements to control construction emissions under SCA-AIR-2. Therefore, the project's emissions of DPM and PM_{2.5} during construction and operation would have a less-than-significant cumulative impact on nearby sensitive receptors. Furthermore, future sensitive receptors on the project site would not be required to implement health risk reduction measures described under the City's SCA #24: Exposure to Air Pollution (Toxic Air Contaminants). Overall, construction and operation of the project would not substantially increase the cumulative severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to the generation of TAC emissions that were not identified in the Program EIRs.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any new or more severe significant impacts related to criteria air pollutants, TACs emissions, or cumulative TAC emissions. The project would be required to implement SCA-AIR-1: Dust Controls – Construction Related (#21), SCA-AIR-2: Diesel Particulate Matter Controls –

²⁹ Alameda County Transportation Commission (ACTC), 2014. Countywide Travel Demand Model. Planning Area 1; 2020 Daily Model Vehicle Volumes. July.

³⁰ Bay Area Air Quality Management District (BAAQMD), 2015. Roadway Screening Analysis Calculator, April 16.

Construction Related (#23), SCA-AIR-3: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#25), to ensure impacts to air quality would be less than significant. In addition, implementation of SCA-AIR-4: Asbestos in Structures (#27) and SCA-AIR-5: Criteria Pollutant Controls – Construction Related (#22) would further reduce any impacts to a less-than-significant level. Please see Attachment A for a full description of the applicable SCAs.

C. Biological Resources

	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>Would the project:</p> <p>a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;</p> <p>Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;</p> <p>Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means;</p> <p>Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;</p>	■	<input type="checkbox"/>	<input type="checkbox"/>
<p>b. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code [OMC] Chapter 12.36) by removal of protected trees under certain circumstances; or</p> <p>Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources.</p>	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR found all biological resources topics to either have no or less than significant impacts with implementation of applicable SCAs. The 1998 LUTE EIR found all potential biological resources impacts to be less than significant and therefore no mitigation measures or SCAs were required.

2. Project Analysis

Special-Status Species, Wildlife Corridors, Riparian and Sensitive Habitat, Wetlands, Tree and Creek Protection (Criteria 3.a and 3.b)

The project site is located within a developed area, the majority of which is covered with impervious surfaces. Wildlife and botanical resources present within the project site are adapted to disturbed, urban conditions and would not be adversely affected by implementation of the project. The only existing tree located at the project site is planned for removal. However, it has been determined that this tree has poor structure, is generally in fair condition, the roots and limbs are in poor condition, and has only moderate vigor.³¹ The project site also contains various landscaping, all of which is planned for removal.

The project would be required to implement SCA-BIO-1: Tree Removal during Bird Breeding Season (#30) and SCA-BIO-2: Tree Permit (#31).

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to special-status species, wildlife corridors, riparian and sensitive habitat, wetlands, and tree and creek protection than those identified in the Program EIRs. The Program EIRs did not identify any mitigation measures related to biological resources, and none would be needed for the implementation of the project. The project would be required to implement SCA-BIO-1: Tree Removal during Bird Breeding Season (#30) and SCA-BIO-2: Tree Permit (#31). Please see Attachment A for a full description of the applicable SCAs.

³¹ Tree Management Experts, 2018. Arborist Report for 2201 Valley Street, Oakland. February 27.³² Note: this analysis is based, in part, on previous cultural resource background research and analysis conducted for the Eastline Project (2100 Telegraph) EIR (Urban Planning Partners 2018).

D. Cultural Resources

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be “materially impaired.” The significance of an historical resource is “materially impaired” when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance <u>and</u> that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historic Places, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR included an assessment of known and unknown archaeological resources, paleontological resources, and human remains and found that impacts to these

topics would be less than significant with implementation of SCAs. The 2011 Renewal Plan EIR also analyzed historic resources and cumulative cultural resources impacts and found these to be significant and unavoidable, even with implementation of SCAs and Mitigation Measure CUL-1, which would require the avoidance, adaptive reuse, or appropriate relocation of historically significant structures.

The 1998 LUTE EIR, which analyzed paleontological resources and historical resources, found that impacts to these topics would be less than significant and would not require mitigation measures or SCAs. The 1998 LUTE EIR also found impacts related to archeological resources and demolition of historic resources would be less than significant implementation of mitigation measures that are functionally equivalent to current SCAs.

2. Project Analysis³²

Cultural resources are sites, buildings, structures, objects, and districts that may have traditional or cultural value for their historical significance. A historical resource is a resource listed in, or determined eligible for listing in, the California Register of Historical Resources, local register of historical resources, deemed significant under the criteria of Public Resources Code Section 5024.1, or formally recognized as a historical resource at the lead agency's discretion (CEQA Guidelines Section 21084.1).

To update the 2011 baseline conditions for cultural resources, LSA conducted a records search at the Northwest Information Center in Rohnert Park, California. The results of the background research indicated no change in baseline conditions for cultural resources in and adjacent to the project site.

Historical Resources (Criterion 4.a)

Project Site

The 0.89-acre project site contains two parcels currently developed with a surface parking lot and a single story, 616-square-foot gas station that was constructed in 1987. According to online parcel information provided by the City of Oakland, the gas station building has an Oakland Cultural Heritage Survey (OCHS) rating of F3, meaning it is a building of No Particular Interest ("F"), and is not in a historic district ("3"). Accordingly, neither the single-story gas station nor the parking lot is a historical resource under CEQA.

The project would demolish the gas station building and surface parking lot. Because neither the single-story gas station building, nor the parking lot are historical resources

³² Note: this analysis is based, in part, on previous cultural resource background research and analysis conducted for the Eastline Project (2100 Telegraph) EIR (Urban Planning Partners 2018).

under CEQA, their demolition would not result in direct impacts to significant historical resources.

Surrounding Historic Resources

The project site is adjacent to the Cathedral District (located west and across Telegraph Avenue from the project site) and the Uptown Commercial District (located south of and across 21st Street from the project site) and is also located within the vicinity of historic properties.

The Cathedral District is an Area of Primary Importance (API) that extends east to Telegraph Avenue between 21st and 22nd Streets (where the 1902 First Baptist Church provides the southern boundary) and along part of West Grand Avenue.³³ The Cathedral District includes buildings located in the Tuttle Homestead Tract and the Jones Tract. The District developed slowly and was sparsely populated by 1882. The Cathedral District extends east to Telegraph Avenue between 21st and 22nd Streets (where the 19052 First Baptist Church provides the eastern boundary) and along part of West Grand Avenue. The Cathedral District was named for the Cathedral of St. Francis de Sales (2100 Grove Street / Martin Luther King Jr. Way), which was the western “anchor” of the District but sustained heavy damage during the 1989 Loma Prieta Earthquake; it was demolished in 1993.

The Cathedral of St. Francis De Sales was built in 1893, quickly stimulating nearby residential development within the Cathedral District. The district contains 31 remaining contributors, mostly one and two-story buildings of Queen Anne, Stick, and Colonial architectural styles dating from 1872-1916. Following the 1906 earthquake, several homes in the District were altered with additional floors or internally partitioned and converted to multifamily housing. The district is notable for its representation of architectural styles of the era as adapted for narrow lots.

The Uptown Commercial District (Uptown District), located north of Downtown Oakland, is an API that developed as a 1920s-1930s Deco-era shopping and entertainment district.³⁴ The Uptown District contains 20 buildings on fully-developed parcels roughly bounded on the north by 21st Street, on the east by Broadway, on the south by 17th Street, and on the west by Telegraph Avenue. The core of the Uptown District is the intersection of 19th Street and Broadway, and includes the Fox and Paramount Theaters, among other similarly distinguished historic buildings.

³³ Cathedral District – Historic Resources Inventory, 1985a. On file at Oakland Cultural Heritage Survey, Oakland, California. Architecture + History, LLC, 2017. Historic Resources Evaluation Report for 1711-1739 Webster Street, Oakland, California, March 15.

³⁴ Uptown Shopping/Entertainment District – Historic Resources Inventory, 1985b. On file at Oakland Cultural Heritage Survey, Oakland, California.

The Uptown District contains 20 buildings, 13 of which are contributing elements that collectively represent a distinct phase of expansion of Oakland's central business district with luxury shopping anchored by the Capwell store. The Uptown District contains mostly multi-story commercial buildings of Classical Revival, Beaux Arts, and Art Deco commercial architectural styles from circa 1910 to 1932, including both brownstone and loft buildings with decorative Art Deco terra cotta ornament.

The buildings 45 years of age or older within a two-block radius of the project site vary in height from one to eight stories. There is a variety of building heights throughout the neighborhood, including the Paramount Theater, the I. Magnin building, the Breuner building, the old YMCA building, the former Emporium Capwell building (now Uptown Station), and 2101 Webster. The buildings within a two-block radius of the project site range in date of construction from circa 1899 to 1987 (see Table V.D-1). The general character-defining features of buildings in the project vicinity include boxy, rectangular massing; Art Deco, Romanesque Revival, Vernacular, Georgian Revival, and Modern architectural styles; masonry, terra cotta, and granite cladding with repetitive, uniform fenestration. Historic properties in the vicinity of the project site are also shown in Table V.D-1.

The project would include new construction located adjacent to and near individually significant historical resources and near, but not within, the boundaries of the historic districts. Given the location of the project site within this area of Central Oakland, the height of the project could cause a change to the integrity of historic setting of the area. However, integrity of setting, feeling, and association, have been diminished by decades of development and construction in the area, which has resulted in a variety of building types, styles, and land uses. The historical architectural resources in the project vicinity generally have retained their integrity of location.

Material impairment is defined as any project that may cause a "substantial change in the significance of a historical resource through physical demolition, destruction, relocation, or alteration of the resources or its immediate surroundings." The significance of a historical resource is materially impaired if a project demolishes or materially alters the character-defining features of the building that account for the building's inclusion on the California Registry of Historic Resources, local register of historic resources, or historical resources survey.

Although the project would impact integrity of setting and, to a lesser degree, integrity of feeling in the vicinity of the project area, the degree of impact would not result in a significant impact to the integrity of location, design, materials, or workmanship of the individual resources in the project vicinity. The historical resources adjacent to and near the project site would not be demolished, physically altered, or materially changed.

Table V.D-1 Summary of Buildings 45 Years of Age or Older within a Two-Block Radius

Description	Date(s) of Construction	CEQA Historical Resource?
517-523 22nd Street (2 story)	Circa 1899	Yes
524 22nd Street/2201 Telegraph Ave (First Baptist Church) (3 story)	1905	Yes
471 24th Street (2 story)	1907	Yes
531 24th Street (3 story)	1908-1909	Yes
547 24th Street (3 story)	1914	Yes
2025 Broadway (Paramount Theater) (3 story/approx. 125 feet)	1930	Yes
2150 Telegraph Avenue/495 22nd Street (former Kwik Way Restaurant [Space Burger]) (1 story)	1953	Yes
2121-2127 Broadway (2 story)	1975	No
2135-2147 Broadway (2 story)	1917	No
2148 Broadway (3 story)	1923	Yes
2201 Broadway/450-466 22nd Street (Breuner Company Building) (8 story)	1931	Yes
2211-2221 Broadway/407-417 West Grand Avenue (Hofbrau Building) (1 story)	1933	No
2001 Broadway (I. Magnin Building) (5 story)	1931	Yes
2315 Broadway (2 story)	1922	No
2345 Broadway (2-3 story)	1924-1925	No
2003-2009 Telegraph Ave (Santa Fe/Continental Building) (1 story)	1948	No
2022 Telegraph Avenue (1 story)	1948	No
2025-2035 Telegraph Avenue (1 story)	1968	No
2040 Telegraph Avenue (1 story)	1960	No
2100 Telegraph Avenue (2 story)	Circa 1970s	No
2101-2115 Telegraph Avenue (old YMCA Building) (6 story)	1910	Yes
2200 Telegraph (1 story)	1987	No
2225 Telegraph Avenue (1 story)	1963	No
2315 Telegraph Avenue (3 story)	1905-1906	No
2331 Telegraph Avenue (2 story)	1900-1901	No
2341 Valley Street (3 story)	1912-1913	Yes
2342 Telegraph (3 story)	1906	Yes
2380 Valley Street (3 story)	1926	Yes
37 Grand Avenue (2 story)	1926	Yes
55 Grand Avenue (1 story)	1922	Yes

Sources: Eastline Project (2100 Telegraph) EIR (Urban Planning Partners 2018); Planning and Zoning Map (online), City of Oakland; Oakland Cultural Heritage Survey 1985a, 1985b.

The project would alter the setting of the neighborhood but would represent a less than significant level of impact due to previous construction projects throughout Central Oakland. Recent construction projects in the area follow a pattern of recent architectural design using modern construction methods found elsewhere in Oakland and throughout California. The project would not introduce a type of design or method of construction not already found in Central Oakland.

In addition, any shadows cast by the project on nearby historical resources would not render those historical resources ineligible for inclusion in any federal, state or local registers. Although new shading as a result of the project would be cast on the stained-glass windows facing Telegraph Avenue and West Grand Avenue, this would only diminish direct lighting into the church during the morning hours from early March through early October. In addition, natural lighting would still come through the stained-glass windows located on 21st Street and adjacent to West Grand Avenue year-round and would not affect their historic and visual character. Lastly, no new net shadow would be cast on the church during the winter months. Therefore, new project shading would not affect the historic-defining character element of this resource (see *Section V.A, Aesthetics, Shadow, and Wind*, for further information about shadows and shading).

As part of the City's design review of the project, the City must find that the project will be consistent with Oakland Municipal Code 17.136.050(B), which requires the project's design to harmonize with the surrounding area and community character. Such findings, as made by the Design Review Committee, will further ensure that the project's design will not negatively affect nearby historic resources. As a result, the project would not significantly alter the historic character of any surrounding historic resources.

Summary

Because there are no historic resources within the project site, the project would not directly cause an adverse material change to a historical resource.

The project would not result in the removal of any character-defining features of the nearby historic districts/APIs and would not materially impair any of the adjacent historic properties within adjacent blocks. As a result, the project would not impair the significance of historical resources surrounding the site.

Archaeological and Paleontological Resources and Human Remains (Criteria 4.b, 4.c, and 4.d)

The project would entail excavation to a depth of approximately 18 feet below grade to build a partial basement. The project site appears to be underlain by a fill layer that extends approximately 12 feet in depth to the top of the tree parallel BART tunnels which

cross the western portion of the project site in a northwest to southeast orientation.³⁵ A significant portion of the ground underlying the project was previously disturbed to facilitate the construction of three underground BART tunnels constructed between 1968 and 1974.^{36,37} The three BART tunnel segments crossing through and underneath the project site were installed using a cut-and-cover technique utilizing artificial fill to backfill around the tunnels and restore the original elevation of the project site.^{38,39,40} The fill is generally a loose mixture of sand, clay, gravel and fragments of brick, glass, and plastic.⁴¹

Subsurface conditions have been previously and significantly compromised by the excavation and construction of BART tunnels directly below the project site. Although excavation and construction of BART tunnels significantly impacted the integrity of subsurface conditions in the tunnel alignments segments within the project site, the majority of the project site has remained relatively intact. Therefore, the potential to encounter archaeological and paleontological resources or human remains cannot be entirely discounted.

The City's SCAs related to archaeological and paleontological resources and human remains would apply to the project and reduce any potential impacts to a less-than-significant level. The project would be required to implement SCAs related to the discovery of archaeological resources, paleontological resources, and human remains during construction, as identified in Attachment A, including: SCA-CUL-1: Archaeological and Paleontological Resources – Discovery During Construction (#33) and SCA-CUL-2: Human Remains – Discovery During Construction (#35). Implementing these SCAs would protect cultural resources and reduce impacts because of the conditions that would be implemented and the monitoring that would be ensured to minimize potential adverse effects that could result from implementation of the project. Therefore, the project, together with the impacts of previous and future development in the vicinity, would have a less-than-significant impact to unknown archaeological or paleontological resources.

³⁵ PES Environmental, 2017. Phase II Environmental Site Assessment Report: 2200 Telegraph Avenue, Oakland, California. June 19.

³⁶ Sanborn Perris-Map Co., Ltd., 1951. *Berkeley, California: Volume 1: Sheet 54.*

³⁷ Sanborn Perris-Map Co., Ltd., 1970. *Berkeley, California: Volume 1: Sheet 54.*

³⁸ Rodgers, Richard. 2016. Preliminary Geotechnical Recommendations – 2100 Telegraph Avenue, Oakland, California, Langan Project No.: 750630601. Langan Treadwell Rollo, Oakland, California.

³⁹ Bay Area Rapid Transit (BART). 2016. A History of BART: The Project Begins. Available at: <http://www.bart.gov/about/history/history>, accessed December 29, 2016.

⁴⁰ McDonnell, Amanda and Tina M. Hariu. 2012. Subsurface Investigation Report and Case Closure Request. Former Chevron Service Station 93600, 2200 Telegraph Avenue, Oakland California. Fuel Leak Case No. RO00002435. Conestoga-Rovers & Associates, Emeryville, California.

⁴¹ Rodgers, Richard. 2016. Preliminary Geotechnical Recommendations – 2100 Telegraph Avenue, Oakland, California, Langan Project No.: 750630601. Langan Treadwell Rollo, Oakland, California.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to historical resources or archaeological and paleontological resources than those identified in the Program EIRs. In addition, the project would not demolish any built environment historical resources. Implementation of SCA-CUL-1: Archaeological and Paleontological Resources – Discovery During Construction (#33), and SCA-CUL-2: Human Remains – Discovery During Construction (#35), would ensure impacts to cultural resources would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

E. Geology, Soils, and Geohazards

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Expose people or structures to substantial risk of loss, injury, or death involving: <ul style="list-style-type: none"> • Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; • Strong seismic ground shaking; • Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or • Landslides; 	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property; result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR included an analysis of geology, soils, and geohazards and found that impacts to these topics would be less than significant with implementation of SCAs.

The 1998 LUTE EIR included an analysis of geology, soils, and geohazards and found that impacts to these topics would be less than significant and would not require mitigation measures or SCAs.

2. Project Analysis

Exposure to Risk of Loss, Injury, or Death Involving Fault Rupture, Seismic-Related Shaking, Liquefaction, Lateral Spreading, Subsidence, or Collapse, or Landslides (Criterion 5.a)

The project site is in a seismically active region, and the nearest active fault is the Hayward Fault, which is located approximately 3 miles northeast of the project site.⁴² The project site would experience very strong shaking in the event of a magnitude 6.8 earthquake on the Hayward Fault.⁴³

The project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone.⁴⁴ Therefore, the project would not result in significant impacts with respect to rupture of a known earthquake fault. The project site is also not within an earthquake-induced landslides hazard zone mapped by the California Geological Survey (CGS).⁴⁵ Based on the relatively flat topography of the project site and surrounding area, landslides would not pose a risk to the project. The majority of the project site (except for the southwest corner) is within a liquefaction hazard zone as designated on a Seismic Hazards Zone map prepared by CGS;⁴⁶ therefore, a geotechnical report must be prepared, and appropriate mitigation measures incorporated into the project design, as required by California Code of Regulations Title 14, Article 10.

An Initial Geotechnical Evaluation⁴⁷ was performed for the project using data previously collected from the site vicinity to evaluate the potential for earthquake-induced geologic hazards including liquefaction, lateral spreading, and cyclic densification (also referred to as seismic densification or differential compaction) in the vicinity of the project site. The findings of the Initial Geotechnical Evaluation are summarized below.

A significant amount of fill overlies the BART tunnels underlying the project site. The fill generally consists of a mixture of sand and clay with isolated gravel, brick, plastic and concrete fragments. The fill is generally loose to medium dense where sandy and medium stiff to stiff where clayey. Borings drilled near the southwest corner of the project site indicate the fill or ground surface improvements are generally underlain by interbedded deposits of medium stiff to hard clay with various amounts of sand and medium dense to very dense sand with variable clay content. However, a boring drilled further east on 22nd

⁴² California Geological Survey (CGS), 2010. Fault Activity Map of California (2010). <http://maps.conservation.ca.gov/cgs/fam/>, Accessed March 29, 2017.

⁴³ Association of Bay Area Governments (ABAG), 2016. Shaking Severity Map. <http://gis.abag.ca.gov/website/Hazards/?hlyr=haywardSouth&co=6001>, accessed December 2.

⁴⁴ California Department of Conservation, 1982. Special Studies Zones, Oakland West, January 1.

⁴⁵ California Geological Survey (CGS), 2003. State of California Seismic Hazard Zones, Oakland West Quadrangle Official Map, February 14.

⁴⁶ Ibid.

⁴⁷ Langan, 2018. Initial Geotechnical Evaluation, 2200 Telegraph Avenue and 2201 Valley Street, Oakland, California, February 28.

Street indicates there could be some softer clay deposits and loose sand layers along the southern edge of the project site that are associated with a former marsh and stream depression that was filled with marine clays. These marine/marsh deposits likely extend throughout most of the project site, except near the southwest corner, to depths of about 20 to 30 feet, and are generally weak and highly compressible.

Sand layers within marsh deposits and fill layers underlying the project site are likely susceptible to liquefaction during a regional major earthquake. Liquefaction-induced settlements within these layers could be on the order of one inch; however, this estimate would need to be confirmed during additional geotechnical investigation at the project site. The potentially liquefiable layers are relatively thin and discontinuous, and the potential for lateral spreading at the site is low because the site is relatively flat and has no downslope or free face; however, this would also be confirmed as part of a geotechnical investigation.⁴⁸

Borings near the project site (but not above the BART tunnels) indicate a few inches of cyclic densification could occur during a major earthquake; however, borings, which are located directly above the BART tunnels indicate that the fill above the tunnels, where sandy, is very loose and may experience cyclic densification-induced settlements of up to 6 inches during a major earthquake.

The Initial Geotechnical Evaluation concluded that the project is feasible from a geotechnical standpoint. The primary geotechnical considerations for the project are: 1) the BART tunnels below the site; 2) the presence of the undocumented fill above the BART tunnels; 3) the presence of the weak marsh/marine clay layer beneath the fill; 4) selection of an appropriate foundation system to support anticipated building loads for the proposed office buildings without excessive settlement; 5) not changing the state of stress of the BART tunnels. The Initial Geotechnical Evaluation recommended that a detailed geotechnical investigation should be performed prior to development of final plans.

The Initial Geotechnical Evaluation preliminarily concluded that a shallow foundation (either footings or mat foundation) on improved soil or a deep foundation system consisting of drilled piles or shafts would be required to support the proposed structure, and the soil improvement and piles would need to extend through the fill and/or soft marine/marsh layer and gain support in the underlying stiffer and less compressible soil layers (bearing layer); in addition they would need to extend through the BART zone of influence (ZOI). These foundation types are viable provided the ultimate stresses on the BART tunnels are not greater than existing stresses and no settlement of the BART tunnels is induced. The Initial Geotechnical Evaluation concluded that the most viable deep foundation systems for the project are non-displacement augured cast-in-place piles or

⁴⁸ Ibid.

large diameter drilled shafts, which are installed using equipment that does not create significant vibrations or excessive noise. Deep foundations in the BART ZOI would need to be constructed with a permanent void within the ZOI so that there is no load transfer from the new building to the BART tunnels. Typically, the permanent void is created in an annular space between the side of the foundation and an outer casing that separates the foundation from surrounding soil.⁴⁹

BART has developed guidelines for construction near their subway structures.⁵⁰ These guidelines indicate that structures over or adjacent to BART's subway structures must be designed and constructed to not impose any temporary or permanent adverse effects on the subway structures. These guidelines include the following:

- Maintaining a minimum clearance of 7.5 feet between adjacent structures and the subway structure, with a minimum cover of 8 feet wherever possible;
- Limits for vertical loading;
- Requirements for shoring within the ZOI;⁵¹
- Analysis of soil redistribution caused by temporary shoring or permanent foundation system;
- Monitoring of dewatering for changes in groundwater level (recharging is required if groundwater level is expected to drop more than 2 feet);
- Pre-drilling piles to 10 feet below the Line of Influence;⁵²
- Performing monitoring of vibration, movement and deformation of structures;

Pertinent design and construction documents must be submitted to BART for review and approval. In addition, the following must be submitted to BART as applicable:⁵³

- Geologic Hazards Evaluation and Geotechnical Investigation reports;
- Dewatering monitoring and recharging plans;
- Vibration monitoring plan and/or movement and deformation monitoring plans;
- Foundation plan showing the anticipated total foundation loads;
- Excavation plan for area within the ZOI showing excavation slope or shoring system; and,

⁴⁹ Ibid.

⁵⁰ BART, 2003. General Guidelines for Design and Construction Over or Adjacent to BART's Subway Structures, July 23.

⁵¹ The BART ZOI is defined as the area above a line from the critical point of the substructure at a slope of 1½ horizontal to 1 vertical (line sloping towards ground level).

⁵² The BART line of influence is defined as a line from the critical point of the substructure at a slope of 1½ horizontal to 1 vertical (line sloping towards ground level).

⁵³ Ibid.

- Procedures and control of soil compaction operation.

The project design team will submit the Initial Geotechnical Evaluation, schematic design drawings, and a detailed Basis of Design (BOD) to BART for review and preliminary approval. The BOD will not include detailed calculations but will outline the methods by which the design will address BART's requirements related to the tunnels. The purpose of the BOD is to provide an opportunity for BART to review the proposed design at a high-level at an early project stage. The project team will interact with BART to resolve concerns prior to commencing detailed calculations.⁵⁴

The project design team would also submit the following items to BART which would constitute the final report to BART, excluding any requests by BART for additional information based on their review:

- Construction Document drawing set, including the fully designed foundation and sub-grade structure;
- Project specifications;
- Final BOD, approved by BART;
- Final geotechnical report;
- Soil-structure interaction report;
- Permit-level structural calculations package;
- Calculations documenting temporary means and methods impacts on the BART tunnels; and
- Construction schedule, monitoring plan (for ground water, deflections, and vibrations), inspections, testing and reporting to BART, anticipated construction logistics plan (e.g. tower crane plan), pile installation methods, and the demolition plan.

In addition, the project sponsor is currently in discussions with the City of Oakland and BART engineering regarding a recommendation for using a Structural Design Review Team (SDRT) to conduct third-party review of structural and geotechnical design of project on behalf of City and BART. The third-party reviewer for the SDRT will be Shahriar Vahdani, Ph.D., P.E., of Applied GeoDynamics, Inc. The City of Oakland has approved the SRDT members and scope. Both are pending BART approval.

The project would be required to comply with the City's SCAs related to geology and soils prior to approval of construction-related permits. This includes SCA-GEO-1: Construction-Related Permit(s) (#37) which would require the project to comply with all standards, requirements and conditions contained in construction-related codes, including but not

⁵⁴ Magnusson Klemencic Associates, 2018. BART Approval Process, February 15.

limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction. The project would also be required to comply with SCA-GEO-2: Seismic Hazards Zone (Landslide/Liquefaction) (#40) which requires a site-specific geotechnical report to be prepared for the project by a registered geotechnical engineer and submitted to the City review and approval. The report must be consistent with CGS Special Publication 117⁵⁵ (as amended) and contain, at a minimum, a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction hazards. The recommendations contained in the approved report must be implemented during project design and construction.

Compliance with the SCAs and BART's requirements for construction over and adjacent to subway structures, as discussed above, would ensure that the project would be designed and constructed to account for and withstand seismic and geologic hazards which could have adverse effects on the project and the BART tunnels, thereby minimizing exposure of people and structures to substantial risk of loss, injury, or death during a large regional earthquake. Therefore, the project would not result in significant impacts with respect to ground shaking and seismic-related ground failure.

Expansive Soil, Erosion or Loss of Topsoil, Creating Substantial Risks to Life, Property, or Creeks/Waterways. (Criterion 5.b)

The Initial Geotechnical Evaluation⁵⁶ indicated that the project site is underlain by fill materials and native soils that are clayey and could have expansive soils. Therefore, expansive soils may present a potential geologic hazard for the project site. However, if the site-specific geotechnical report (as required by SCA-GEO-2) identifies expansive soils beneath the project site, implementation of the recommendations in the geotechnical report would ensure that potential hazards associated with expansive soils would be mitigated to a less-than-significant level through appropriate foundation design.

As discussed in detail in *Section V.H, Hydrology and Water Quality*, of this document, soil erosion could occur during project grading and construction. However, as described in Section V.H, compliance with the Construction General Permit, including the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), would reduce the potential impacts related to erosion of topsoil to a less-than-significant level.

⁵⁵ CGS, 2008. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California. Revised and Re-adopted September 11.

⁵⁶ Langan, 2018.Op cit.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to geology, soils, and geohazards than those identified in the Program EIRs. Implementation of SCA-GEO-1: Construction-Related Permit[s] (#37), and SCA-GEO-2: Seismic Hazards Zone (Landslide/Liquefaction) (#40), would ensure impacts to geology, soils, and geohazards would be less than significant. Additionally, BART requirements for construction over and adjacent to subway structures would apply to the project. The project would also be required to comply with existing regulations (the Construction General Permit) regarding erosion and sedimentation control. Please see Attachment A for a full description of the applicable SCAs.

F. Greenhouse Gas and Climate Change

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically: <ul style="list-style-type: none"> For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO₂e annually. For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO₂e annually AND more than 4.6 metric tons of CO₂e per service population annually. 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 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. 	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR found all impacts to greenhouse gas (GHG) emissions and climate change to be less than significant with implementation of applicable SCAs.

Climate change and GHG emissions were not expressly addressed in the 1998 LUTE EIR. Since information on climate change and greenhouse gas emissions was known, or could have been known, when the Program EIR was certified, it is not actually new information as specifically defined under CEQA. This is consistent with the First District Court of

Appeal's ruling in *Concerned Dublin Citizens v. City of Dublin*, 214 Cal.App.4th 1301 (2013).

The project under the 1998 LUTE EIR and the 2011 Renewal Plan EIR is required to evaluate impacts related to GHG emissions from construction and operation. The CEQA Guidelines by the Bay Area Air Quality Management District (BAAQMD) also require project-level GHG emissions to be quantified and disclosed for the purpose of providing more information to the lead agency and the public. The project would be subject to the City of Oakland's SCAs.

2. Project Analysis

As described under *Section V.B, Air Quality*, the City of Oakland has adopted thresholds of significance recommended by the BAAQMD⁵⁷ to evaluate potential impacts to the existing environment from GHG emissions. The BAAQMD's thresholds of significance for GHG emissions, which are defined in terms of carbon dioxide equivalents (CO₂e), were designed to ensure compliance with the State's Assembly Bill (AB) 32 GHG reduction goals. The GHG thresholds adopted by the City are supported by substantial evidence presented in the BAAQMD's Revised Draft Options and Justification Report.⁵⁸ This GHG analysis considers the maximum development potential for commercial development at the project site, which considers the maximum allowable FAR of 20.0, and thus a maximum of 902,740 gross square feet of development. This maximum development potential represents in a worst-case scenario, resulting in a more conservative analysis; thus, the project as proposed would likely result in slightly less-significant impacts than those discussed.

Greenhouse Gas Emissions Generation (Criterion 6.a)

The BAAQMD recommends using the most current version of the California Emissions Estimator Model (CalEEMod version 2016.3.2) to estimate construction and operation emissions for a land use project. CalEEMod uses widely accepted models for emission estimates combined with appropriate default data for a variety of land use projects that can be used if site-specific information is not available. The default data (e.g., emission factors) are supported by substantial evidence provided by regulatory agencies and a combination of statewide and regional surveys of existing land uses and resources. The primary input data used to estimate emissions associated with construction and operation of the project are conservatively based on the maximum project development scenario, as shown in Table V.F-1 below. Project emissions were estimated for 2022, which is the earliest expected year of operation. Since statewide vehicle emission standards are

⁵⁷ Bay Area Air Quality Management District (BAAQMD), 2010. Proposed Air Quality CEQA Thresholds of Significance, May 3.

⁵⁸ Bay Area Air Quality Management District (BAAQMD), 2009. Revised Draft Options and Justification Report; California Environmental Quality Act Thresholds of Significance, October.

Table V.F-1 Summary of CalEEMod Land Use Input Parameters

Land Use Type	CalEEMod Land Use Type	Units	Unit Amount
Existing Conditions			
Gasoline Station	Gasoline/Service Station	Pumps	10
Parking Lot	Parking Lot	Spaces	74
Analysis with Maximum Commercial Development Potential			
Office	General Office Building	Square Feet	739,360
Retail	Regional Shopping Center	Square Feet	26,740
Parking Garage	Enclosed Parking with Elevator	Spaces	350

required to improve over time in accordance with the Pavley (AB 1493) and Low-Emission Vehicle regulations (Title 13, California Code of Regulations, Section 1961.2), estimating emissions for the earliest year of operation provides the maximum expected annual emissions and is conservative. Additional project-specific information used to calculate GHG emissions in CalEEMod, including changes to default data, is summarized in Table V.F-2.

In accordance with the City of Oakland’s CEQA guidance for evaluating the GHG thresholds of significance, the construction CO₂e emissions were annualized over a period of 40 years and then added to the expected CO₂e emissions during operation. For this analysis, the service population was estimated as 2,285 persons for the maximum development potential.⁵⁹

Estimated CO₂e emissions from the existing land uses on the project site were subtracted from the estimated emissions during project operation. As shown in Table V.F-3, the total average annual CO₂e emissions and the total average annual CO₂e emissions per service population for the project are compared to the City’s GHG thresholds of significance. While the estimated net new 5,528 CO₂e emissions generated by the project would be above the City’s annual emissions threshold of 1,100 CO₂e, the 2.4 CO₂e generated by the project would be below the efficiency threshold (based on the service population) of 4.6 CO₂e for the maximum development potential. Therefore, construction and operation of the project would have a less-than-significant impact on global climate change.

⁵⁹ Service population was based on the Alameda County Transportation Commission Model used in the transportation analysis which assumes approximately 3 persons per 1,000 square-feet of office and 2.5 persons per 1,000 square-feet of retail.

Table V.F-2 Summary of Project-Specific Assumptions for CalEEMod

CalEEMod Input Category	Assumptions and Changes to Default Data
Construction Phase	CalEEMod applies default equipment usage and construction phase lengths based on the findings of a survey of construction projects less than 5 acres. The survey results are organized in CalEEMod based on lot acreage size. While the project is approximately 0.89 acres, the multi-story development projects included in the construction survey were approximately 3 acres. Therefore, the default equipment usage and construction phase lengths for a 3-acre lot were used to estimate the total hours of equipment operation (and associated emissions) required to construct the project. A drill rig (for pile driving) was added to the default construction equipment list. Construction was assumed to begin in 2020. Construction was assumed to begin in June 2020.
Material Movement	Approximately 9,500 cubic yards of soil is expected to be hauled off-site.
Demolition	The existing structures, which include an approximately 16,900-square-foot gas station lot and approximately 21,900-square-foot surface parking lot, would be demolished and hauled off-site.
Utility provider	The default CO ₂ intensity factor reported for 2008 was updated to the most recent CO ₂ intensity factor verified by a third party in 2013. ^a
Vehicle Trips	Daily trip rates for each type of land use were adjusted according to the project traffic analysis (see <i>Section V.M, Transportation and Circulation</i>). These trip estimates account for a 46.9 percent trip reduction based on the City of Oakland's Transportation Impact Review Guidelines for development in an urban environment within 0.5 mile of a BART station.
Fleet Mix	Because the project is not expected to generate new bus or mobile home trips, these vehicle types were removed from the fleet mix. Based on this assumption, the default ratio of vehicle types representing each land use were maintained and scaled up.
Fireplaces and Woodstoves	It was assumed that there would be no fireplaces or woodstoves.
Wastewater	Based on the design of the East Bay Municipal Utility District's Wastewater Treatment Plant, emissions estimated from wastewater treatment assumed a process with 100 percent aerobic biodegradation and 100 percent anaerobic digestion with cogeneration.
Water Use	In accordance with the City of Oakland's Green Building Ordinance, the project will implement mandatory measures from the statewide CALGreen Code to reduce indoor water use by approximately 20 percent.
Stationary Sources	In accordance with the California Building Code, an emergency generator would be required for the project. It was assumed that a 350-horsepower diesel generator would be used for non-emergency operation up to 50 hours per year (for routine testing and maintenance).

Notes: Default CalEEMod data used for all other parameters not described.

^a Pacific Gas and Electric Company, 2015. Greenhouse Gas Emission Factors: Guidance for PG&E Customers.

Source: See Attachment F.

Table V.F-3 Summary of Average GHG Emissions for the Maximum Development Scenario

Emissions Scenario	CO₂e (MT/Year)	CO₂e (MT/Year/Service Populations)
Existing Operations		
Total Emissions	620.9	--
Project Construction and Operations		
Construction ^a	22.9	0.01
Operation – Area	<0.1	<0.01
Operation – Energy	2,750.8	1.20
Operation – Mobile	3,006.2	1.32
Operation – Waste	6.7	<0.01
Operation – Water	359.9	0.16
Total Project Emissions	6,148.8	2.7
Net Project Emissions	5,528	2.4
Thresholds of Significance	1,100	4.6
Exceed Threshold?	Yes	No

Notes: MT = metric tons; SP = service population

^a In accordance with CEQA guidance from the City of Oakland, GHG emissions during construction are amortized over 40 years.

Source: See Attachment F.

As shown in Table V.F-2, the project would be required to operate an emergency generator for the elevator system, which must comply with the BAAQMD's permit requirements for a stationary source. It was assumed a 350-horsepower diesel generator would be used for non-emergency operation up to 50 hours per year (for routine testing and maintenance). As shown in Table V.F-4, the emissions of 7 CO₂e from the emergency diesel generator are below the City's threshold of 10,000 CO₂e for stationary sources. Therefore, routine testing and maintenance of the emergency generator would have a less-than-significant impact on global climate change.

Table V.F-4 Summary of Average GHG Emissions from Emergency Generator

Stationary Source	CO₂e (MT/year)
Emergency Generator	7
Threshold of Significance	10,000
Exceed Threshold?	No

Notes: MT = metric tons

Source: See Attachment F.

Based on the findings described above, the land-based and stationary source operations of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to GHG emissions that were not identified in the Program EIRs.

Consistency with GHG Emissions and Policies (Criteria 6.b)

The City's GHG quantitative thresholds were designed to ensure compliance with the State's AB 32 GHG reduction goals, as set forth in the California Air Resources Board's Climate Change Scoping Plan. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, or a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Since the GHG emissions from the project would be below the City's thresholds of significance, as described above in Criterion 6.a and in Tables V.F-3 and V.F-4, it can be assumed that the project is consistent, and not in fundamental conflict, with the AB 32 Scoping Plan.

In December 2012, the City adopted the Energy and Climate Action Plan (ECAP). The purpose of the ECAP is to identify and prioritize actions the City can take to reduce energy consumption and GHG emissions associated with the City. The ECAP outlines a 10-year plan including more than 150 actions that will enable the City to achieve a 36 percent reduction in GHG emissions below the 2005 level by 2020.⁶⁰ These measures support implementation of the green planning policies in the City of Oakland's General Plan by promoting energy efficiency and minimizing vehicle emissions. The project would also be required to comply with the City's Green Building Ordinance and SCAs (described further below), which support the goals, policies, and actions of the ECAP and General Plan. Therefore, the project is consistent with, and would not hinder, the GHG reduction goals set forth in the ECAP and the green planning policies of the General Plan.

The project is subject to the City's SCA-GHG-1: GHG Reduction Plan (#42), because the project involves a land use development that exceeds the threshold of significance for total CO₂e emissions and is considered a "Very Large Project" (commercial office building encompassing more than 250,000 square feet of floor space). SCA-GHG-1 requires the project to develop and submit a GHG Reduction Plan, with the goal of reducing GHG emissions at least 36 percent below the project's 2005 business-as-usual baseline GHG emissions. Other SCAs required by the City could also reduce GHG emissions. These include but are not limited to preparation and implementation of a Transportation and Parking Demand Management (TDM) Plan under SCA-TRANS-1: Transportation and Parking Demand Management (#80); compliance with green building requirements under SCA-UTIL-6: Green Building Requirements (#88); and Construction and Demolition Waste Reduction and Recycling Plan under SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#85).

⁶⁰ City of Oakland, 2012. Energy and Climate Action Plan, December 4.

Overall, the project would not conflict with applicable GHG plans, policies or regulations and this impact would be less than significant. Furthermore, the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to GHG emissions that were not identified in the Program EIRs.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related GHG emissions or consistency with GHG emissions policies than those identified in the Program EIRs. Implementation of SCA-GHG-1: GHG Reduction Plan (#42), and SCA-UTIL-6: Green Building Requirements (#88) (discussed further in *Section V.N, Utilities*), would ensure impacts to GHG and climate change would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

G. Hazards and Hazardous Materials

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
<p>a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;</p> <p>Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;</p> <p>Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors;</p> <p>Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the Cortese List) and, as a result, would create a significant hazard to the public or the environment;</p>	■	<input type="checkbox"/>	<input type="checkbox"/>
<p>b. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school;</p>	■	<input type="checkbox"/>	<input type="checkbox"/>
<p>c. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions; or</p> <p>Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR found all impacts to hazards and hazardous materials would be less than significant with implementation of applicable SCAs

The 1998 LUTE EIR found all impacts to hazardous materials handling, potential release of hazardous materials, hazardous materials related to construction and demolition, and contamination of soils or ground water, would be less than significant and would not require mitigation measures or SCAs. The 1998 LUTE EIR also found that impacts related to exposure of construction workers to hazardous materials would be less than significant with implementation of Mitigation Measure M.5, which requires the preparation and implementation of site-specific health and safety plans as recommended by the Occupational Safety and Health Administration. Mitigation Measure M.5 is functionally equivalent to current SCAs which reduce potential hazardous materials impacts to less-than-significant levels.

2. Project Analysis

Hazardous Materials Use, Storage and Disposal and Hazardous Building Materials (Criterion 7.a)

Operation of the project would not involve the use, storage, or disposal of significant quantities of hazardous materials. The proposed retail, gallery, and office uses would involve the use of only small quantities of commercially-available hazardous materials (e.g., paint and cleaning supplies).

Construction of the project would involve demolition of the existing structures on the western portion of the project site. A Phase I Environmental Site Assessment (ESA)⁶¹ prepared for the western portion of the project site, which is currently occupied with a gas station. The Phase I ESA indicates that the presence of asbestos-containing materials (ACMs) is not likely based on the age of construction of the structures on the project site (approximately 1985). However, the Occupational Safety and Health Administration does not permit an assumption that a material does not contain asbestos in buildings constructed after 1980. In addition, asbestos is still used, although at low concentrations, in various mastics and roofing materials. The Phase I ESA also indicated that no evidence of polychlorinated biphenyls (PCBs) containing equipment or lead paint was identified at the site. A previous Phase I ESA⁶² prepared for the eastern portion of the project site, which currently contains the Douglas parking lot, also indicated that no evidence of ACMs, PCB-containing equipment, or lead paint was identified.

⁶¹ PES Environmental, Inc., 2017. Phase I Environmental Site Assessment, 2200 Telegraph Avenue, Oakland, California, June 19.

⁶² PES Environmental, Inc., 2016. Phase I Environmental Site Assessment, 2201 Valley Street, Oakland, California, August 1.

Although the presence of hazardous building materials at the project site appears unlikely, there is the possibility of hazardous building materials being present. If present and not appropriately removed and disposed of, hazardous building materials could be released into the environment during demolition activities, which may adversely affect construction workers, the public, and/or the environment.

In accordance with the requirements of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#44), the project applicant must submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of ACMs, lead-based paint, PCBs, and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant must submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant must implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

As described in the 2011 Renewal Plan EIR, California Health and Safety Code Section 19827.5 allows local agencies to issue demolition or alteration permits only after the applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants including asbestos. The project would be required to comply with SCA-AIR-4: Asbestos in Structures (#27), which requires the project applicant to comply with all applicable laws and regulations regarding demolition and renovation of ACMs, including but not limited to California Code of Regulations Title 8; California Business and Professions Code Division 3; California Health and Safety Code Sections 25915-25919.7; and BAAQMD Regulation 11, Rule 2, as may be amended. Evidence of compliance must be submitted to the City upon request. The project would also be required to comply with SCA-HAZ-3: Hazardous Materials Related to Construction (#43), which requires implementation of lead-safe work practices and compliance with all local, regional, state, and federal requirements concerning lead.

In addition, consistent with the findings of the Program EIRs, the project would be required to properly handle and dispose of electrical equipment, lighting ballasts and other building materials that may be identified to contain PCBs in accordance with the Toxic Substances Control Act and other federal and State regulations.

Construction of the project would involve the use and transport of hazardous materials. These materials could include fuels, oils, paints and other chemicals used during construction activities. Handling and transportation of hazardous materials could result in accidental releases or spills and associated health risks to workers, the public, and environment. The project would be required to comply with SCA-HAZ-3, which requires that Best Management Practices (BMPs) are implemented by the contractor during

construction to minimize potential negative effects on groundwater, soils, and human health which could occur as a result of hazardous materials handling and storage.

Exposure to Hazardous Materials in the Subsurface, Cortese List (Criterion 7.a)

The project site has been the subject of environmental investigations and cleanup actions in association with releases from gasoline underground storage tanks (USTs) and piping,⁶³ and is therefore included on the list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5 (also known as the Cortese List). Based on the results of previous investigation and monitoring activities, the leaking UST case was granted closure by Alameda County Environmental Health Department (ACEH) in 2015.⁶⁴ The case closure included Site Management Requirements that limit the land use to an active fueling station and require ACEH to re-evaluate the case prior to redevelopment of the project site. The Site Management Requirements also require planning and implementation of appropriate health and safety procedures prior to and during excavation and construction activities in areas of residual contamination.⁶⁵

Based on the presence of residual contamination and anticipated redevelopment of the project site, additional site investigation activities were conducted in 2017 to further evaluate remaining contamination in soil and groundwater beneath the project site. Investigation activities found elevated concentrations of total petroleum hydrocarbons as gasoline (TPH-g) in groundwater which were indicative of potential floating product (i.e. separate phase petroleum product floating on the groundwater surface). Subsequently, remediation and observation wells were installed at the project site to conduct a multiphase extraction (MPE) pilot test.⁶⁶

The MPE pilot test was performed in September to October of 2017 and successfully removed petroleum hydrocarbons from the subsurface; however, groundwater monitoring performed following the MPE pilot test found higher concentrations of TPH-g and naphthalene in some wells compared to the pre-pilot test concentrations. Elevated lead concentrations were also detected in soil samples collected from depths of 2 to 6 feet at the project site.⁶⁷ Based on these findings, additional soil and groundwater sampling activities were performed at the project site between January and April 2018 to further

⁶³SOMA Environmental Engineering, Inc., 2017a. Workplan to Conduct Additional Soil and Groundwater Investigation at 2200 Telegraph Avenue, Oakland, California, October 3.

⁶⁴ ACEH, 2015. Case Closure for Fuel Leak Case No. RO0002435 and Geotracker Global ID T0600161613, Chevron # 9-3600, 2200 Telegraph Avenue, Oakland, CA 94612, January 27.

⁶⁵ Ibid.

⁶⁶ SOMA Environmental Engineering, Inc., 2017a. Op. cit.

⁶⁷ SOMA Environmental Engineering, Inc., 2017b. Workplan for Further Investigation, 2200 Telegraph Avenue, Oakland, California, December 7.

evaluate the extent of contamination, and MPE pilot testing continued from November 2017 through March 2018.⁶⁸

A workplan⁶⁹ was prepared for the project site in May 2018 which proposed sampling of soil at various depths to characterize soil to be excavated during construction of the proposed project. In June 2018, ACEH requested that this workplan be revised to include sampling of soil at additional depths to characterize soil that would remain in place following construction excavation activities.⁷⁰ In July 2018 ACEH approved the amended workplan, and indicated that a report documenting the findings should be submitted to ACEH by November 14, 2018. Documentation of the implementation of this work plan was not available as of the publication of this document.

A separate workplan⁷¹ for further investigation and rebound study at the project site was prepared in June 2018. Implementation of this workplan was documented in a report prepared in September 2018.⁷² The investigation found that the extent of lead contamination in soil is undefined and more investigation is required in order to completely define the extent, so that all impacted soil can be removed. A workplan to conduct further soil sampling for this purpose is proposed to be prepared. The investigation also found elevated concentrations of contaminants in groundwater and proposed installation of two additional extraction wells, operation of the MPE, and conducting two rebound sampling events to address the groundwater contamination. It is anticipated that all proposed work would be completed in three to four months following receipt of necessary approvals and permits.⁷³ In October 2018, ACEH approved the report and proposed actions, and requested that a report documenting the remedial progress be submitted to ACEH at a date to be determined.⁷⁴

⁶⁸ SOMA Environmental Engineering, Inc., 2018a. Draft Corrective Action Plan, 2200 Telegraph Avenue & 2201 Valley Street, Oakland, California, July 20.

⁶⁹ PES Environmental, Inc., 2018. Work Plan for Pre-Construction Soil Characterization Investigation, 2201 Valley Street, Oakland, California, May 29.

⁷⁰ ACEH, 2018a. Revised Work Plans Request; Site Cleanup Program Case No. RO0003258 and Geotracker Global ID T10000010738, A+A Gas & Mart, 2200 Telegraph Avenue, Oakland, CA 94612. June 14.

⁷¹ SOMA Environmental Engineering, Inc., 2018b, Revised Work Plan for Further Investigation and Rebound Study, 2200 Telegraph Avenue, Oakland, California, June 2018.

⁷² SOMA Environmental Engineering, Inc., 2018c, Focused Site Conceptual Model and Workplan for Well Installation and MPE Operation, 2200 Telegraph Avenue & 2201 Valley Street, Oakland, California, September 26.

⁷³ Ibid.

⁷⁴ ACEH, 2018b. Approval of Focused Site Conceptual Model and Workplan for Well Installation and MPE Operation; Site Cleanup Program Case No. RO0003258 and Geotracker Global ID T10000010738, A+A Gas & Mart, 2200 Telegraph Avenue & 2201 Valley Street, Oakland, CA 94612. October 4.

The environmental investigation and remediation activities at the project site are being overseen by ACEH. A Draft Corrective Action Plan (CAP)⁷⁵ was submitted to ACEH in July 2018. The CAP proposes corrective actions including:

- Removal of the existing USTs and associated infrastructure;
- Excavation of contaminated soils and confirmation sampling;
- Potential use of MPE to further reduce contamination if necessary following construction excavation and dewatering; and,
- Potential installation of vapor mitigation engineering controls (VMEC), including a potential soil vapor mitigation system beneath the proposed structure.

ACEH approved the CAP in July 2018 and indicated that implementation of the proposed excavation would minimize risk to on- and off-site receptors from exposure to residual subsurface contamination, and potential installation of VMEC would also mitigate risk to occupants of the proposed structure from impacted soil vapor. ACEH also required that several documents be reviewed and approved by ACEH prior to the start of construction activities, including:⁷⁶

- A project schedule;
- A Corrective Action Implementation Plan presenting detailed plans for the proposed soil excavation and construction dewatering;
- A Construction Soil and Groundwater Management Plan (SGMP); and,
- A SGMP Certification Form signed by all environmental professionals and contractors that would be involved with implementation of the corrective actions.

ACEH also indicated that prior to the start of foundation construction, utility installation, soil import and backfilling of excavations, the following documents must to be reviewed and approved by ACEH:⁷⁷

- A Soil Import Management Plan;
- VMEC design documents (if required);
- Planning approvals and building permit plans;
- Remedial soil excavation documentation; and,
- Soil import documentation (if required for backfill).

ACEH indicated that prior to building occupancy the following documents must be reviewed and approved by ACEH:⁷⁸

⁷⁵ SOMA Environmental Engineering, Inc., 2018a. Draft Corrective Action Plan, 2200 Telegraph Avenue & 2201 Valley Street, Oakland, California, July 20.

⁷⁶ ACEH, 2018. Conditional Approval of *Corrective Action Plan* for Site Cleanup Program Case No. RO0003258 and Geotracker Global ID T10000010738, A+A Gas & Mart, 2200 Telegraph Avenue and 2201 Valley Street, Oakland, California, 94612,

⁷⁷ Ibid.

- A Corrective Action Completion Report;
- A VMEC Report of Construction (if required), including a VMEC Operation & Maintenance (O&M) Plan and Trench Dam & Plug Maintenance Plan;
- A Vapor Mitigation System Post Construction Performance Monitoring Report (if required);
- Institutional Controls (e.g., a Land Use Covenant and Disclosure Covenants, and Conditions and Restrictions, if required);
- Financial Assurance (if required); and,
- A Long Term Site Management Plan (if required).

The project would be required to comply with SCA-HAZ-1, which would replace the requirement for implementation of 1998 LUTE EIR Mitigation Measure M.5, and requires the project applicant to implement recommendations for remedial actions and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, State, or federal regulatory agency. The project applicant would be required to submit a Health and Safety Plan for the review and approval by the City and implement the approved plan to protect project construction workers from risks associated with hazardous materials. The project applicant would be required to ensure that BMPs are implemented by the contractor during construction to minimize potential hazards related to contaminated soil and groundwater. Compliance with SCA-HAZ-1, would require the applicant to provide the City with documentation of ACEH approval of the CAP implementation related documents described above, and following implementation of the CAP, the applicant would be required to provide the City with documentation from ACEH approving the implementation of the CAP and related documents and approving occupancy of the site. The investigation and remediation of the project site under ACEH oversight would ensure that potential impacts from the project related to hazardous materials in the subsurface of the project site would be less-than-significant level.

Hazardous Materials within a ¼-Mile of a School (Criterion 7.b)

The Oakland School for the Arts at 530 18th Street is located approximately 1,200 feet southwest of the project site, and New Day Preschool at 460 West Grand Avenue is located approximately 100 feet north of the site. No other schools were identified within a ¼-mile of the project site.⁷⁹ The project would not involve the handling of acutely hazardous materials. Consistent with the findings of the 2011 Renewal Plan EIR, compliance with SCAs described above that address potential emissions of hazardous materials during

⁷⁸ Ibid.

⁷⁹ California Department of Education, 2018. California School Directory, <http://www.cde.ca.gov/re/sd/>, accessed March 5, 2018.

construction, would reduce potential impacts from the project related to hazardous emissions or the handling of hazardous materials, substances, or waste within ¼-mile of a school to a less-than-significant level.

Emergency Access Routes (Criterion 7.c)

During construction the project may require temporary closure of portions of adjacent streets which include West Grand Avenue, Telegraph Avenue, 22nd Street, and Valley Street. The project would also permanently restrict vehicle access to a section of Valley Street just north of 22nd Street. This alteration to the existing roadway network would not result in less than two emergency access routes for a roadway exceeding 600 feet in length. The Safety Element of the City of Oakland General Plan⁸⁰ indicates that the emergency evacuation routes in the vicinity of the project site include West Grand Avenue, Telegraph Avenue, and Broadway. While construction of the project could temporarily impact some of these nearby designated evacuation routes, the project would not permanently alter these designated evacuation routes, and consistent with the findings of the 2011 Renewal Plan EIR, compliance with traffic control requirements imposed by the City for the permitting of temporary closure of street areas would ensure that appropriate emergency access is maintained at all times during construction activities. Therefore, the project would have a less than significant impact related to emergency access and evacuation.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to hazardous materials, exposure, or emergency access routes than those identified in the Program EIRs. Implementation of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#44), SCA-HAZ-2: Hazardous Materials Related to Construction (#43), and SCA-AIR-4: Asbestos in Structures (#27), would ensure impacts to hazards and hazardous materials would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

⁸⁰ City of Oakland, 2004. General Plan, Safety Element, Figure 7.2. Amended 2012.
<http://www2.oaklandnet.com/government/o/PBN/OurServices/GeneralPlan/DOWD009020>, accessed November 18.

H. Hydrology and Water Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Violate any water quality standards or waste discharge requirements; Result in substantial erosion or siltation on or off site that would affect the quality of receiving waters; Create or contribute substantial runoff which would be an additional source of polluted runoff; Otherwise substantially degrade water quality; Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);	■	<input type="checkbox"/>	<input type="checkbox"/>
c. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems; Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on or off site.	■	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
d. Result in substantial flooding on or off site; Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows; Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or Expose people or structures to a substantial risk of loss, injury, or death involving flooding.	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR found all impacts related to hydrology and water quality to be less than significant with implementation of applicable SCAs.

The 1998 LUTE EIR found all hydrology and water quality impacts to be less than significant and therefore no mitigation measures or SCAs were required.

2. Project Analysis

Water Quality and Creek Protection (Criterion 8.a)

The project is located within a highly urbanized environment and there are no lakes, creeks or other surface waters in the immediate proximity. Lake Merritt, which is the nearest surface water body, is approximately 1,700 feet to the east and is separated from the project site by urban development. Stormwater runoff from the project site is conveyed to Lake Merritt via underground storm drains and culverts.

Construction of the project would involve demolition, grading, and construction, all of which could result in degradation of the quality of stormwater runoff, erosion and/or sedimentation, and adverse effects on downstream receiving waters. Additionally, potential discharge of contaminated dewatering effluent during construction could result in impacts to the environment from the discharge of sediment and chemical compounds to receiving waters. As discussed under *Section V.G, Hazards and Hazardous Materials*,

the project would be required to comply with SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#44) and SCA-HAZ-2: Hazardous Materials Related to Construction (#43) which require Best Management Practices (BMPs) to be implemented during construction to minimize potential negative effects on groundwater and receiving waters which could result from inappropriate handling of construction-related hazardous materials (e.g., fuels, oils, and paints) and contaminated soil and groundwater during construction.

Any groundwater dewatering would be subject to permits from East Bay Municipal Utility District (EBMUD) or the Regional Water Quality Control Board (RWQCB), depending if the discharge were to the sanitary or storm sewer system. If the water is not suitable for discharge to the storm drain (receiving water), dewatering effluent may be discharged to EBMUD's sanitary sewer system if special discharge criteria are met. These include, but are not limited to, application of treatment technologies or BMPs which would result in achieving compliance with the wastewater discharge limits. Discharges to EBMUD's facilities must occur under a Special Discharge Permit. In addition, per the EBMUD Wastewater Ordinance, "all dischargers, other than residential, whose wastewater requires special regulation or contains industrial wastes requiring source control shall secure a wastewater discharge permit" (Title IV, Section 1). EBMUD also operates its wastewater treatment facilities in accordance with Waste Discharge Requirements issued by the RWQCB, which require rigorous monitoring of effluent to ensure discharges do not adversely impact receiving water quality.

The project would require a grading permit⁸¹ and therefore would be required to comply with SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48), which requires preparation and implementation of an Erosion and Sedimentation Control Plan to manage stormwater runoff and minimize erosion and sedimentation through measures such as barriers and devices to trap, store and filter runoff. In addition, because the project would involve replacement of over 10,000 square feet of impervious surfaces, the project would be required to comply with Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP).⁸² Regulated projects are required to incorporate post-construction stormwater management measures to reduce stormwater pollution from all new and replaced impervious surfaces. The project is a Category "B" Special Project which is qualified for 100 percent Low Impact Development (LID) treatment reduction credits based on the density achieved by the project (expressed

⁸¹ The Grading Ordinance (Oakland Municipal Code Section 15.04.3.2240) requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation exceeding 50 cubic yards. During project construction, estimated soil excavation is 9,500 cubic yards. Therefore, the project sponsor would be required to apply for the grading permit.

⁸² San Francisco Bay Regional Water Quality Control Board (RWQCB), 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008, November 19.

as floor area ratio and dwelling units per acre). This means up to 100 percent of the amount of runoff for the project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems: (1) tree-box-type high flowrate biofilters and (2) vault-based high flowrate media filters. According to the Stormwater Supplement Form, the proposed non-LID treatment measures for the project are vault-based high flowrate media filters. The project is located in an area that is exempt from hydromodification⁸³ requirements of Provision C.3 of the MRP.⁸⁴

The project would be required to comply with SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects (#54), which requires compliance with provision C.3 of the MRP, and the preparation and implementation of a Post-Construction Stormwater Management Plan, which would include and identify stormwater control and treatment systems. Compliance with SCA-HYD-2 also requires the project applicant to enter into a maintenance agreement with the City, to ensure adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures.

Use of Groundwater (Criterion 8.b)

As indicated in an initial geotechnical evaluation⁸⁵ prepared for the project, groundwater was encountered at a depth of about 15 feet below ground surface in a soil boring near the project site. During foundation excavation and construction, dewatering could be necessary. However, dewatering during construction would be temporary and have only a localized and short-term effect on groundwater levels. Therefore, depletion of groundwater resources associated with construction-period dewatering would be less than significant. Operation of the project would not involve dewatering or the use of groundwater, as potable water is supplied to the project site by EBMUD.

Stormwater Drainage and Drainage Patterns (Criterion 8.c)

The project site is currently entirely covered with impervious surfaces, totaling approximately 38,600 square feet. No new impervious surface would be created after the implementation of the project. As described above, stormwater runoff from the project site is currently conveyed to Lake Merritt via underground storm drains and culverts. Stormwater would continue to be conveyed through these same storm drains and culverts as part of the project. Therefore, the project would not increase runoff that could exceed

⁸³ Hydromodification is defined as the modification of a stream's hydrograph, caused in general by increases in flows and durations that result when land is developed (e.g., made more impervious). The effects of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding.

⁸⁴ San Francisco Bay Regional Water Quality Control Board (RWQCB), 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008, November 19.

⁸⁵ Langan, 2018. Initial Geotechnical Evaluation for 2200 Telegraph Avenue and 2201 Valley Street, Oakland, California, February 28.

the capacity of existing storm water drainage systems and would not substantially alter the existing drainage pattern of the site or increase the risk of flooding, erosion or sedimentation.

Flooding and Substantial Risks from Flooding (Criterion 8.d)

Current floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) indicates that the project site is located outside the 100-year flood hazard area.⁸⁶ Therefore, development of the project would not be subject to significant impacts with respect to storm-related flooding.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related water quality and creek protection, use of groundwater, stormwater drainage, or flooding than those identified in the Program EIRs. Implementation of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#44), SCA-HAZ-2: Hazardous Materials Related to Construction (#43), SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48), and SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects (#54), would ensure impacts to hydrology and water quality would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

⁸⁶ Federal Emergency Management Agency, 2009. Flood Insurance Rate Map, Alameda County, California and Incorporated Areas, Panel 67 of 725, Map Number 06001C0067G, August 3.

I. Land Use, Plans, and Policies

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Physically divide an established community;	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in a fundamental conflict between adjacent or nearby land uses; or	■	<input type="checkbox"/>	<input type="checkbox"/>
c. Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR found all land use or policy impacts to be less than significant and therefore no mitigation measures or SCAs were required.

The 1998 LUTE EIR analyzed land use compatibility between existing uses and zoning and found that these impacts to be less than significant with implementation of a number of mitigation measures, which have largely been implemented into the City of Oakland Municipal Code (OMC) or as SCAs. The 1998 LUTE EIR also found a significant and unavoidable effect associated with policy inconsistencies with the Clean Air Plan (resulting from significant and unavoidable increases in criteria pollutants from increased traffic regionally). It identified mitigation measures, which largely align with current City of Oakland SCAs involving TDM and which apply to all projects within the City of Oakland.

2. Project Analysis

Division of Existing Community, Conflict with Land Uses, or Land Use Plans (Criteria 9.a through 9.c)

General Plan and Zoning Designation

The General Plan designates the project site as Central Business District (CBD) which is intended to encourage, support, and enhance the downtown area as a high-density, mixed-use urban center of regional importance, and a primary hub for business,

communications, office, government, high technology, retail, entertainment, and transportation. The project site is zoned as Central Business District Pedestrian Retail Commercial Zone (CBD-P). The intent of the CBD-P zone is to create, maintain, and enhance areas of the CBD for ground-level, pedestrian-oriented, active storefront uses, while upper story spaces are intended to be available for a wide range of office and residential activities.

The project is consistent with both the General Plan and Zoning as it would develop a high-rise mixed-use commercial tower that would help the City further establish the area as a high-density, mixed-use urban center of regional importance, and a primary hub for business.

Development Standards

The project site is within Height Area 6, which has no height limit. Despite this, towers above 250 feet in height require a Conditional Use Permit. In Height Area 6, the maximum building base height is 85 feet and the minimum is 45 feet. The project would result in the development of a 420-foot-high, 27-story building with a base height of 100 feet, placing the project within the development envelope of Height Area 6.

Furthermore, the maximum non-residential FAR is 20.0. Based on the maximum FAR, up to 772,100 square feet of non-residential uses are allowed on the 38,605 square foot project site. The project's non-residential FAR is 19.85 with a total of 766,385 square feet.⁸⁷

The project sponsor is also seeking several variances for maximum average floorplate above 85 feet (25,000 square feet allowed, 32,105 square feet requested), maximum floorplate diagonal (235 feet allowed, 240 to 293 feet requested), maximum lot coverage (75% allowed, 79 to 87% requested), and loading bays (6 required, 3 requested).

Division of Existing Communities

Consistent with the findings of the Program EIRs, the project would increase office and commercial space in the Downtown Oakland area, specifically within the CBD. Furthermore, the project's land uses are consistent and compatible with nearby existing and planned commercial, office, and residential land uses. Lastly, the project would be built on land that is already developed, and thus would not create a new physical barrier. For these reasons, the project would not create a division of existing communities and would be consistent with existing uses.

⁸⁷ Non-residential FAR calculations include square footage totals from office, commercial/arts/retail, and lobby uses.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to land use, plans, or policies than those identified in the Program EIRs. The Program EIRs did not identify any applicable mitigation measures related to land use, and no City SCAs have been identified for the implementation of the project.

J. Noise

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts. During the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard; Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise;	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise;	■	<input type="checkbox"/>	<input type="checkbox"/>
c. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3-dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);	■	<input type="checkbox"/>	<input type="checkbox"/>

	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
Would the project:			
d. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24); Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (see Figure 1); Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]); or	■	<input type="checkbox"/>	<input type="checkbox"/>
e. During either project construction or project operation expose persons to or generate ground-borne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR found that impacts to construction noise, special events operational noise, and traffic noise would be significant and unavoidable for the development of the Victory Court Ballpark, even with implementation of applicable SCAs. Noise and vibration impacts associated with other development in the project area would be less than significant with implementation of applicable SCAs.

The 1998 LUTE EIR found that noise impacts associated with traffic noise increase, changes in map designations, mixed use development, noise compatibility within residential areas, live-work noise compatibility, and transportation improvements would be less than significant with implementation of Mitigation Measures L.3, L.4, L.5, and L.7. These mitigation measures are functionally equivalent to the latest City SCAs (#68 and

#69). In addition, the 1998 LUTE EIR found that impacts to short-term increases in noise and vibration due to construction for the Downtown Showcase District and Coliseum Showcase District would be significant and unavoidable, even with implementation of Mitigation L.8 and L.11.

2. Project Analysis

Ambient Noise Environment

The primary sources of noise in the vicinity of the project site are traffic on Interstate (I-) 980 and along major roadways near the project site. Sources of noise from major roadways include: (1) traffic on West Grand Avenue, which runs east to west adjacent to the northern border of the project site; and (2) traffic on Telegraph Avenue, which runs north to south adjacent to the western border of the project site. Based on the roadway noise contours for 2025 in the City of Oakland General Plan, traffic noise levels range from 65 to 70 dBA⁸⁸ Ldn⁸⁹ at the project site and vicinity.^{90,91}

The local noise environment has been further characterized by noise measurements collected in 2016 for another project (Eastline Project), which is located across 22nd Street to the south of the project site at 2100 Telegraph Avenue. Due to the proximity of the two projects, the results of the noise measurements in the Eastline Project noise study can also be used to characterize ambient noise levels in the project area. Three short-term (15-minute) noise levels were measured for the Eastline Project. Traffic noise levels were measured at 60.8 dBA Leq⁹² and were taken 43 feet away from the nearest traffic lane on Telegraph Avenue; 62.3 dBA Leq at 35 feet from the nearest traffic lane on 22nd Street; and 67.4 dBA Leq at 26 feet from the nearest traffic lane on Broadway. These site-specific noise measurement results are approximately consistent with the General Plan noise estimates of 65 to 70 dBA discussed above.

⁸⁸ dBA is an A-weighted sound level. The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.

⁸⁹ Ldn = day/night noise level. The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured during the night between 10:00 PM and 7:00 AM.

⁹⁰ City of Oakland, 2005. City of Oakland General Plan, Noise Element, March.

⁹¹ The City of Oakland General Plan notes that existing traffic noise levels are not expected to change substantially over the 20-year period between 2005 and 2025 (i.e., changes in noise levels would not be distinguishable) given the minor changes expected to occur in traffic levels. Therefore, existing noise levels at the project site and its vicinity are assumed to be the same as what is indicated in the 2025 noise contours.

⁹² Leq = equivalent noise level. The average A-weighted noise level during the measurement period. For this CEQA evaluation, Leq refers to a one-hour period unless otherwise stated.

On-site measurements to characterize the existing ground-borne noise environment were performed on February 22, 2018 by Charles M. Salter Associates Inc. (Salter Associates).⁹³ While a BART train is passing by in the underground tunnel, it is estimated that: (1) ground-borne noise levels at the ground-floor spaces of the proposed building could exceed Noise Criteria (NC) 40⁹⁴; (2) ground-borne noise at the fifth level would be reduced to approximately NC 30 and quieter; and (3) ground-borne noise at the tenth level would be reduced to below NC 25.

Ambient Vibration Environment

On-site measurements to characterize perceptible ground-borne vibration were performed on February 22, 2018 by Salter Associates.⁹⁵ Measurements were taken directly on the asphalt pavement at five locations on the project site. The maximum vibration levels were found to be associated with BART train movements and quantified to be approximately 53 to 70 VdB⁹⁶ while a BART train was passing by in the underground tunnel.

Temporary Construction Noise Impact (Criterion 10.a)

The project would result in a significant impact if it were to generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction or City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise.

An acoustical analysis was performed to evaluate potential noise impacts during construction of the project. The findings of the acoustical analysis for project construction are summarized below.

Construction is expected to occur over a period of approximately 29 months and would temporarily increase noise levels in the vicinity of the project site. Construction noise levels would vary from day to day, depending on the quantity and condition of the equipment being used, the types and duration of activity being performed, the distance between the noise source and the receptor, and the presence or absence of barriers, if any, between the noise source and receptor. Demolition, excavation/grading, and foundation work are typically the noisiest phases of construction and would occur during the first phases of construction. The later phases of construction include activities that are typically quieter and that occur within the building under construction, thereby providing

⁹³ Charles M. Salter Associates Inc., 2018a. 2201 Valley Office Building, Oakland BART Train Structure-Borne Noise Comments, March 2.

⁹⁴ Noise Criteria is typically used to quantify background noise in a room. Because the ground-borne noise measured in NC during the vibration monitoring survey was mostly low frequencies, the NC levels were on average equal to the dBA levels.

⁹⁵ Charles M. Salter Associates Inc., 2018b. 2201 Valley Office Building, Oakland BART Train 'Feelable' Vibration Study, March 2.

⁹⁶ VdB = unit describing the amplitude of vibration on a logarithmic scale.

a barrier for noise between the construction activity and any nearby receptors. Although pile driving is proposed as part of this project, piles would be installed using a rotary drilling rig, which would generate noise levels similar to an auger drill rig. Pile installation is expected to occur over a period of approximately 3 months.

The nearest receptors to the project site are a preschool (approximately 100 feet to the north across West Grand Avenue); a mixed-use building with retail and restaurants on the first floor and condominiums on the upper floors (approximately 115 feet to the northeast across West Grand Avenue); an office building (approximately 45 feet to the east across Valley Street); a garage building and a closed restaurant (approximately 50 feet and 100 feet to the south across 22nd Street); a church and a gas station (approximately 100 feet to the west across Telegraph Avenue); and a Buddhist temple (approximately 235 feet to the northwest across West Grand Avenue). The gas station to the west of the project site is not considered susceptible to noise or vibration disturbance because it does not contain noise-sensitive activities or uses.

Table V.J-1 shows typical noise levels associated with various types of construction equipment that may be used during each phase of construction.⁹⁷ To evaluate potential construction noise associated with the proposed project, this assessment quantified the noise that would result from the simultaneous operation of the two noisiest pieces of equipment expected to be used in each construction phase (this is a standard, yet conservative, analytical approach used in acoustical analysis to estimate maximum construction noise associated with proposed projects). The addition of the two noisiest pieces of equipment are presented in Table V.J-1 to characterize the noise impact from the project at the nearest receptors.

As indicated in Table V.J-1, the two noisiest pieces of equipment could generate exterior noise levels of up to 90 dBA at the office building to the east, which is well above the applicable 70-dBA construction noise standard, and up to 83 dBA at the preschool receptor to the north and the church to the west, which is well above the applicable 65-dBA construction noise standard. The estimated construction-period noise levels would also exceed applicable noise standards at numerous other nearby receptors (Table V.J-1).

However, it should be noted that the types and locations of heavy construction equipment would vary over time across the project site. Therefore, the duration and frequency that heavy construction equipment would operate at the closest possible proximity to an adjacent receptor would be limited on any given day and would not be expected to last

⁹⁷ The types of construction equipment are based on the California Emissions Estimator Model (CalEEMod) equipment list.

Table V.J-1 Reference and Calculated Noise Levels from Construction Equipment (dBA)

Phase	Equipment	Reference Noise Levels at 50 Feet	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 45 Feet (office building to the east)	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 100 Feet (church to the west and preschool to the north)	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 115 Feet (retail, restaurants, and condominium to the northeast)	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 235 Feet (Buddhist temple to the northwest)
Demolition	Concrete/Industrial Saws	76				
	Excavators	85	89	82	81	75
	Rubber Tired Dozers	85				
Site Preparation	Rubber Tired Dozers	85				
	Tractors/Loaders/Backhoes	80	87	80	79	73
Grading	Excavators	85				
	Graders	85				
	Bore/Drill Rigs	85	89	82	81	75
	Rubber Tired Dozers	85				
	Tractors/Loaders/Backhoes	80				
Building Construction	Cranes	88				
	Generator Sets	81				
	Tractors/Loaders/Backhoes	80	90	83	82	76
	Welders	73				

Phase	Equipment	Reference Noise Levels at 50 Feet	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 45 Feet (office building to the east)	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 100 Feet (church to the west and preschool to the north)	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 115 Feet (retail, restaurants, and condominium to the northeast)	Calculated Noise Levels for the Two Noisiest Pieces of Equipment at 235 Feet (Buddhist temple to the northwest)
Paving	Cement and Mortar Mixers	85	89	82	81	75
	Pavers	85				
	Rollers	74				
	Tractors/Loaders/Backhoes	80				
Architectural Coating	Air Compressors	81	82	75	74	68

Notes: The types of construction equipment are based on the California Emissions Estimator Model (CalEEMod) equipment list. The following propagation adjustment was applied to estimate noise levels at 45 feet, 100 feet, 115 feet, and 235 feet, assuming:
 $dBA2 = dBA1 + 10 \times \log_{10} (D1/D2)^2$

Where:

dBA1 reference noise level at a specified distance (in this case, 50 feet).

dBA2 is the calculated noise level.

D1 is the reference distance (in this case, 50 feet).

D2 is the perpendicular distance from receiver.

Sources: Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No.0123. September. U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook (for construction equipment noise levels shown above).

more than a few hours at a time. In addition, once the external structure has been erected, the noisiest phases of construction would be complete and noise from heavy construction equipment inside of the structure would be blocked and attenuated by the structure itself.

Although construction-generated noise could temporarily result in the exposure of the nearby receptors to noise levels in excess of the Noise Ordinance Standards, consistent with the findings of the 2011 Renewal Plan EIR, implementation of the City of Oakland's SCAs would reduce the impacts of construction period noise to a less-than-significant level, as described below.

- SCA-NOI-1: Construction Days/Hours (#62) provides limits on the days and hours of construction to avoid generating noise when it would be most objectionable to neighboring residences. These limitations, which specify that construction activities would be limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday (among other restrictions), would prevent the disturbance of sleep for a majority of residents located close to the project site. This SCA also requires any extension of these work hours to be approved in advance by the City and requires property owners and occupants within 300 feet of the project site to be notified of such an extension.
- SCA-NOI-2: Construction Noise (#63) requires all construction projects to implement basic noise reduction measures during construction.
- SCA-NOI-3: Extreme Construction Noise (#64) requires that the project applicant prepare and implement a Construction Noise Management Plan that contains site-specific noise attenuation measures to reduce construction impacts associated with any anticipated extreme noise generating activities (i.e., activities generating noise levels greater than 90 dBA).

Because the project could generate extreme construction noise (noise levels of greater than 90 dBA), SCA-NOI-3 would apply. The types of measures that would effectively reduce construction noise that may be included in the Construction Noise Management Plan include the following:

- **Temporary noise barriers placed between the proposed construction activities and nearby receptors.** The noise barriers may be constructed from plywood and installed on top of a portable concrete K-Rail system to be able to move and/or adjust the wall location during construction activities. Other noise reduction materials that result in an equivalent or greater noise reduction than plywood, may also be used. Noise control blankets may be utilized on the building structure or hung on scaffolding as the building is erected to reduce noise emission from the site. The use of noise control blankets will particularly be targeted to cover the levels of the building that have line of sight with the windows of nearby receptors. The composition, location, height, and width of the barriers during different phases of construction will be determined by a qualified acoustical consultant and incorporated

into the Construction Noise Management Plan for the project. A properly designed noise barrier can reduce noise as much as 15 dBA if it breaks the "line of sight" between the noise source and the receiver.

- **Best available noise control techniques.** Best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) will be used for project equipment and trucks during construction wherever feasible. For example, exhaust mufflers on pneumatic tools can lower noise levels by up to about 10 dBA and external jackets can lower noise levels by up to about 5 dBA.
- **Equipment positioning.** Construction equipment will be positioned as far away from noise-sensitive receptors as possible. For every doubling of the distance between a given receptor and construction equipment for hard surfaces, noise will be reduced by approximately 6 dBA.
- **Monitoring.** Monitoring the effectiveness of noise attenuation measures by taking noise measurements will ensure that the best practices being implemented are effective at reducing noise levels to acceptable levels.
- **Notification and communication.** Notification and open lines of communication with potentially affected nearby receptors is an effective way to manage construction-period noise. When property owners and occupants feel informed about a project's daily schedule and duration they are typically better able to accept potential noise-related inconvenience. All receptors located within 300 feet of the construction activities will be notified and informed about the project prior to commencing extreme noise generating activities.

The combination of the temporary noise barrier, if breaking the "line of sight" between the noise source and the receiver, and exhaust mufflers could provide noise reduction of up to 25 dBA. This would reduce the exterior noise levels at all nearby receptors below the applicable construction noise standards. Also, it should be noted that a typical building façade with windows closed provides a noise level reduction of approximately 25 dBA.⁹⁸ Therefore, interior noise levels at nearby receptors would be substantially lower than exterior noise levels, and would be reduced to below applicable interior noise standards (i.e. 45 dBA Ldn for residential units and 50 dBA Leq for non-residential spaces), in accordance with the 2016 California Building Standards Code.

- SCA-NOI-4: Construction Noise Complaints (#66) provides additional measures to respond to and track construction noise complaints during construction to allow sources of potentially disruptive construction noise to be quickly controlled or eliminated.

⁹⁸ Charles M. Salter Associates Inc., 1998. Acoustics – Architecture, Engineering, the Environment.

The proximity of the project site to sensitive receptors, and the types of construction equipment that would be used as part of the project, are similar to other projects in Uptown Oakland and other urban areas. Because the project site and its vicinity are part of an established, urbanized area, periodic exposure to construction-related noise and vibration are part of the existing conditions. Therefore, with the implementation of the required SCAs, the impact of construction generated noise on nearby receptors would be reduced to a less-than-significant level.

Operational Noise (Criterion 10.b)

The project would result in a significant impact if it were to generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise.

The primary noise generated by the long-term operation of the project would occur as a result of the use of HVAC systems and delivery trucks for the commercial space. Noise generated from HVAC systems would be subject to SCA-NOI-5: Operational Noise (#69) that requires all operational noise to comply with the performance standards of Chapter 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. Noise from delivery trucks would not be a substantial new source of noise in the project area because the existing land uses at the project site include noise generated by similar delivery trucks and loading activities at nearby commercial land uses. For these reasons, the potential for noise generated by the HVAC systems and delivery trucks to violate the City of Oakland operational noise standards during the operational period of the project would be less than significant.

Permanent Increase in Ambient Traffic Noise and Cumulative Noise Impact (Criterion 10.c)

The project would generate a significant increase in ambient traffic noise if it results in a 5-dBA permanent increase in noise levels in the project vicinity. A project is considered to contribute to a significant cumulative impact if (1) the cumulative increase results in a 5-dBA permanent increase in ambient noise levels in the project vicinity, and (2) 3 dBA of the cumulative increase is attributable to the project.

The a.m. and p.m. peak hour traffic volumes were assessed for the maximum development potential scenario, which represents the highest project-generated traffic volumes and thus represents a worst-case scenario, resulting in a more conservative analysis.

The assessment of a.m. and p.m. peak hour traffic volumes at seven intersections near the project site indicates that the highest project-generated traffic volumes would occur along 22nd Street between Valley Street and Broadway (192 vehicles per hour during the

a.m. peak hour).⁹⁹ According to the noise level measurements collected for the Eastline Project, ambient traffic noise levels are approximately 62.3 dBA Leq near this roadway segment. The ambient traffic noise levels, project-generated traffic volumes, and predicted project-generated traffic noise for this roadway segment are summarized in Table V.J-2 below. As a result of the project, traffic noise is expected to increase by approximately 1 dBA Leq along 22nd Street between Valley Street and Broadway during the a.m. peak hour. As this is the roadway segment with the greatest predicted increase in traffic volumes, traffic noise increases along other roadway segments would be less than 1 dBA Leq. This is below the 5-dBA significance threshold for project-generated traffic noise. As a result, the implementation of the project would not result in a significant increase in traffic noise along local area roadways under the maximum development potential scenario.

Table V.J-2 Ambient Traffic Noise, Project-Generated Traffic Volumes and Predicted Project-Generated Traffic Noise

Roadway Segment	Existing Ambient Traffic Noise Levels (dBA Leq)	Project Generated Traffic Volume (vehicle/hour)	Predicted Project Generated Traffic Noise (dBA Leq at 50 feet)	Existing + Project Traffic Noise Levels (dBA Leq)	Estimated Increase in Noise (dBA Leq)
22 nd Street between Valley Street and Broadway (a.m. peak hour)	62.3	192	56.4	63.3	1.0

Note: Traffic noise model outputs are included in Appendix I.

Source: BASELINE Environmental Consulting, 2018. FHWA TNM Version2.5 model was used for these results.

Under cumulative conditions, which considers traffic generated by past, present, and probable future projects, in addition to the project, the assessment of a.m. and p.m. peak hour traffic volumes at seven intersections near the project site indicates that the highest traffic volume increase would occur along West Grand Avenue east of Northgate Avenue (totaling 1,315 vehicles per hour during a.m. peak hour).¹⁰⁰ Existing noise levels from this roadway segment are estimated based on the roadway noise contours for 2025 in the City of Oakland General Plan, which indicates that traffic noise levels range from 65 to 70 dBA Ldn at the project site and vicinity. During the peak traffic hour under normal traffic conditions, Ldn is within plus or minus 2 dBA of the Leq.¹⁰¹ Therefore, the existing peak hour traffic noise levels are approximately 63-72 dBA Leq at the project site and vicinity. This analysis conservatively assumes existing ambient noise levels are 63 dBA Leq near West Grand Avenue east of Northgate Avenue. The existing and cumulative traffic volumes

⁹⁹ Fehr & Peers, 2018. 2201 Valley Street – Preliminary Transportation Assessment. February 27.

¹⁰⁰ Fehr & Peers, 2018. 2201 Valley Street – Preliminary Transportation Assessment. February 27.

¹⁰¹ California Department of Transportation (Caltrans), 1998. Technical Noise Supplement-A Technical Supplement to the Traffic Noise Analysis Protocol.

and predicted traffic noise for this roadway segment are summarized in Table V.J-3 below. Cumulative traffic noise is expected to increase by about 4.6 dBA Leq along West Grand Avenue east of Northgate Avenue during the a.m. peak hour. This is below the 5-dBA significance threshold for cumulative impacts to occur. As this is the roadway segment with the greatest predicted increase in traffic volume, traffic noise increase along other roadway segments would be less than 4.6 dBA Leq. As a result, the cumulative traffic noise increase along local area roadways is less than significant.

Table V.J-3 Existing and Cumulative Traffic Volumes and Predicted Traffic Noise

Roadway Segment	Existing Ambient Traffic Noise Levels (dBA Leq)	Cumulative Traffic Volume Increase (vehicle/hour)	Predicted Cumulative Traffic Noise Levels (dBA Leq at 50 feet)	Existing + Cumulative Traffic Noise Levels (dBA Leq)	Difference between Existing+ Cumulative Traffic Noise Levels and Existing Ambient Traffic Noise Levels (dBA Leq)
West Grand Avenue east of Northgate Avenue (a.m. peak hour)	63	1315	65.8	67.6	4.6

Note: Traffic noise model outputs are included in Attachment G.

Source: BASELINE Environmental Consulting, 2018. FHWA TNM Version2.5 model was used for these results.

Noise Exposure during Construction and Operation (Criterion 10.d)

The project would result in a significant impact to construction workers if it were to generate noise in excess of California Division of Occupational Safety and Health (Cal/OSHA) standards. Construction workers could be exposed to excessive noise from the heavy equipment used during construction of the project as shown in Table V.J-1. However, noise exposure of construction workers is regulated by Cal/OSHA. Title 8, Subchapter 7, Group 15, Article 105 of the California Code of Regulations (Control of Noise Exposure) sets noise exposure limits for workers and requires employers who have workers that may be exposed to noise levels above these limits to establish a hearing conservation program, make hearing protectors available, and keep records of employee noise exposure measurements. The construction contractor for the project would be subject to these regulations, and compliance with these Cal/OSHA regulations will ensure that the potential of construction workers to be exposed to excessive noise is less than significant.

The project would result in a significant impact to occupants of the proposed building if it were to expose those occupants to noise levels greater than stated in the Oakland General

Plan. Occupants of the project would be subject to ambient outdoor noise levels that range from 65 to 70 dBA Ldn.¹⁰² This noise environment is regarded as “conditionally acceptable” community noise exposure levels for offices. The City of Oakland General Plan indicates that development within a “conditionally acceptable” environment requires an analysis of noise-reduction requirements, and if necessary, noise-mitigation features in the design.

The implementation of SCA-NOI-6: Exposure to Community Noise (#67) would require compliance with the City of Oakland General Plan. This SCA requires noise reduction measures to be incorporated into building design based upon the recommendations of a qualified acoustical engineer. The noise reduction measures would be required to reduce interior noise levels to 50 dBA Leq for non-residential spaces (e.g., retail spaces and offices), in accordance with the 2016 California Building Standards Code. Sound Transmission Class (STC) rated windows, exterior doors (such as balcony doors), and exterior walls are commonly used to control interior noise from exterior sources. A STC rating roughly equals the decibel reduction in noise volume that a wall, window, or door can provide.¹⁰³ Given that the ambient noise environment at the project site currently ranges from about 65 to 70 dBA Ldn, the use of sound-rated windows, exterior doors, and exterior walls with STC ratings ranging from about STC 15 to about STC 20 would need to be used in order to reduce interior noise levels from exterior sources to about 50 dBA Leq for non-residential spaces, thereby satisfying the interior noise standards for non-residential spaces. The noise control measures are required to be submitted to the City of Oakland for review and approval prior to the issuance of a construction-related permit. Compliance with SCA-NOI-6 would therefore reduce the potential of future occupants of the project to be exposed to excessive or incompatible noise levels to a less-than-significant level.

Construction and Operational Vibration (Criterion 10.e)

The project would result in a significant impact if it were to expose persons to or generate ground-borne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).

Construction activities can result in varying degrees of ground vibration, depending on the equipment, activity, and relative proximity to sensitive receptors. Vibration levels for construction equipment that could be used at the project site are presented in Table V.J-4 to characterize the vibration impact from the project at the nearest office building to the east of the project site at 45 feet, the preschool to the north and the church to the west of the project site at 100 feet, the residential condominiums and retail and restaurants to the northeast of the project site at 115 feet, and the Buddhist temple to the northwest of the

¹⁰² City of Oakland, 2005. Op. cit.

¹⁰³ U.S. Department of Housing and Urban Development, undated. Noise Notebook, Chapter 4 Supplement, Sound Transmission Class Guidance.

project site at 235 feet. These vibration levels were calculated based on the reference levels at 25 feet, which are also shown in Table V.J-4.

Table V.J-4 Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet (in/sec)	PPV at 45 Feet (in/sec)	PPV at 100 Feet (in/sec)	PPV at 115 Feet (in/sec)	PPV at 235 Feet (in/sec)	RMS at 25 Feet (VdB)	RMS at 45 Feet (VdB)	RMS at 100 Feet (VdB)	RMS at 115 Feet (VdB)	RMS at 235 Feet (VdB)
Vibratory roller	0.210	0.087	0.026	0.021	0.007	94	86	76	74	65
Large bulldozer	0.089	0.037	0.011	0.009	0.003	87	79	69	67	58
Caisson drilling	0.089	0.037	0.011	0.009	0.003	87	79	69	67	58
Loaded truck	0.076	0.031	0.010	0.008	0.003	86	78	68	66	57
Small bulldozer	0.003	0.001	<0.001	<0.001	<0.001	58	50	40	38	29

Notes:

PPV Peak Particle Velocity. The maximum instantaneous peak of a vibration signal.

RMS Root Mean Square. The average of the squared amplitude of a vibration signal.

Based on vibration levels at 25 feet, the following propagation adjustment was applied to estimate PPV vibration levels at 45 feet, 100 feet, 115 feet, and 235 feet assuming:

$$PPV2 = PPV1 \times (D1/D2)^{1.5}$$

Where: PPV1 is the reference vibration level at a specified distance.

PPV2 is the calculated vibration level.

D1 is the reference distance (in this case 25 feet).

D2 is the distance from the equipment to the receiver.

Based on vibration levels at 25 feet, the following propagation adjustment was applied to estimate RMS vibration levels at 45 feet, 100 feet, 115 feet, and 235 feet assuming:

$$RMS2 = RMS1 - 30 \log_{10} (D2/D1)$$

Where: RMS1 is the reference vibration level at a specified distance.

RMS2 is the calculated vibration level.

D1 is the reference distance (in this case 25 feet).

D2 is the distance from the equipment to the receiver.

Source: FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No.0123. September. (for PPV and RMS vibration levels at 25 feet).

Although the table provides one vibration level for each piece of equipment, it should be noted that there is considerable variation in reported ground vibration levels from construction activities, primarily due to variation in soil characteristics.

Tables V.J-5 and V.J-6 summarize the vibration criteria to prevent disturbance of occupants and to prevent damage to structures, respectively. In this analysis, the “Occasional Events” disturbance criterion is applied because the same kind of vibration events are not expected to occur over 70 times per day due to the variance in the types and locations of construction equipment used during construction. The 75-RMS VdB Occasional Events threshold for residences and buildings where people normally sleep is applied to the residential condominiums, while the 78-RMS VdB Occasional Events threshold for institutional land uses with primarily daytime use is applied to the preschool, the church, and the Buddhist temple. The nearest office building to the east of

the project site, and the retail and restaurants to the northeast of the project site do not classify any of the special land use category in Table V.J-5 and therefore, vibration disturbance impact is not discussed at these locations.¹⁰⁴

Table V.J-5 Vibration Criteria to Prevent Disturbance – RMS (Vdb)

Land Use Category	Frequent Events^a	Occasional Events^b	Infrequent Events^c
Buildings where vibration would interfere with interior operations	65	65	65
Residences and buildings where people normally sleep	72	75	80
Institutional land uses with primarily daytime use	75	78	83

^a More than 70 vibration events of the same kind per day or vibration generated by a long freight train.

^b Between 30 and 70 vibration events of the same kind per day.

^c Fewer than 30 vibration events of the same kind per day.

Source: FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No.0123. September.

Table V.J-6 Vibration Criteria to Prevent Damage to Structures

Building Category	PPV (in/sec)	RMS (VdB)
Reinforced-concrete, steel or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No.0123. September.

As indicated in Table V.J-4, construction-generated vibration levels could be as high as 74 RMS VdB at the condominium located 115 feet northeast of the project site. This vibration level would not exceed the 75-RMS VdB Occasional Events thresholds for residences and buildings where people normally sleep (see Table V.J-5). Construction-generated vibration levels could be as high as 76 RMS VdB at the preschool and the church located 100 feet to the north and west of the project site, and as high as 65 RMS VdB at the Buddhist temple located 235 feet northwest of the project site. These vibration levels would not exceed the 78-RMS VdB Occasional Events thresholds for institutional land uses with primarily daytime use (see Table V.J-5).

¹⁰⁴ According to the FTA Transit Noise and Vibration Impact Assessment Manual, the “Institutional land uses” category includes institutions and offices that have vibration-sensitive equipment and have the potential for activity interference such as schools, churches, doctors’ offices. However, commercial or industrial locations including office buildings are not included in this category unless there is vibration-sensitive activity or equipment within the building. According to the most current information by the time this analysis was written, the nearest office building to the east of the project site, and the retail and restaurants to the northeast of the project site do not contain vibration-sensitive activity or equipment.

In addition, consistent with the findings of the 2011 Renewal Plan EIR, implementation of SCA-NOI-1, SCA-NOI-2, SCA-NOI-3, and SCA-NOI-4 would further reduce vibration impact at these receptors.

SCA-NOI-1 limits construction activities to the hours between 7:00 a.m. and 7:00 p.m. Monday through Friday, and limits construction with the potential to generate extreme noise (which is often correlated with the potential to generate high vibration) to the hours between 8:00 a.m. and 4:00 p.m. This would limit any impacts to normal daytime hours, thereby reducing the likelihood of disturbing residents (i.e., through interfering with sleep).

SCA-NOI-2 limits the use of impact tools, which would limit the use of equipment that could generate high vibration levels. SCA-NOI-2 also requires stationary construction equipment to be located as far as possible from adjacent properties. As discussed above, because ground-borne vibration attenuates rapidly with distance from the source of the vibration, SCA-NOI-2 would limit vibration impacts from any stationary construction equipment.

SCA-NOI-3 requires the development of a Construction Noise Management Plan and implementation of site-specific measures to reduce extreme noise. Because high noise-generating construction activities often generate high vibration levels, compliance with SCA-NOI-3 would reduce vibration impacts from potential high vibration-generating construction activities.

SCA-NOI-4 requires the implementation of measures to respond to and track complaints, which would allow sources of potentially disruptive construction vibration to be quickly controlled or eliminated. For these reasons, the potential for construction-generated vibration to disturb the occupants of nearby buildings is less than significant.

Construction of the project would not damage nearby buildings. As indicated in Table V.J-4, construction-generated vibration levels may reach 0.087 PPV in/sec at 45 feet, 0.026 PPV in/sec at 100 feet, 0.021 PPV in/sec at 115 feet, and 0.007 PPV in/sec at 235 feet. The nearest office building at 45 feet is considered a historic resource. However, because these vibration levels are below even the 0.12 PPV in/sec threshold (see Table V.J-6) to cause damage to buildings extremely susceptible to vibration damage, the potential for construction-generated vibration to cause damage to nearby buildings is less than significant.

The long-term operation of the project would not involve the use of any equipment or process that would generate perceptible levels of ground-borne vibration or perceptible levels of ground-borne noise. However, because an underground BART tunnel runs beneath the project site, users of the site could be exposed to perceptible ground-borne vibration and ground-borne noise when BART trains are passing under the project site.

As described above, Salter Associates performed site measurements to characterize the existing perceptible ground-borne vibration and existing ground-borne noise environment. Based on the results of the noise measurements, Salter Associates then analyzed potential impacts and reduction measures associated with perceptible ground-borne vibration and ground-borne noise.¹⁰⁵

With regard to perceptible ground-borne vibration, the BART Train ‘Feelable’ Vibration Study (Vibration Study)¹⁰⁶ indicates that BART vibration of 53 to 70 VdB would not exceed the 75-VdB disturbance threshold and below commonly accepted thresholds of human perception of 72 to 78 VdB even at the ground floor areas. Therefore, no reductions measures would be necessary.

With regard to ground-borne noise, the BART Train Structure-Borne Noise Comments (Ground-borne Noise Study)¹⁰⁷ identified the following potentially significant ground-borne noises: (1) Train noise levels at the ground-floor spaces of the building could exceed the 40-VdB disturbance threshold (see Table V.J-7) and would be clearly audible in a quiet gallery space; (2) The noisiest train events could generate ground-borne noise of 30 VdB. Although this would not exceed the 40-VdB disturbance threshold (see Table V.J-7), it could be audible in quiet enclosed rooms (e.g. audio-conferencing rooms) from the lowest office floor at the fifth level to the ninth level; and (3) train noise might only be barely detectable in particularly quiet spaces from the tenth level and above.

Table V.J-7 Ground-borne Noise Criteria to Prevent Disturbance – RMS (dBA)

Land Use Category	Frequent Events^a	Occasional Events^b	Infrequent Events^c
Residences and buildings where people normally sleep	35	38	43
Institutional land uses with primarily daytime use	40	43	48

^a More than 70 vibration events of the same kind per day or vibration generated by a long freight train.

^b Between 30 and 70 vibration events of the same kind per day.

^c Fewer than 30 vibration events of the same kind per day.

The Ground-borne Noise Study recommended the following ground-borne noise reduction measures: (1) disclose the potential for ground-borne noise to be audible at the ground floor and consider this factor in the selection of ground-floor retail tenants; (2) implement floating floor and isolated wall and ceiling construction; (3) study very quiet or otherwise acoustically sensitive spaces (e.g. sound-recording rooms) on a case-by-case basis during the tenant-improvement phases to determine if sound isolation measures are desired to further reduce train noise intrusion.

¹⁰⁵ Brandon Northart of Urban Planning Partners, 2018. Personal Communication with Monika Krupa of Baseline. March 13.

¹⁰⁶ Charles M. Salter Associates Inc., 2018b. Op. cit.

¹⁰⁷ Charles M. Salter Associates Inc., 2018a. Op. cit.

SCA-NOI-7: Exposure to Vibration (#70), requires the implementation of a Vibration Reduction Plan that contains vibration reduction measures to reduce ground-borne vibration to acceptable levels per FTA standards (see Tables V.J-5 and V.J-7). With the implementation of SCA-NOI-7, as well as the ground-borne noise control measures recommended in the Ground-borne Noise Study, the potentially significant ground-borne noise impacts would be reduced to a less-than-significant level.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to construction noise and vibration, ambient noise, or noise exposure than those identified in the Program EIRs. Implementation of SCA-NOI-1: Construction Days/Hours (#62), SCA-NOI-2: Construction Noise (#63), SCA-NOI-3: Extreme Construction Noise (#64), SCA-NOI-4: Construction Noise Complaints (#66), SCA-NOI-5: Operational Noise (#68), SCA-NOI-6: Exposure to Community Noise (#67), and SCA-NOI-7: Exposure to Vibration (#69) would ensure impacts to noise would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

K. Population and Housing

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR found all potential population and housing impacts to be less than significant and therefore no mitigation measures or SCAs were required.

The 1998 LUTE EIR, found that impacts to housing capacity and potential housing displacement would be less than significant and would not require mitigation measures or SCAs. The 1998 LUTE EIR also found impacts related to increased employment growth potential would be reduced to a less than significant level with implementation of Mitigation Measure C.2, which would require the city to maintain a database of underutilized parcels and to assist developers in locating sites for their developments.

2. Project Analysis***Population Growth and Displacement of Housing and People (Criteria 11.a and 11.b)***

The project would demolish the existing gas station on the project site and replace the existing surface parking lot to construct a new office building with approximately 739,360

square feet of office space and approximately 16,805 square feet of commercial/art/retail space. As a result, the project would result in an increase of approximately 2,232 jobs.¹⁰⁸

According to the Association of Bay Area Governments (ABAG), the number of jobs in the city of Oakland is expected to increase by approximately 65,000 (approximately 31 percent) between 2015 and 2040.¹⁰⁹ Job growth in the project would fall well within the range of projected and planned growth for Oakland. As an employment center city, Oakland is both a place of employment and a place of work. The total number of jobs is similar to the number of employed residents of the city. A large share of jobs in Oakland is held by Oakland residents, about 40 percent currently, according to recent data from the U. S. Census.¹¹⁰ Another large share of jobs is held by residents of nearby cities and other parts of Eastern San Francisco Bay Area. That pattern is anticipated to apply to future job growth for the project and is not anticipated to directly or indirectly result in unanticipated population growth.

Development under the project would not displace existing housing units or residents on the project site as there is no existing residential development currently located at the site.

While the 1998 LUTE EIR identified Mitigation Measure C.2, which requires the City of Oakland to maintain a database of underutilized parcels and to assist developers in locating sites for their developments, this mitigation measure has already been implemented by the City, and thus is not applicable to the project.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to population growth or displacement than those identified in the Program EIRs. The Program EIRs did not identify any mitigation measures related to population and housing. In addition, implementation of SCA-PH-1: Jobs/Housing Impact Fee (#71), which would require the applicant to comply with the City's Jobs/Housing Impact Fee Ordinance (Chapter 15.68 of the Oakland Municipal Code). Please see Attachment A for a full description of this SCA.

¹⁰⁸ The population associated with the proposed project is based on the 2014 Alameda County Transportation Commission Model used in the transportation analysis which assumes approximately 3 persons per 1,000 square-feet of office and 2.5 persons per 1,000 square-feet of retail.

¹⁰⁹ Association of Bay Area Governments (ABAG), 2013. Projections 2013.

¹¹⁰ U.S. Census Bureau, 2016. 2012-2016 American Community Survey 5-Year Estimates.

L. Public Services, Parks, and Recreation Facilities

	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
Would the project:			
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: <ul style="list-style-type: none"> • Fire protection; • Police protection; • Schools; or • Other public facilities. 	■	□	□
b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.	■	□	□

1. Program EIR Findings

The 2011 Renewal Plan EIR found all public services and recreational facilities impacts to be less than significant and therefore no mitigation measures or SCAs were required.

The 1998 LUTE EIR found impacts to related to the demand for parks would be less than significant and would not require mitigation measures or SCAs. The 1998 LUTE EIR also found that impacts related to police services, fire protection and emergency medical services, schools, and libraries would be reduced to a less than significant level with implementation of mitigation measures are functionally equivalent to the latest SCAs or have already been implemented within the Oakland General Plan to reduce all potential effects to a less-than-significant. Lastly, the 1998 LUTE EIR found that impacts related to

firefighting and evacuation constraints would be significant and unavoidable even with implementation of a mitigation measure which would require the construction of a fire station in the North Oakland Hills to address the increase in population and housing.

2. Project Analysis

Public Services and Parks and Recreation (Criteria 12.a and 12.b)

The project would create demands on public services; however, the development would occur in an urban area already served by public services and recreation facilities. The Program EIRs have determined that the anticipated growth would not impose a burden on existing public services in the Downtown Oakland area and would not create a significant impact.

The project could cause a minor increase in demand for police and fire protection services; however, adherence to the following General Plan policies N.12.1, N.12.2, N.12.5, F1-1, and F1-2 would mitigate potential impacts to a less-than-significant level.

The project is within the development envelope analyzed in the Program EIRs and the increase in demand for public services is consistent with that analysis, finding no significant impact. Compliance with standard City practices would further ensure the project would have no significant impacts related to services. In addition, adherence to the General Plan's OSCAR Element policies 3.1, 3.3, and 3.10 would ensure that any potential impacts to recreational facilities are not significant.

The project could indirectly increase student enrollment at local schools as some future employees of the project's office space might move to Oakland as result of the project. Pursuant to Senate Bill (SB) 50, the project sponsor would be required to pay school impact fees, which are established to offset potential impacts from new development on school facilities.¹¹¹ This would be deemed full and complete mitigation.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any significant impacts related to public services, parks, and recreation. Further, based on an examination of the Program EIRs, implementation of the project would not substantially increase the severity of impacts previously identified in the Program EIRs, nor would it result in new significant impacts related to public services, parks, and recreation that were not previously identified in the Program EIRs. In addition, implementation of SCA-PS-1: Capital Improvements Impact Fee (#74), which would require the applicant to comply with

¹¹¹ School Facility Source, 2016. School Facility Fee Justification Report for Residential, Commercial, and Industrial Development Projects for the Oakland Unified School District. Available at: <http://www.ousd.org/cms/lib07/CA01001176/Centricity/Domain/95/Oakland%20USD%20-%20Level%20I%202016%20FINAL%2006-06-2016.pdf>, accessed July 20, 2018.

the City's Capital Improvements Impact Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code). Please see Attachment A for a full description of this SCA.

M. Transportation and Circulation

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle and pedestrian facilities (except for automobile level of service or other measures of vehicle delay); or	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause substantial additional vehicle miles traveled (per capita, per service population, or other appropriate efficiency measure); or	■	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas or by adding new roadways to the network.	■	<input type="checkbox"/>	<input type="checkbox"/>

1. Program EIR Findings

The 2011 Renewal Plan EIR identified significant and unavoidable impacts to roadway segment operations as well as railroad crossing safety, after implementation of identified mitigation measures; however, none of these impacts are in the area affected by the project.

The 1998 LUTE EIR identified significant and unavoidable impacts related to level of service (LOS) on several roadway segments. However, on April 14, 2017, the City of Oakland's Planning Commission adopted new Transportation Impact Review Guidelines for Land Use Projects consistent with Senate Bill 743 (Steinberg 2013), implementing a shift from traffic delay metrics to thresholds based on a Vehicle Miles Traveled standard (VMT) in the City of Oakland. The revised thresholds remove automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA and replace them with the VMT standard.

2. Project Analysis

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 consistent with SB 743. The revised thresholds remove automobile

delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The recommendation aligns with draft proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis with adopted plans and policies related to transportation, which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. This section describes the potential impacts of the project on the transportation system. It includes a discussion of significant topics under CEQA and uses VMT standards, instead of LOS standards, as discussed above.

Conflicts with Plans, Ordinances, or Policies Relating to Safety, or Performance of the Circulation System (Criterion 13.a)

The project would replace an existing gas station and surface parking lot with a 27-floor building. The building would consist of up to 739,460 square feet of office space, and 26,740 square feet of ground-floor retail space. The project proposes a parking garage with up to 350 parking spaces on the first four floors. The primary garage driveway would be on 22nd Street, about 110 feet east of Telegraph Avenue. An additional exit-only right-turn-only driveway may possibly be provided on West Grand Avenue if necessary due to queuing backups that may occur depending on the driveway location of the adjacent Eastline project at 2100 Telegraph.

The LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets policies, states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking. The project would encourage the use of non-automobile transportation modes by providing office and commercial uses with minimal parking in a dense, walkable urban environment that is well-served by local and regional transit.

The project is consistent with both the City's Pedestrian Master Plan and Bicycle Master Plan as it would not make major modifications to existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities. Further, because the proposed project would generate more than 50 peak-hour trips SCA-TRANS-1: Transportation and Parking Demand Management (#80) is required.

The project is consistent with applicable plans, ordinances, and policies, and would not cause a significant impact by conflicting with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay). For these reasons, the project would not conflict with adopted plans, ordinances, or policies resulting in a less-than-significant impact; no mitigation measures are required.

Cause Substantial Additional Vehicle Miles Traveled (Criterion 13.b)

VMT Screening

Many factors affect travel behavior, including: density of development, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development that is located at a great distance from other land uses, in areas with poor access to non-single occupancy vehicle travel modes generate more automobile travel compared to development located in urban areas, where a higher density of development, a mix of land uses, and non-single occupancy vehicle travel options are available.

Given these travel behavior factors, most of Oakland has lower VMT per capita and VMT per worker ratios than the nine-county San Francisco Bay Area region due to its density and relation to factors mentioned above. Further, within the City of Oakland, some neighborhoods may have lower VMT ratios than others.

The Governor’s Office of Planning and Research established that the VMT metric is the appropriate metric to fully account for the many factors that affect travel behavior and specifically indicated that VMT should be reported on a per worker basis for office uses, an approach which is also reflected in the City of Oakland’s Transportation Impact Review Guidelines¹¹² (TIRG).

Vehicle Miles Traveled Estimate

Estimating VMT requires the use of travel demand models to fully capture the length of trips on the transportation network, as well as the changes in VMT behavior that may occur with the introduction of the project. This analysis presents use of the Metropolitan Transportation Commission (MTC) Travel Model to fully analyze the VMT impacts of the project. The following describes how the MTC Travel Model estimates VMT.

Neighborhoods within Oakland are expressed geographically in transportation analysis zones, or TAZs, for transportation analysis and other planning purposes. The MTC Travel Model includes 116 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 neighborhoods.

The MTC Travel Model assigns all predicted trips within, across, or to/from the nine-county San Francisco Bay Area region onto the roadway network and the transit system by

¹¹² City of Oakland, 2017. Transportation impact Review Guidelines. April 14. Available at: <http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak063581.pdf>, accessed: May 16, 2018.

mode (single-driver and carpool vehicle, biking, walking, or transit) and transit carrier (bus, rail) for a particular scenario.

The travel behavior from the MTC Travel Model is modeled based on the following inputs:

- Socioeconomic data developed by the Association of Bay Area Governments (ABAG)
- Population data created using the 2000 US Census and modified using the open source PopSyn software
- Zonal accessibility measurements for destinations of interest
- Travel characteristics and vehicle ownership rates derived from the 2000 Bay Area Travel Survey (BATS)
- Observed vehicle counts and transit boardings

The daily VMT output from the MTC Travel Model for office uses comes from a tour-based analysis. The tour-based analysis examines the entire chain of trips over the course of a day, not just trips to and from the project site. In this way, all of the VMT for an individual employee is included, not just trips into and out of the person's home or workplace. For example, a resident leaves their apartment in the morning, stops for coffee, and then goes to the office. In the afternoon the resident heads out to lunch, and then returns to the office, with a stop at the drycleaners on the way. After work, the resident goes to the gym and then joins friends at a restaurant for dinner before returning home. All the stops and trips within the resident's day form their "tour". The tour-based approach would add up the total number of miles driven over the course of her tour and assign it as her daily VMT.

Based on the MTC Travel Model, the regional average daily VMT per worker is 21.8 under 2020 conditions and 20.3 under 2040 conditions.

Thresholds of Significance for VMT

According to the City of Oakland TIRG, the following are 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 worker minus 15-percent.
- For local-serving retail projects,¹¹³ a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15-percent.

¹¹³ The City of Oakland's TIRG defines local-serving retail as retail not exceeding 80,000 square-feet of contiguous retail space.

Because the project is an office project, the criteria used in this analysis is if VMT exceeds the existing regional VMT per worker minus 15-percent.

VMT Screening Criteria

VMT impacts would be less than significant for a project if any of the following identified screening criteria are met:

1. Small Projects: The project generates fewer than 100 vehicle trips per day.
2. Low-VMT Areas: The project meets map-based screening criteria by being located in an area that exhibits below threshold VMT, or 15 percent or more below the regional average.
3. Near Transit Stations: The project is located in a Transit Priority Area or within a ½-mile of a Major Transit Corridor or Stop¹¹⁴ and satisfies the following:
 - Has a Floor Area Ratio (FAR) of more than 0.75.
 - Does not include more parking for use by residents, customers, or employees of the project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site).
 - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Transportation Commission).

VMT Impact Analysis

The project would include 739,360 square-feet of office and 26,740 square-feet of retail space. Per direction provided in the TIRG, the regional VMT per worker minus 15-percent is used as the threshold of significance for the retail and office uses. These components of the project satisfy the Low-VMT Area (#2) and Near Transit Stations (#3) criteria as described below.

Criterion #1: Small Projects

The project would generate more than 100 trips per day and therefore does not meet Criterion #1.

¹¹⁴ Major transit stop is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

Criterion #2: Low-VMT Area

Table V.M-1 below describes the 2020 and 2040 VMT for TAZ 970 in the MTC Model, the TAZ in which the project is located, as well as the applicable VMT thresholds of 15-percent below the regional average. As shown in Table V.M-1, the 2020 and 2040 average daily VMT (12.5 and 10.6, respectively) per worker in the project TAZ are below the regional average minus 15-percent (18.5 and 17.3 respectively). Therefore, the project would not exceed VMT more than 15-percent below the regional averages and would be less-than-significant for the office and retail components of the project.

Table V.M-1 Daily Vehicle Miles Traveled Summary

Land Use	Bay Area				TAZ 970	
	2020		2040		2020	2040
	Regional Average	Regional Average Minus 15%	Regional Average	Regional Average Minus 15%		
Office and Retail (VMT per worker) ^a	21.8	18.5	20.3	17.3	12.5	10.6

^a MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVMTPerWorker, accessed January 2018. Source: Fehr & Peers, 2018.

Criterion #3: Near Transit Stations

The project would be located within 0.2 miles of the 19th Street BART Station and frequent bus service along Broadway (Route 18 with 15-minute peak headways, and Route 51A with 10-minute peak headways) and 20th Street (Route 6 with 10-minute peak headways and Routes 72/72M/72R with 10- to 12-minute peak headways). The project would satisfy Criterion #3 because it would meet the following three conditions for this criterion:

- The project would have a FAR of 19.85, which is greater than 0.75.
- The project would include up to 350 parking spaces. The City of Oakland Planning Code (Section 17.116.080) has no parking minimum requirement and allows up to one space for each three hundred square feet of ground floor area and one space for each five hundred square feet of floor area above ground floor for office and retail use in the CBD-P zone. Therefore, a total of 1,568 maximum parking spaces would be allowed by the City of Oakland Planning Code for this development. Table V.M-2 below shows the parking ratios for several recently approved office projects in Downtown Oakland. The project would provide a parking ratio of 0.46 parking spaces per 1,000 square feet, which is consistent with other recently approved office projects (see Table V.M-2). The project would not provide more parking for use by employees or

customers than other typical nearby uses, nor would it provide more parking than required by City Code.

- The project is located within the Downtown Priority Development Area (PDA) as defined by Plan Bay Area and is therefore consistent with the region’s Sustainable Communities Strategy.

Table V.M-2 Example Downtown Office Project Parking Ratios

Development	Size	New Parking Supply	Parking Supply Ratio
1100 Broadway	312 ksf	0	0
2 Kaiser Plaza (Option A)	457 ksf	280	0.61 spaces per ksf
2 Kaiser Plaza (Option B)	850 ksf	352	0.41 spaces per ksf
T12	588 ksf	205	0.35 spaces per ksf
Eastline – 2100 Telegraph (All Office Final Development Program)	1,555 ksf	1,690	1.09 spaces per ksf

Source: Fehr & Peers, 2018; Urban Planning Partners, 2018

Vehicle Miles Travelled Screening Conclusion

The project would satisfy the Low-VMT Area (#2) and the Near Transit Stations (#3) criteria and is therefore would have a less-than-significant impact related to VMT.

Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas or by adding new roadways to the network (Criterion 13.c)

The project would not modify the roadway network surrounding the project site. Therefore, the project would not substantially induce additional automobile travel by increasing the physical roadway capacity in congested areas (i.e. by adding new mixed-flow lanes) and would not add new roadways to the network and would have a less-than-significant impact on inducing additional automobile traffic.

3. Conclusion

The project’s potential impacts related to pedestrian, bicycle, transit, emergency access, and design and incompatible use considerations would be less than significant. The project would not result in any other transportation related significant impacts.

Further, implementation of SCA-TRANS-1: Transportation and Parking Demand Management (#80) would be applicable to the project and would ensure that transportation and circulation-related impacts associated with the project would be less than significant.

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to pedestrian, bicycle, transit, emergency access, or design identified in the Program EIRs. Implementation of SCA-TRANS-1: Transportation and Parking Demand Management (#79) to ensure no significant CEQA impacts related to transit occur. Additionally, independent of CEQA, the City will require implementation of SCA-TRANS-2: Construction Activity in the Public Right-of-Way (#76), SCA-TRANS-3: Bicycle Parking (#77), SCA-TRANS-4: Transportation Improvements (#78), SCA-TRANS-5: Transportation Impact Fee (#80) and SCA-TRANS-6: Plug-In Electric Vehicle Charging Infrastructure (#83) would further minimize the already less-than-significant transportation impacts. Please see Attachment A for a full description of the applicable SCAs.

N. Utilities and Service Systems

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board; Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects; Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	■	<input type="checkbox"/>	<input type="checkbox"/>
b. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	■	<input type="checkbox"/>	<input type="checkbox"/>
c. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects; Violate applicable federal, state, and local statutes and regulations related to solid waste;	■	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
d. Violate applicable federal, state and local statutes and regulations relating to energy standards; or Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	■	□	□

1. Program EIR Findings

The 2011 Renewal Plan EIR found all impacts to utilities and service systems to be less than significant with applicable SCAs.

The 1998 LUTE EIR, which analyzed utilities and service systems, found all potential impacts to be less than significant after implementation of mitigation measures, which are functionally equivalent to the latest SCAs.

2. Project Analysis

Water, Wastewater, and Stormwater (Criteria 14.a and 14.b)

The project site is in an already built-out urban area, and no new utility infrastructure would be required. While the project would increase the amount of water needed and wastewater generated in the project area, it does not include any new, less efficient water uses than what was previously evaluated in the Program EIRs. For these reasons, the project would not result in the need for additional water entitlements or water-related facilities.

Wastewater generated by the project would be subject to both primary and secondary treatment and would not violate the wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. The current project site is composed of entirely impervious surface area. The project thus would not increase this amount and would likely reduce the amount of stormwater generated at the site through landscaping,

other infrastructure improvements, and from compliance with City of Oakland requirements.

In addition, implementation of City SCAs would further address any potential impacts on water, wastewater and stormwater, including: SCA-UTIL-1: Sanitary Sewer System (#89) and SCA-UTIL-2: Storm Drain System (#90). The City of Oakland SCA related to recycled water (SCA #92), would not apply to the project as there is currently no access to recycled water to the site.

Solid Waste Services (Criterion 14.c)

Nonhazardous solid waste in the analyzed area is ultimately hauled to the Altamont Landfill and Resource Facility. The Altamont Landfill would have sufficient capacity to accept waste generated by development under the project. In addition, implementation of SCA-UTIL-3: Recycling Collection and Storage Space (#86), would be required and the project would be required to comply with the City of Oakland Recycling Space Allocation Ordinance (Chapter 17.118 of the Oakland Planning Code). Lastly, implementation of SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#84) would be required of the project. In addition, the project would be required to comply the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (Chapter 15.34 of the Oakland Municipal Code). Implementation of these SCAs and adherence with City of Oakland requirements would ensure no significant impacts related to solid waste would occur.

Energy (Criterion 14.d)

The project would be required to comply with the standards of Title 24 of the California Code of Regulations. In addition, the project would be required to implement SCA-UTIL-5: Underground Utilities (#85), which requires all new gas, electric, cable, and telephone facilities underground, and SCA-UTIL-6: Green Building Requirements (#87), which requires compliance with the green building ordinance. Implementation of these SCAs and adherence with Title 24 requirements would ensure no significant impacts related to energy would occur.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any new or more severe significant impacts related to water supply, sewer capacity, stormwater drainage facilities, solid waste services, and energy than those identified in the Program EIRs. Implementation of SCA-UTIL-1: Sanitary Sewer System (#89), SCA-UTIL-2: Storm Drain System (#90), SCA-UTIL-3: Recycling Collection and Storage Space (#86), SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#84), SCA-UTIL-5: Underground Utilities (#85), SCA-UTIL-6: Green Building Requirements (#87) and SCA-UTIL-7: Water Efficient Landscape Ordinance (WELO) (#92), as well as compliance with Title 24

and CALGreen requirements would ensure that impacts to utilities and service systems would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

Attachment A: Mitigation Measures and Standard Conditions of Approval and Reporting Program

A. Applicable Mitigation Measures

The following applicable mitigation measures from the 1998 LUTE EIR would be required of the project to ensure that any impacts to the environment are reduced to the maximum extent feasible. All other mitigations which are functionally equivalent to the City of Oakland's Standard Conditions of Approval are discussed and addressed below in the Standard Conditions of Approval table.

Mitigation Measure N.1: The City shall require the project sponsors to incorporate specific design elements in the final siting and designs for the high rises that could reduce ground-level winds within the Downtown Showcase District.

B. Standard Conditions of Approval

The City of Oakland's Uniformly Applied Development Standards adopted as Standard Conditions of Approval (Standard Conditions of Approval, or SCAs) were originally adopted by the City in 2008 (Ordinance No. 12899 C.M.S.) pursuant to Public Resources Code section 21083.3) and have been incrementally updated over time. The SCAs incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Water Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, Green Building Ordinance, historic/Landmark status, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects.

These SCAs are incorporated into projects as conditions of approval, regardless of the determination of a project's environmental impacts. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, avoid or substantially reduce a project's environmental effects.

In reviewing project applications, the City of Oakland determines which SCAs apply based upon the zoning district, community plan, and the type of permits/approvals required for the project. The City of Oakland also will determine which SCAs apply to a specific project based on the specific project type and/or project site characteristics. Because these SCAs are mandatory City requirements imposed on a city-wide basis, environmental analyses assume these SCAs will be implemented by the project, and these SCAs are not imposed as mitigation measures under CEQA.

All SCAs identified in the CEQA document—which is consistent with the measures and conditions presented in the City of Oakland General Plan, Land Use and Transportation EIR (LUTE EIR, 1998) and the 2011 Central District Urban Renewal Plan Amendments EIR (2011 Renewal Plan EIR)—are included herein. To the extent that any SCA identified in the CEQA document was inadvertently omitted, it is automatically incorporated herein by reference.

- The first column identifies the SCA applicable to that topic in the CEQA document.
- The second column identifies the monitoring schedule or timing applicable to the project.
- The third column names the party responsible for monitoring the required action for the project.

In addition to the SCAs identified and discussed in the CEQA document, other SCAs that are applicable to the project are included herein.

The project sponsor is responsible for compliance with any recommendations in approved technical reports and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific SCA, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the SCAs will be the responsibility of the Planning and Zoning Division. Prior to the issuance of a demolition, grading, and/or construction permit, the project sponsor shall pay the applicable mitigation and monitoring fee to the City in accordance with the City’s Master Fee Schedule.

Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—i.e., **SCA-AIR-1**, **SCA-AIR-2**, etc. The SCA titles are also provided—i.e., **SCA-AIR-1: Dust Controls – Construction Related (#21)**.

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Aesthetics, Shadow and Wind			
SCA-AES-1: <i>Lighting</i> (#19). Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.	Prior to building permit final	N/A	Bureau of Building
SCA-AES-2: <i>Trash and Blight Removal</i> (#16). The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multi-family residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.	Ongoing	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>SCA-AES-3: Graffiti Control (#17).</p> <p>a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:</p> <ol style="list-style-type: none"> Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. Use of paint with anti-graffiti coating. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement. <p>b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:</p> <ol style="list-style-type: none"> Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. Covering with new paint to match the color of the surrounding surface. Replacing with new surfacing (with City permits if required). 	Ongoing	N/A	Bureau of Buildings
<p>SCA-AES-4: Landscape Plan (#18).</p> <p>a. Landscape Plan Required</p> <ul style="list-style-type: none"> The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought-tolerant. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively), and with any applicable streetscape plan. 	Prior to approval of construction-related permit	Bureau of Planning	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
b. Landscape Installation <ul style="list-style-type: none"> The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of \$2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid. 	Prior to building permit final	Bureau of Planning	Bureau of Building
c. Landscape Maintenance <ul style="list-style-type: none"> All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced. 	Ongoing	N/A	Bureau of Buildings
<p>SCA-AES-5: Public Art for Private Development (#20). The project is subject to the City's Public Art Requirements for Private Development, adopted by Ordinance No. 13275 C.M.S. ("Ordinance"). The public art contribution requirements are equivalent to one-half percent (0.5%) for the "residential" building development costs, and one percent (1.0%) for the "non-residential" building development costs.</p> <p>The contribution requirement can be met through: 1) the installation of freely accessible art at the site; 2) the installation of freely accessible art within one-quarter mile of the site; or 3) satisfaction of alternative compliance methods described in the Ordinance, including, but not limited to, payment of an in-lieu fee contribution. The applicant shall provide proof of full payment of the in-lieu contribution and/or provide plans, for review and approval by the Planning Director, showing the installation or improvements required by the Ordinance prior to issuance of a building permit.</p> <p>Proof of installation of artwork, or other alternative requirement, is required prior to the City's issuance of a final certificate of occupancy for each phase of a project unless a separate, legal binding instrument is executed ensuring compliance within a timely manner subject to City approval.</p>	Payment of in-lieu fees and/or plans showing fulfillment of public art requirement – Prior to Issuance of Building permit	Bureau of Planning	Bureau of Planning
Air Quality			
SCA-AIR-1: Dust Controls – Construction Related (#21). The project applicant shall implement all of the following applicable dust control measures during construction of the project:	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.</p> <p>b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).</p> <p>c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</p> <p>d. Limit vehicle speeds on unpaved roads to 15 miles per hour.</p> <p>e. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.</p> <p>f. All trucks and equipment, including tires, shall be washed off prior to leaving the site.</p> <p>g. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.</p> <p>h. Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).</p> <p>i. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.</p> <p>j. When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity.</p> <p>k. Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.</p> <p>l. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.</p>			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>SCA-AIR-2: Diesel Particulate Matter Controls – Construction Related (#23).</p> <p>a. Diesel Particulate Matter Reduction Measures</p> <p>The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose <u>one</u> of the following methods:</p> <p>i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction.</p> <p>-or-</p> <p>ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.</p>	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
<p>b. Construction Emissions Minimization Plan (if required by a above)</p> <p>The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following:</p> <p>i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number,</p>	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.</p> <p>ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.</p>			
<p>SCA-AIR-3: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#25). The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose <u>one</u> of the following methods:</p> <p>a. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.</p> <p>- or -</p> <p>b. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:</p> <p>i. Installation of non-diesel fueled generators, if feasible, or;</p> <p>ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.</p>	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
<p>SCA-AIR-4: Asbestos in Structures (#27). The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health</p>	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.			
<p>SCA-AIR-5: Criteria Air Pollutants – Construction Related (#22)</p> <p>The project applicant shall implement all of the following applicable basic control measure for criteria pollutants during construction of the project as applicable:</p> <ol style="list-style-type: none"> Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time of two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clean signage to this effect shall be provided for construction workers at all access points. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations (“California Air Resources Board Off-Road Diesel Regulations”). All construction equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations (“California Air Resources Board Off-Road Diesel Regulations”) and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met. 	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Biological Resources			
SCA-BIO-1: Tree Removal during Bird Breeding Season (#30). To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.	Prior to removal of trees	Bureau of Planning	Bureau of Building
SCA-BIO-2: Tree Permit (#31). a. Tree Permit Required Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.	Prior to approval of construction-related permit	Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building	Bureau of Building
b. Tree Protection During Construction Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist: i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree. ii. Where proposed development or other site work is to	During construction	Public Works Department, Tree Division	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.</p> <p>iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.</p> <p>iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.</p> <p>v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.</p> <p>vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.</p>			
<p>c. Tree Replacement Plantings Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:</p>	Prior to building permit final	Public Works Department, Tree Division	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>i. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.</p> <p>ii. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division.</p> <p>iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.</p> <p>iv. Minimum planting areas must be available on site as follows:</p> <ul style="list-style-type: none"> For Sequoia sempervirens, three hundred fifteen (315) square feet per tree; For other species listed, seven hundred (700) square feet per tree. <p>v. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.</p> <p>vi. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.</p>			
Cultural Resources			
<p>SCA-CUL-1: Archaeological and Paleontological Resources – Discovery During Construction (#33). Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with</p>	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.</p> <p>In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.</p> <p>In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.</p>			
<p>SCA-CUL-2: Human Remains – Discovery During Construction (#35). Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to</p>	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
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resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.			
Geology, Soils and Geohazards			
SCA-GEO-1: Construction-Related Permit(s) (#37). The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA-GEO-2: Seismic Hazards Zone (Landslide/Liquefaction) (#40). : The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
Greenhouse Gas and Climate Change			
SCA-GHG-1: GHG Reduction Plan (#42). a. Greenhouse Gas (GHG) Reduction Plan Required The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval and shall implement the approved GHG Reduction Plan. The goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions to below <u>at least one</u> of the Bay Area Quality Management District's (BAAQMD's) CEQA Thresholds of Significance (1,100 metric tons of CO ₂ e per year or 4.6 metric tons of CO ₂ e per year per service population) The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), and additional GHG reduction measures available to further reduce GHG emissions, and (c) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is	Prior to approval of construction-related permit	Bureau of Planning	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase.</p> <p>Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.</p> <p>The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits") as explained below.</p> <p>The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States.</p> <p>As with preferred locations for the implementation of all GHG reductions measures, the preference for carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the project's operational emissions estimated in the GHG Reduction Plan or subsequent approved emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan.</p> <p>For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits.</p>			
<p><i>b. GHG Reduction Plan Implementation During Construction</i></p> <p>The project applicant shall implement the GHG Reduction Plan during construction of the project. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be implemented during construction. For physical GHG reduction measures to be incorporated into off-site projects, the project applicant shall obtain all necessary permits/approvals and the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval. These off-site improvements shall be installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For</p>	During Construction	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
GHG reduction measures involving the purchase of carbon credits, evidence of the payment/purchase shall be submitted to the City for review and approval prior to completion of the project (or prior to completion of the project phase, for phased projects).			
<p>c. GHG Reduction Plan Implementation After Construction</p> <p>The project applicant shall implement the GHG Reduction Plan after construction of the project (or at the completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into the project or off-site projects, the measures shall be implemented on an indefinite and ongoing basis.</p> <p>The project applicant shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan.</p> <p>Annual Report. Implementation of the GHG reduction measures and related requirements shall be ensured through compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report (“Annual Report”), for review and approval by the City Planning Director or his/her designee. The Annual Report shall be submitted to an independent reviewer of the City’s choosing, to be paid for by the project applicant.</p> <p>The Annual Report shall summarize the project’s implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year’s Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline emissions reported in the GHG Plan.</p> <p>The GHG Reduction Plan shall be considered fully attained when project emissions are less than either applicable numeric BAAQMD CEQA Thresholds AND GHG emissions are 36 percent below the project’s 2005 “business-as-usual” baseline GHG emissions, as confirmed by the City through an established monitoring program. Monitoring and reporting activities will continue at the City’s discretion, as discussed below.</p> <p>Corrective Procedure. If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant shall prepare a report for City review and approval, which</p>	Ongoing	Bureau of Planning	Bureau of Planning

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures (“Corrective GHG Action Plan”). The project applicant shall then implement the approved Corrective GHG Action Plan.</p> <p>If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City may, in addition to its other remedies, (a) assess the project applicant a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project’s approvals should be revoked, altered or additional conditions of approval imposed.</p> <p>The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved (compared to the applicable numeric significance thresholds) or required percentage reduction from the “adjusted” baseline.</p> <p>In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant has made a good faith effort to comply with the GHG Reduction Plan.</p> <p>The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the GHG Reduction Plan.</p> <p>Timeline Discretion and Summary. The City shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.</p>			
Hazards and Hazardous Materials			
<p>SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#44).</p> <p>a. Hazardous Building Materials Assessment</p> <p>The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building</p>	Prior to approval of demolition, grading, or building permits	Bureau of Building	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.			
<i>b. Environmental Site Assessment Required</i> The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.	Prior to approval of construction-related permit.	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction
<i>c. Health and Safety Plan Required</i> The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
<i>d. Best Management Practices (BMPs) Required for Contaminated Sites</i> The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: <ul style="list-style-type: none"> i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building. 	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>SCA-HAZ-2: Hazardous Materials Related to Construction (#43). The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:</p> <ul style="list-style-type: none"> a. Follow manufacture’s recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals; e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City’s Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate. 	During construction	N/A	Bureau of Building
Hydrology and Water Quality			
<p>SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48). The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City’s storm drain system and creeks.</p>	During construction-	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects (#54).</p> <p>a. Post-Construction Stormwater Management Plan Required</p> <p>The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:</p> <ul style="list-style-type: none"> i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. 	Prior to approval of construction-related permit	Bureau of Planning; Bureau of Building	Bureau of Building
<p>a. Maintenance Agreement Required</p> <p>The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:</p> <ul style="list-style-type: none"> i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. <p>The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.</p>	Prior to building permit final	Bureau of Building	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Noise			
<p>SCA-NOI-1: Construction Days/Hours (#62). The project applicant shall comply with the following restrictions concerning construction days and hours:</p> <ul style="list-style-type: none"> a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c. No construction is allowed on Sunday or federal holidays. <p>Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.</p> <p>Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.</p>	During construction	N/A	Bureau of Building
<p>SCA-NOI-2: Construction Noise (#63). The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible. b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically 	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.</p> <p>c. Applicant shall use temporary power poles instead of generators where feasible.</p> <p>d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.</p> <p>e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.</p>			
<p>SCA-NOI-3: Extreme Construction Noise (#64).</p> <p>a. Construction Noise Management Plan Required</p> <p>Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:</p> <p>a. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;</p> <p>b. Implement “quiet” pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;</p> <p>c. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;</p> <p>d. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce</p>	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
noise impacts; and e. Monitor the effectiveness of noise attenuation measures by taking noise measurements.			
b. Public Notification Required The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.	During construction	Bureau of Building	Bureau of Building
SCA-NOI-4: Construction Noise Complaints (#66). The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA-NOI-5: Operational Noise (#68). Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.	Ongoing	N/A	Bureau of Building
SCA-NOI-6: Exposure to Community Noise (#67). The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>following:</p> <ul style="list-style-type: none"> a. 45 dBA: Residential activities, civic activities, hotels b. 50 dBA: Administrative offices; group assembly activities c. 55 dBA: Commercial activities d. 65 dBA: Industrial activities 			
<p>SCA-NOI-7: <i>Exposure to Vibration</i> (#69). The project applicant shall submit a Vibration Reduction Plan prepared by a qualified acoustical consultant for City review and approval that contains vibration reduction measures to reduce groundborne vibration to acceptable levels per Federal Transit Administration (FTA) standards. The applicant shall implement the approved Plan during construction. Potential vibration reduction measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a “spring isolation” system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads, and provide adequate filtering of groundborne vibration to the residences above. b. Trenching, which involves excavating soil between the railway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project’s structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets [i.e., Styrofoam] or low-density polyethylene). 	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
Population and Housing			
<p>SCA-PH-1: <i>Jobs/Housing Impact Fee</i> (#71). The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (chapter 15.68 of the Oakland Municipal Code).</p>	Prior to issuance of building permit; subsequent milestones pursuant to ordinance	Bureau of Building	N/A
Public Services, Parks, and Recreation Facilities			
<p>SCA-PS-1: <i>Capital Improvements Impact Fee</i> (#74). The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).</p>	Prior to issuance of building permit	Bureau of Building	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Transportation and Circulation			
<p>SCA-TRANS-1: <i>Transportation and Parking Demand Management</i> (#79).</p> <p><i>a. Transportation and Parking Demand Management (TDM) Plan Required</i></p> <p>The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City.</p> <p>i. The goals of the TDM Plan shall be the following:</p> <ul style="list-style-type: none"> • Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable. • Achieve the following project vehicle trip reductions (VTR): <ul style="list-style-type: none"> ○ Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR ○ Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR • Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate. • Enhance the City's transportation system, consistent with City policies and programs. <p>ii. The TDM Plan should include the following:</p> <ul style="list-style-type: none"> • Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable. • Proposed TDM strategies to achieve VTR goals (see below). <p>iii. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer-Based Trip Reduction Program.</p> <p>iv. The following TDM strategies must be incorporated into a TDM Plan based on a project location or other characteristics. When required, these mandatory strategies should be identified as a credit toward a project's VTR.</p> <p><i>[See additional table below]</i></p> <p>v. Other TDM strategies to consider include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement. • Construction of and/or access to bikeways per the 	Prior to approval of construction-related permit	Bureau of Planning	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.</p> <ul style="list-style-type: none"> • Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project. • Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively) and any applicable streetscape plan. • Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. • Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency). • Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. • Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). • Guaranteed ride home program for employees, either through 511.org or through separate program. • Pre-tax commuter benefits (commuter checks) for employees. • Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants. • On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools. • Distribution of information concerning alternative transportation options. • Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free 			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>parking space in commercial properties.</p> <ul style="list-style-type: none"> • Parking management strategies including attendant/valet parking and shared parking spaces. • Requiring tenants to provide opportunities and the ability to work off-site. • Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week). • Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours. <p>The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.</p>			
<p>b. TDM Implementation – Physical Improvements</p> <p>For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.</p>	Prior to building permit final	Bureau of Building	Bureau of Building
<p>c. TDM Implementation – Operational Strategies</p> <p>For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.</p>	Ongoing	Department of Transportation	Department of Transportation

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
SCA-TRANS-2: Construction Activity in the Public Right-of-Way (#76). a. Obstruction Permit Required The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.	Prior to Approval of Construction Related Permit	Department of Transportation	Department of Transportation
b. Traffic Control Plan Required In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones.	The project applicant shall implement the approved Plan during construction.	Department of Transportation	Department of Transportation
c. Repair of City Streets The project applicant shall repair any damage to the public right-of way, including streets and sidewalks, caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.	Prior to building permit final	N/A	Department of Transportation
SCA-TRANS-3: Bicycle Parking (#77). The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to Approval of Construction Related Permit	Bureau of Planning	Bureau of Building
SCA-TRANS-4: Transportation Improvements (#78). The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities	Prior to building permit final or as otherwise specified	Bureau of Building; Department of Transportation	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below:</p> <ul style="list-style-type: none"> a. 2070L Type Controller with cabinet accessory b. GPS communication (clock) c. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) d. Countdown pedestrian head module switch out e. City Standard ADA wheelchair ramps f. Video detection on existing (or new, if required) g. Mast arm poles, full activation (where applicable) h. Polara Push buttons (full activation) i. Bicycle detection (full activation) j. Pull boxes k. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum l. Conduit replacement contingency m. Fiber switch n. PTZ camera (where applicable) o. Transit Signal Priority (TSP) equipment consistent with other signals along corridor p. Signal timing plans for the signals in the coordination group q. Bi-directional curb ramps (where feasible, and if project is on a street corner) r. Upgrade ramps on receiving curb (where feasible, and if project is on a street corner) 			
<p>SCA-TRANS-5: Transportation Impact Fee (#80). The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).</p>	Prior to issuance of building permit	Bureau of Building	N/A
<p>SCA-TRANS-6: Plug-In Electric Vehicle (PEV) Charging Infrastructure (#83). a. PEV-Ready Parking Spaces The applicant shall submit, for review and approval of the Building Official and Zoning Manager, plans that show the</p>	Prior to Issuance of a Building Permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e. “PEV-Ready”) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces.			
b. PEV-Capable Parking Spaces The applicant shall submit, for review and approval of the Building Official, plans that show the location of inaccessible conduit to supply PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-capable parking spaces.	Prior to Issuance of a Building Permit	Bureau of Building	Bureau of Building
c. ADA-Accessible Spaces The applicant shall submit, for review and approval of the Building Official, plans that show the location of future accessible EV parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1, and specify plans to construct all future accessible EV parking spaces with appropriate grade, vertical clearance, and accessible path of travel to allow installation of accessible EV charging station(s).	Prior to Issuance of a Building Permit	Bureau of Building	Bureau of Building
Utilities and Service Systems			
SCA-UTIL-1: Sanitary Sewer System (#89). The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City’s Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to approval of construction-related permit	Public Works Department, Department of Engineering and Construction	N/A
SCA-UTIL-2: Storm Drain System (#90). The project storm drainage system shall be designed in accordance with the City of Oakland’s Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA-UTIL-3: Recycling Collection and Storage Space (#86). The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For nonresidential projects, at least two (2) cubic feet of storage	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.			
SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#84). The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of \$50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.	Prior to approval of construction-related permit	Public Works Department, Environmental Services Division	Public Works Department, Environmental Services Division
SCA-UTIL-5: Underground Utilities (#85). The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During construction	N/A	Bureau of Building
SCA-UTIL-6: Green Building Requirements (#87). a. Compliance with Green Building Requirements During Plan-Check The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: <ul style="list-style-type: none"> Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and 	Prior to approval of construction-related permit	Bureau of Building	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>Zoning permit.</p> <ul style="list-style-type: none"> Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. <p>ii. The set of plans in subsection (i) shall demonstrate compliance with the following:</p> <ul style="list-style-type: none"> CALGreen mandatory measures. LEED Silver per the appropriate checklist approved during the Planning entitlement process. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. The required green building point minimums in the appropriate credit categories. 			
<p><i>b. Compliance with Green Building Requirements During Construction</i></p> <p>The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project.</p> <p>The following information shall be submitted to the City for review and approval:</p> <p>i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.</p> <p>ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.</p> <p>iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.</p>	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>c. Compliance with Green Building Requirements After Construction</p> <p>Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.</p>	Prior to Final Approval	Bureau of Planning	Bureau of Building
<p>SCA-UTIL-7: Water Efficient Landscape Ordinance (WELO) (#92).</p> <p>The project applicant shall comply with California’s Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less. The project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California’s Model Water Efficient Landscape Ordinance. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO.</p> <p>Prescriptive Measures: Prior to construction, the project applicant shall submit documentation showing compliance with Appendix D of California’s Model Water Efficient Landscape Ordinance (see website below starting on page 23):</p> <p>http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf</p> <p>Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following:</p> <p>a. Project</p> <ol style="list-style-type: none"> Date, Applicant and property owner name, Project address, Total landscape area, Project type (new, rehabilitated, cemetery, or home owner installed), Water supply type and water purveyor, Checklist of documents in the package, and, Applicant signature and date with the statement: “I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package.” <p>b. Water Efficient Landscape Worksheet</p> <ol style="list-style-type: none"> Hydrozone Information Table Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use <p>c. Soil Management Report</p>	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
<p>d. Landscape Design Plan e. Irrigation Design Plan, and f. Grading Plan</p> <p>Upon installation of the landscaping and irrigation systems, the Project applicant shall submit a Certificate of Completion and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Compliance shall also be submitted to the local water purveyor and property owner or his or her designee.</p> <p>For the specific requirements within the Water Efficient Landscape Worksheet, Soil Management Report, Landscape Design Plan, Irrigation Design Plan and Grading Plan, see the link below.</p> <p>http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf</p>			

Provided below is the table for SCA-TRANS-1: Transportation and Parking Demand Management (#79), section a. Transportation and Parking Demand Management (TDM) Plan Required, subsection iv.

Improvement	Required by code or when...
Bus boarding bulbs or islands	<ul style="list-style-type: none"> • A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb
Bus shelter	<ul style="list-style-type: none"> • A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day
Concrete bus pad	<ul style="list-style-type: none"> • A bus stop is located along the project frontage and a concrete bus pad does not already exist
Curb extensions or bulb-outs	<ul style="list-style-type: none"> • Identified as an improvement within site analysis
Implementation of a corridor-level bikeway improvement	<ul style="list-style-type: none"> • A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips
Implementation of a corridor-level transit capital improvement	<ul style="list-style-type: none"> • A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.	<ul style="list-style-type: none"> • Always required
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	<ul style="list-style-type: none"> • When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection
In-street bicycle corral	<ul style="list-style-type: none"> • A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.
Intersection improvements¹¹⁵	<ul style="list-style-type: none"> • Identified as an improvement within site analysis
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	<ul style="list-style-type: none"> • Always required
No monthly permits and establish	<ul style="list-style-type: none"> • If proposed parking ratio exceeds 1:1000 sf.

¹¹⁵ Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.

Improvement	Required by code or when...
minimum price floor for public parking¹¹⁶	(commercial)
Parking garage is designed with retrofit capability	<ul style="list-style-type: none"> Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)
Parking space reserved for car share	<ul style="list-style-type: none"> If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	<ul style="list-style-type: none"> Typically required
Pedestrian crossing improvements	<ul style="list-style-type: none"> Identified as an improvement within site analysis
Pedestrian-supportive signal changes¹¹⁷	<ul style="list-style-type: none"> Identified as an improvement within operations analysis
Real-time transit information system	<ul style="list-style-type: none"> A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Relocating bus stops to far side	<ul style="list-style-type: none"> A project is located within 0.10 mile of any active bus stop that is currently near-side
Signal upgrades¹¹⁸	<ul style="list-style-type: none"> Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and Project frontage abuts an intersection with signal infrastructure older than 15 years
Transit queue jumps	<ul style="list-style-type: none"> Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Trenching and placement of conduit for providing traffic signal interconnect	<ul style="list-style-type: none"> Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and A major transit improvement is identified within operations analysis requiring traffic signal interconnect
Unbundled parking	<ul style="list-style-type: none"> If proposed parking ratio exceeds 1:1.25 (residential)

¹¹⁶ May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

¹¹⁷ Including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a “scramble” signal phase where appropriate.

¹¹⁸ Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals.

Attachment B: Project Consistency with Community Plan or Zoning, Per CEQA Guidelines Section 15183

Section 15183(a) of the California Environmental Quality Act (CEQA) Guidelines states that "...projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an Environmental Impact Report (EIR) was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

Project

As discussed in *Chapter IV, Project Description*, above, the project would be located in developed, urbanized Downtown Oakland. The project would develop a 27-story, approximately 420-foot-high building with an additional 45 feet in mechanical. The project includes approximately 739,360 square feet of office space, approximately 108,865 square feet of vehicle parking, approximately 26,740 square feet of retail and commercial space, approximately 26,822 square feet of private open space, and 6,000 feet for an office lobby. It would demolish an existing gas station and private-parking lot and construct a new office building with approximately 896,931 gross square feet.

Project Consistency

The City of Oakland completed an update of the General Plan Land Use and Transportation Element (LUTE) in March 1998. The LUTE includes the City's current Land Use and Transportation Diagram as well as strategies, policies, and priorities for Oakland's development and enhancement during a two-decade period. The EIR certified for the LUTE is used to simplify the task of preparing environmental documents on later projects that occur as a result of LUTE implementation.

Section 15183(a) of the CEQA Guidelines states that "...projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

As discussed in detail in *Chapter II, Background-Program Plans and EIRs*, of this document, the analysis in the 1998 LUTE EIR is considered the qualified planning level CEQA documents for this assessment, pursuant to CEQA Guidelines Section 15183.

1998 General Plan Land Use and Transportation Element and EIR

As determined by the City of Oakland Bureau of Planning, the proposed land uses are permitted in the zoning district in which the project is located, making the project consistent with the bulk, density, and land uses envisioned for the project site, as outlined below.

- The General Plan land use designation for the site is Commercial Business District (CBD). This classification is intended to encourage, support, and enhance the downtown area as a high-density, mixed-use urban center of regional importance, and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation. The project would provide for a variety of commercial and office uses on the project site that would be pedestrian-oriented and be a hub for business.
- The site is zoned Central Business District Pedestrian Retail Commercial Zone (CBD-P). The project would be consistent with the purposes of this district, which are generally intended to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses while upper story spaces are intended to be available for a wide range of office and residential activities. The project would develop ground- floor commercial retail/gallery space and provide office space on upper floors.
- The proposed building would be up to approximately 420 feet in height with an additional 45 feet for mechanical rooftop screening and is within Height Area 6, which has no maximum height limit.
- The project would create a total of 772,100 gross square feet of non-residential use.¹ The maximum non-residential FAR is 20:1; based on the project site size of approximately 38,605 square feet (approximately 0.89 acres), up to 772,100 square feet of non-residential uses are allowed.

¹ Non-residential use square footage includes uses which are considered active spaces, including office space, retail space, and office lobby.

Attachment C: Infill Performance Standards, Per CEQA Guidelines Section 15183.3

California Environmental Quality Act (CEQA) Guidelines Section 15183.3(b) and CEQA Guidelines Appendix M establish eligibility requirements for projects to qualify as infill projects. Table C-1, on the pages following, shows how the project satisfies each of the applicable requirements.

Table C-1 Project Infill Eligibility		
CEQA Eligibility Criteria		Eligible?/Notes for Project
1.	Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least 75 percent of the site's perimeter. For the purpose of this subdivision, adjoin means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved right-of-way. (CEQA Guidelines Section 15183.3[b][1])	Yes The project site has been previously developed with commercial uses and adjoins existing urban uses, as described in <i>Chapter IV, Project Description</i> , above.
2.	Satisfy the performance Standards provided in Appendix M (CEQA Guidelines Section 15183.3[b][2]) as presented in 2a and 2b below:	—
	2a. <i>Performance Standards Related to Project Design.</i> All projects must implement <u>all</u> of the following:	—
	Renewable Energy. <i>Non-Residential Projects.</i> All nonresidential projects shall include on-site renewable power generation, such as solar photovoltaic, solar thermal, and wind power generation, or clean back-up power supplies, where feasible. <i>Residential Projects.</i> Residential projects are also encouraged to include such on-site renewable power generation.	Yes The project would include renewable energy power generation through a photovoltaic array at the mechanical penthouse.
	Residential Units Near High-Volume Roadways and Stationary Sources. If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code, or community risk reduction plan for the protection of public health from such sources of air pollution. If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds,	Not Applicable According to Section IV (G) of CEQA Appendix M, for mixed-use projects "...the performance standards in this Section that apply to the predominant use shall govern the entire project." Because the predominant use is office, the requirements for residential projects do not apply.

Table C-1 Project Infill Eligibility	
CEQA Eligibility Criteria	Eligible?/Notes for Project
based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measures may include, among others, the recommendations of the California Air Resources Board, air districts, and the California Air Pollution Control Officers Association.	
2b. <i>Additional Performance Standards by Project Type.</i> In addition to implementing all the features described in criterion 2a above, the project must meet eligibility requirements provided below by project type. ^a	
Residential. A residential project must meet <u>one</u> of the following: A. Projects achieving below average regional per capita vehicle miles traveled. A residential project is eligible if it is located in a low vehicle travel area within the region; B. Projects located within ½-mile of an Existing Major Transit Stop or High Quality Transit Corridor. A residential project is eligible if it is located within ½-mile of an existing major transit stop or an existing stop along a high quality transit corridor; <u>or</u> C. Low – Income Housing. A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.	Not Applicable According to Section IV (G) of CEQA Appendix M, for mixed-use projects “...the performance standards in this Section that apply to the predominant use shall govern the entire project.” Because the predominant use is office, the requirements for residential projects do not apply.
Commercial/Retail. A commercial/retail project must meet <u>one</u> of the following: A. Regional Location. A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a low vehicle travel area; <u>or</u> B. Proximity to Households. A project with no single-building floor-plate greater than 50,000 square feet located within ½-mile of 1,800 households is eligible.	Not Applicable According to Section IV (G) of CEQA Appendix M, for mixed-use projects “...the performance standards in this Section that apply to the predominant use shall govern the entire project.” Because the predominant use is office, the requirements for commercial/retail projects do not apply.
Office Building. An office building project must meeting <u>one</u> of the following: A. Regional Location. Office buildings, both commercial and public, are eligible if they locate in a low vehicle travel area; <u>or</u>	Yes, satisfies B. The project site is well-served by multiple transit providers: (1) the 19 th Street Oakland BART Station, which is located 0.2-miles away; (2) AC Transit has stops at Broadway/West Grand Avenue, which serves lines 6 and 800 and Telegraph

Table C-1 Project Infill Eligibility		
CEQA Eligibility Criteria		Eligible?/Notes for Project
	B. <i>Proximity to a Major Transit Stop.</i> Office buildings, both commercial and public, within ½-mile of an existing major transit stop, or ¼-mile of an existing stop along a high quality transit corridor, are eligible.	Avenue/24 th Street, which serves lines 12, 51A, and 851; and (3) City of Oakland Broadway Shuttle is located approximately 300 feet away.
	Schools. Elementary schools within 1 mile of 50 percent of the projected student population are eligible. Middle schools and high schools within 2 miles of 50 percent of the projected student population are eligible. Alternatively, any school within ½-mile of an existing major transit stop or an existing stop along a high quality transit corridor is eligible. Additionally, to be eligible, all schools shall provide parking and storage for bicycles and scooters, and shall comply with the requirements of Sections 17213, 17213.1, and 17213.2 of the California Education Code.	Not Applicable
	Transit. Transit stations, as defined in Section 15183.3(e)(1), are eligible.	Not Applicable
	Small Walkable Community Projects. Small walkable community projects, as defined in Section 15183.3, subdivisions (e)(6), that implement the project features in 2a above are eligible.	Not Applicable
3.	Be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, except as provided in CEQA Guidelines Sections 15183.3(b)(3)(A) or (b)(3)(B) below: (b)(3)(A). Only where an infill project is proposed within the boundaries of a metropolitan planning organization for which a sustainable communities strategy or an alternative planning strategy will be, but is not yet in effect, a residential infill project must have a density of at least 20 units per acre, and a retail or commercial infill project must have a floor area ratio of at least 0.75; or (b)(3)(B). Where an infill project is proposed outside of the boundaries of a metropolitan planning organization, the infill project must meet the definition of a “small walkable community project” in CEQA Guidelines §15183.3(f)(5). (CEQA Guidelines Section 15183.3[b](3))	Yes (see explanation below table)

^a Where a project includes some combination of residential, commercial and retail, office building, transit station, and/or schools, the performance standards in this section that apply to the predominant use shall govern the entire project.

Explanation for Eligibility Criteria 3 – The adopted Plan Bay Area (2013)¹ serves as the Sustainable Communities’ Strategy for the Bay Area, per Senate Bill (SB) 375. As defined by the Plan, Priority Development Areas (PDAs) are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit. The project is consistent with the land use designation, density, and building intensity specified in the General Plan as described in *Section V.I, Land Use, Plans, and Policies*, of this document and summarized below.

The General Plan land use designation for the site is Central Business District (CBD); this classification is intended to encourage, support, and enhance the downtown area as a high-density mixed-use urban center of regional importance, and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation. The proposed mixed-use project would be consistent with this designation.

The project site is zoned as Central Business District Pedestrian Retail Commercial Zone (CBD-P). In this zone ground-level is intended for pedestrian-oriented and active storefront uses, while upper story spaces are intended to be available for a wide range of office and residential activities. The project site is also in Height Area 6, which has no height limit; however, towers above 250 feet in height require a conditional use permit. In Height Area 6, the maximum building base height is 85 feet and the minimum height of any new building is 45 feet. Furthermore, the maximum non-residential FAR is 20.0. Based on the maximum density and FAR, up to 772,100 square feet of non-residential uses are allowed on the 0.89-acre project site.

The project would result in the development of a 27-story building that would include a mix of uses, including residential, commercial/art/retail, and parking. The proposed building would have a base height of 100 feet, which would be above the minimum base height and below the maximum base height, and a tower height of up to 420 feet plus mechanical rooftop screening. The project would also have a FAR of 20.0, with a total of 772,100 square feet of non-residential uses. As such, the project would be consistent with the General Plan, zoning code, and density and intensity requirements.

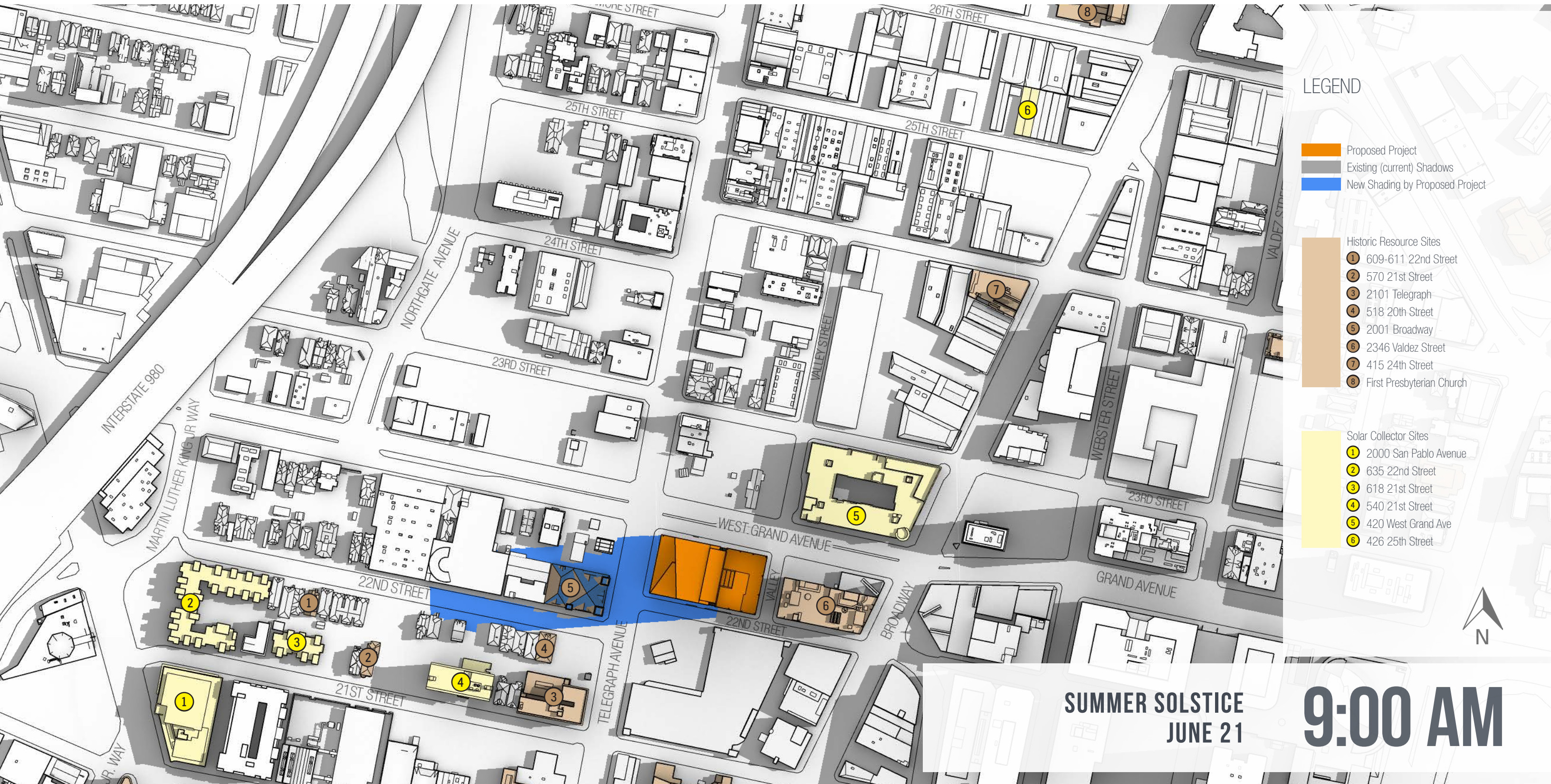
¹ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. Plan Bay Area, Strategy for a Sustainable Region, July 18.

Attachment D: Shadow Study

2201 VALLEY STREET

Shading diagrams on the Summer Solstice

E.1-A1



2201 VALLEY STREET E.1-B1

Cumulative shading diagrams on the Summer Solstice



LEGEND

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects

- Historic Resource Sites
- 609-611 22nd Street
 - 2101 Telegraph
 - 518 20th Street
 - 2001 Broadway
 - 2346 Valdez Street
 - 415 24th Street
 - First Presbyterian Church

- Solar Collector Sites
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 - 2538 Telegraph
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 - 2305 Webster
 - 2315 Valdez



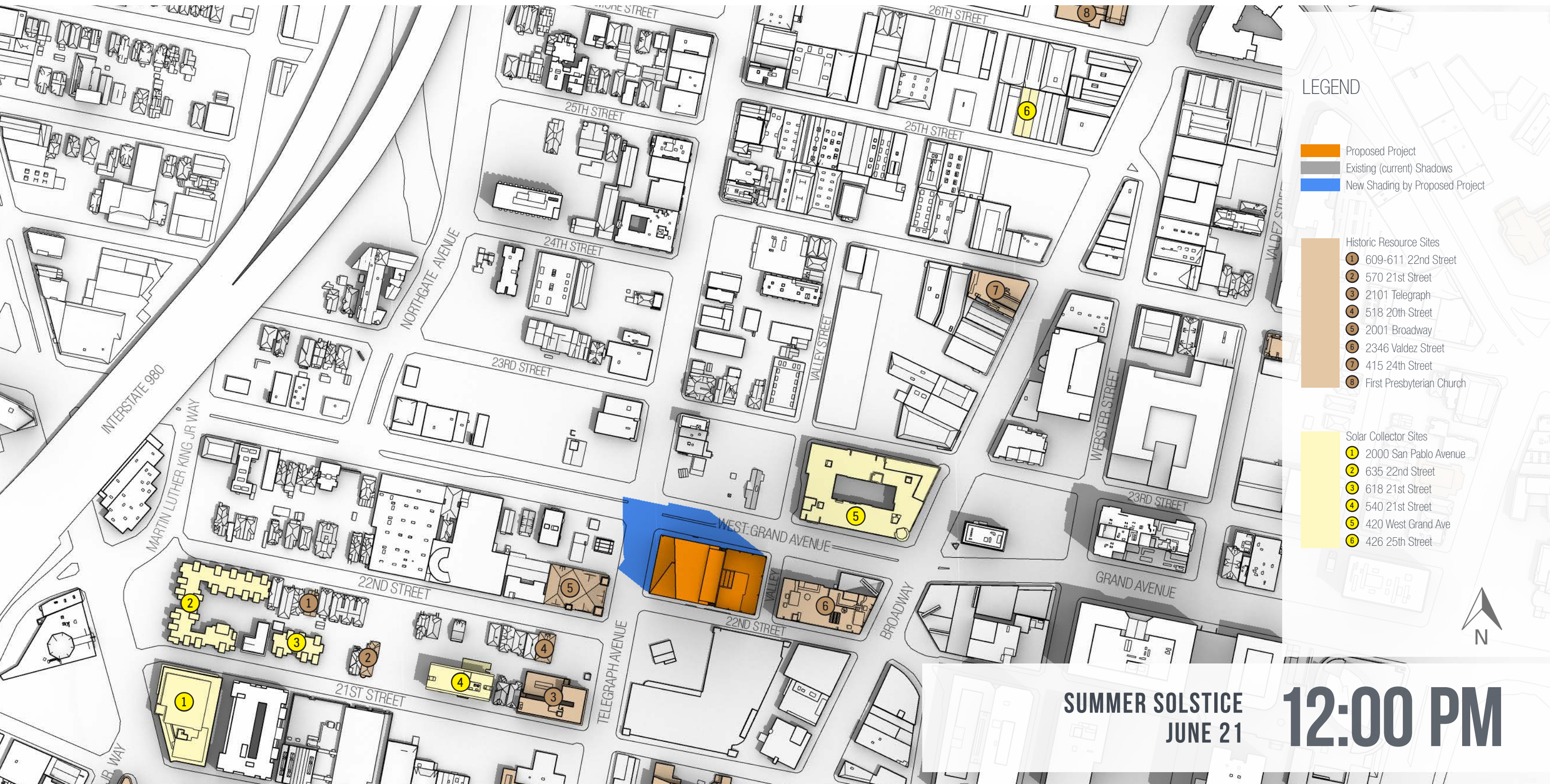
SUMMER SOLSTICE
JUNE 21

9:00 AM

2201 VALLEY STREET

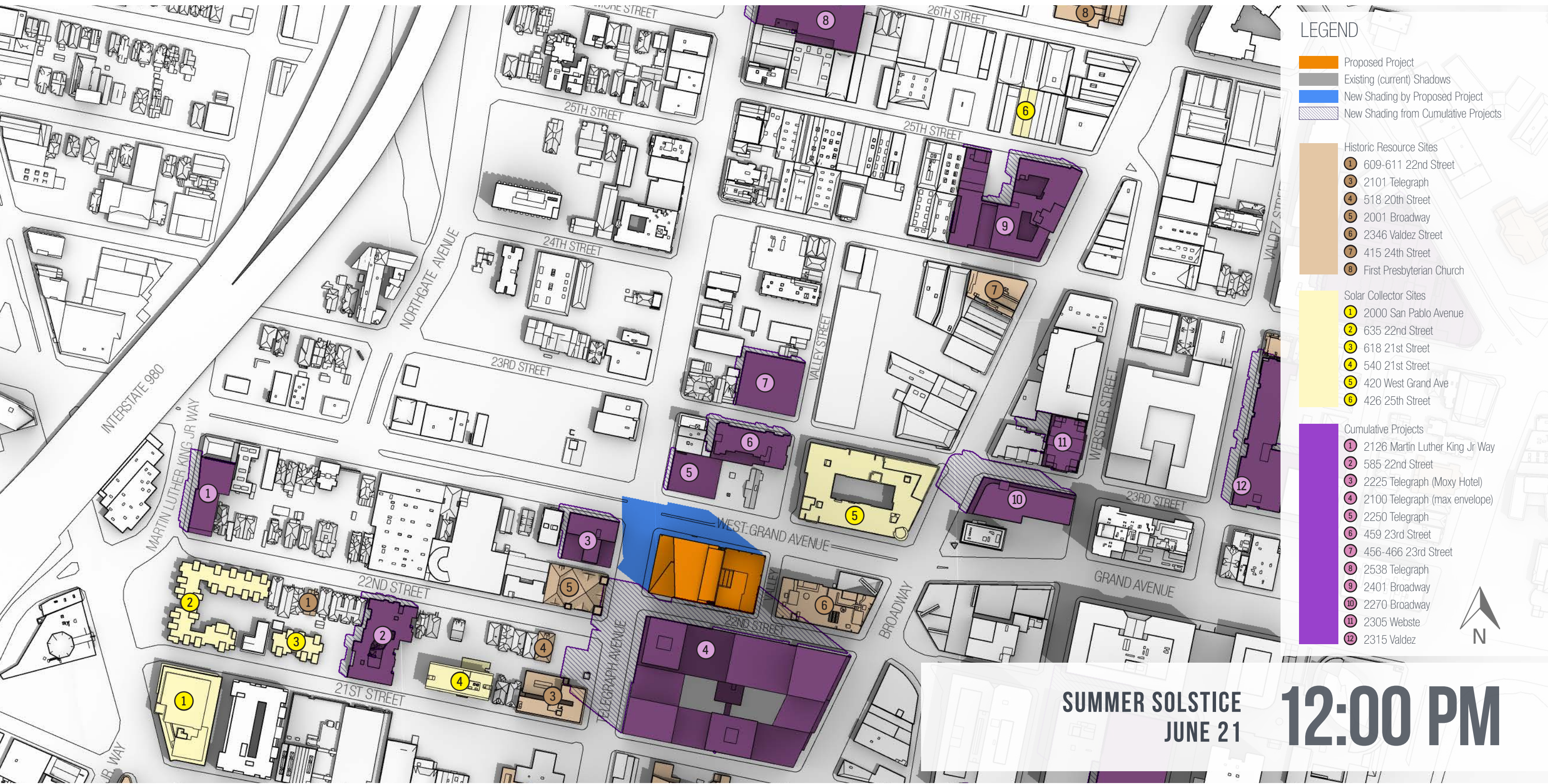
Shading diagrams on the Summer Solstice

E.1-A2



2201 VALLEY STREET E.1-B2

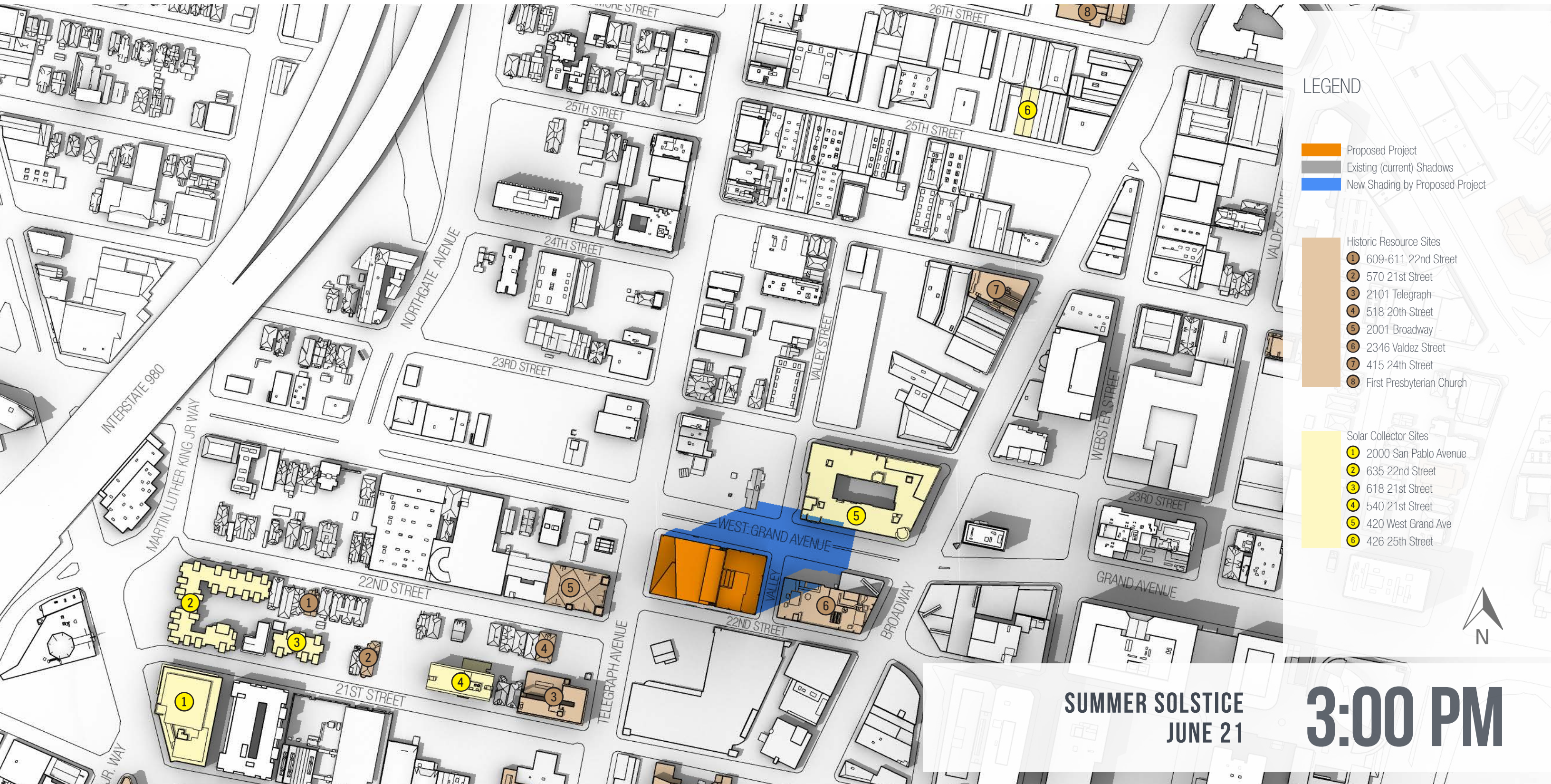
Cumulative shading diagrams on the Summer Solstice



2201 VALLEY STREET

Shading diagrams on the Summer Solstice

E.1-A3





LEGEND

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- New Shading by Proposed Project
- New Shading from Cumulative Projects

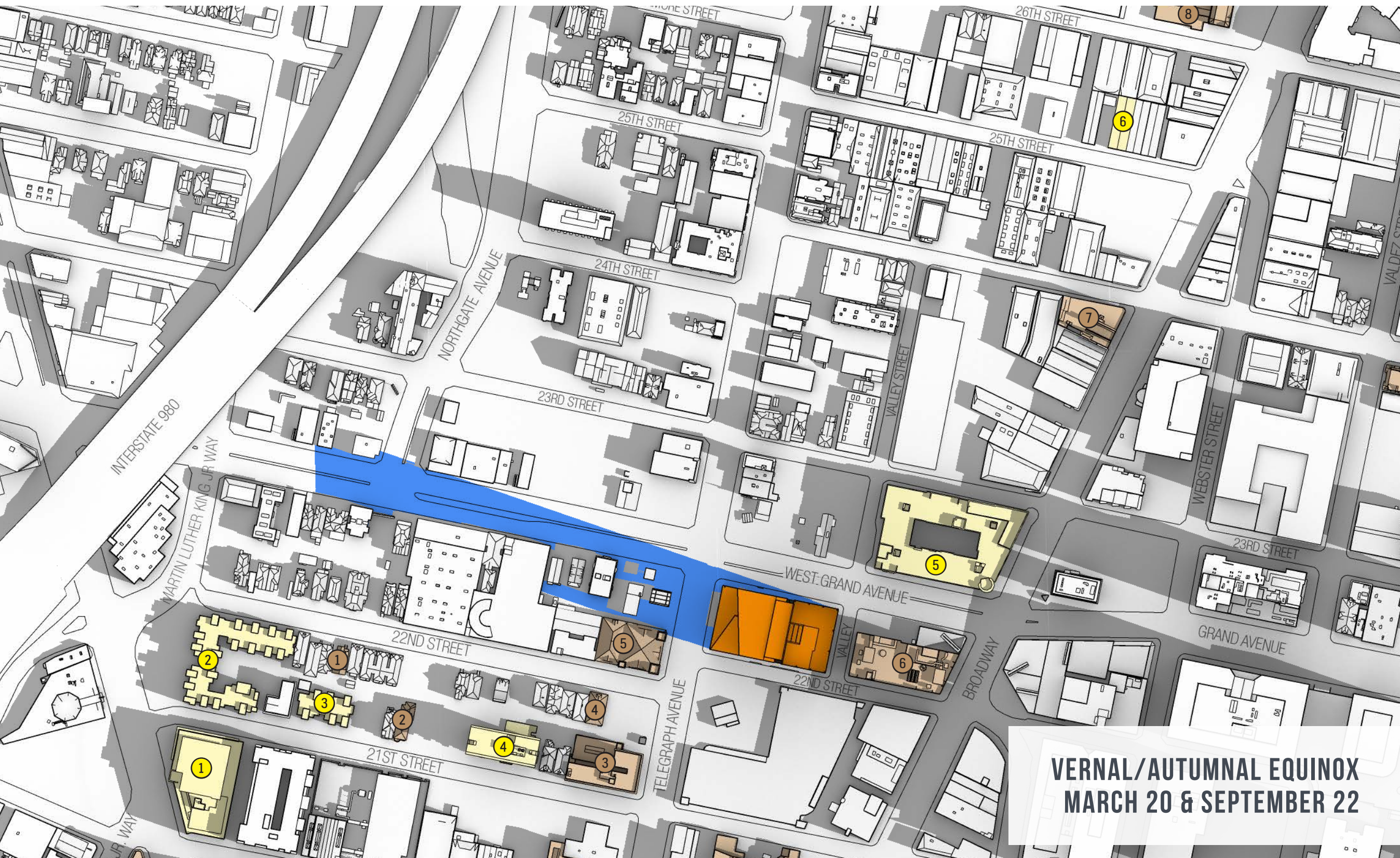
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SUMMER SOLSTICE
JUNE 21

3:00 PM



LEGEND

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project

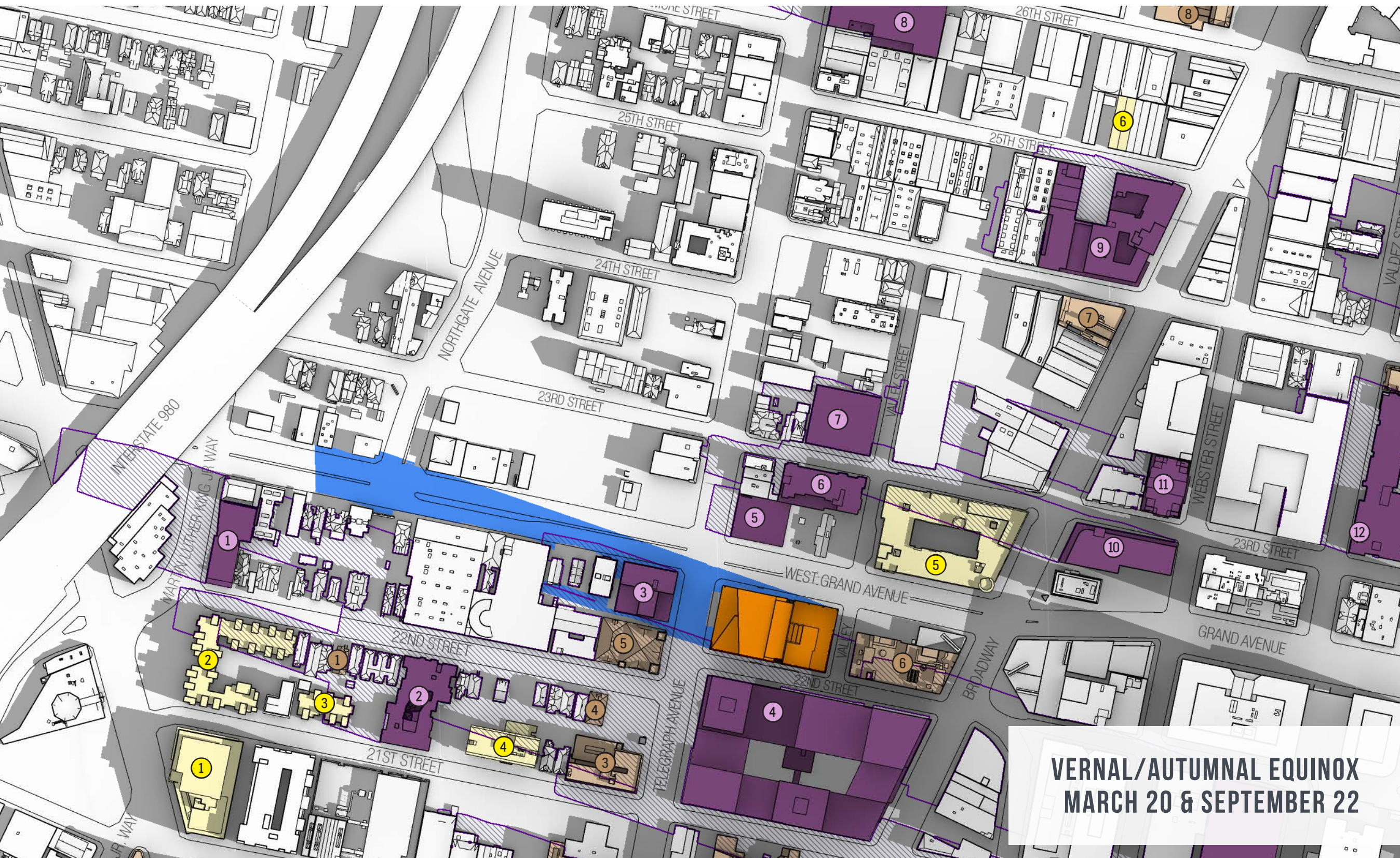
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VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

9:00 AM



LEGEND

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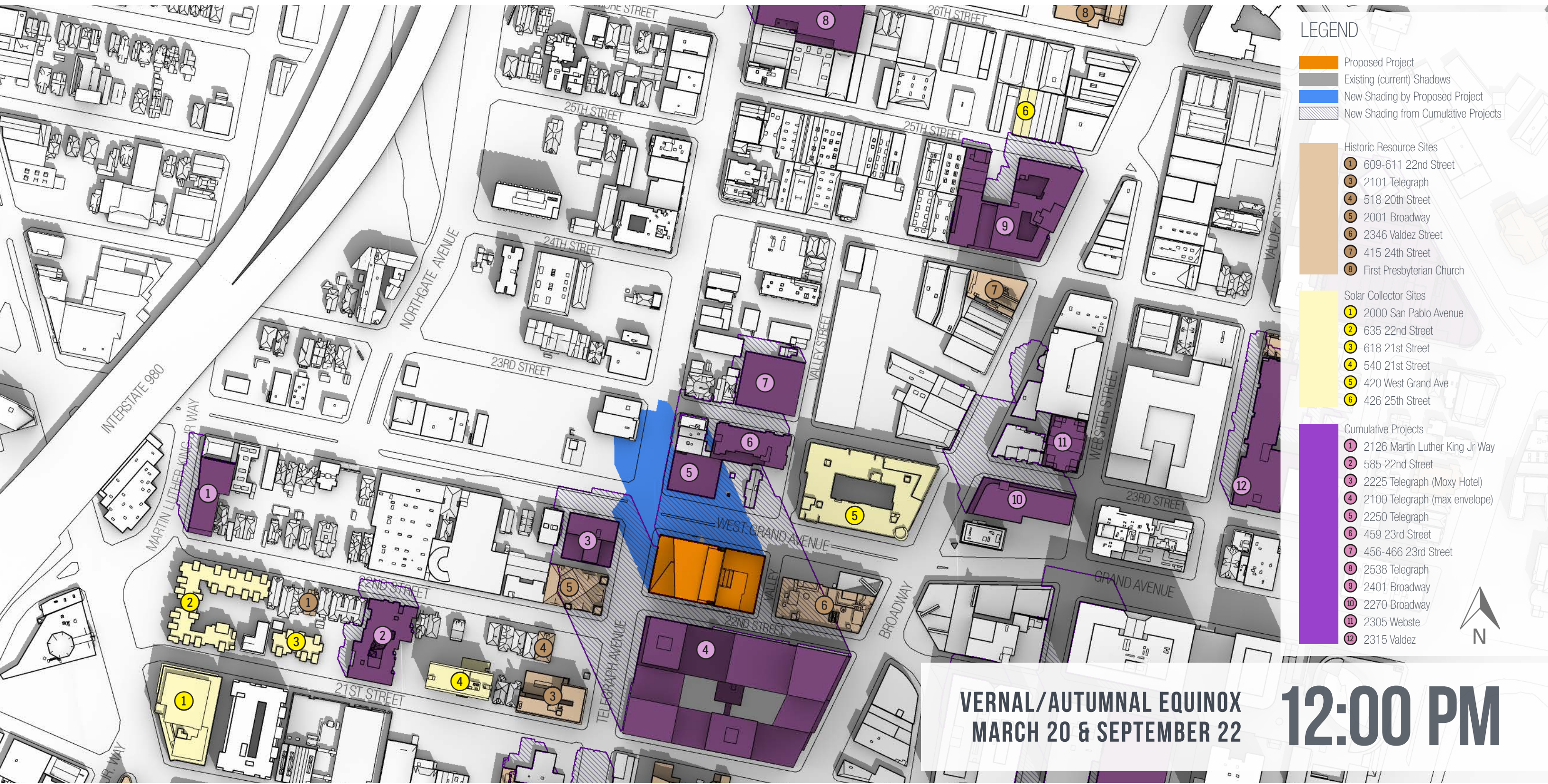
VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

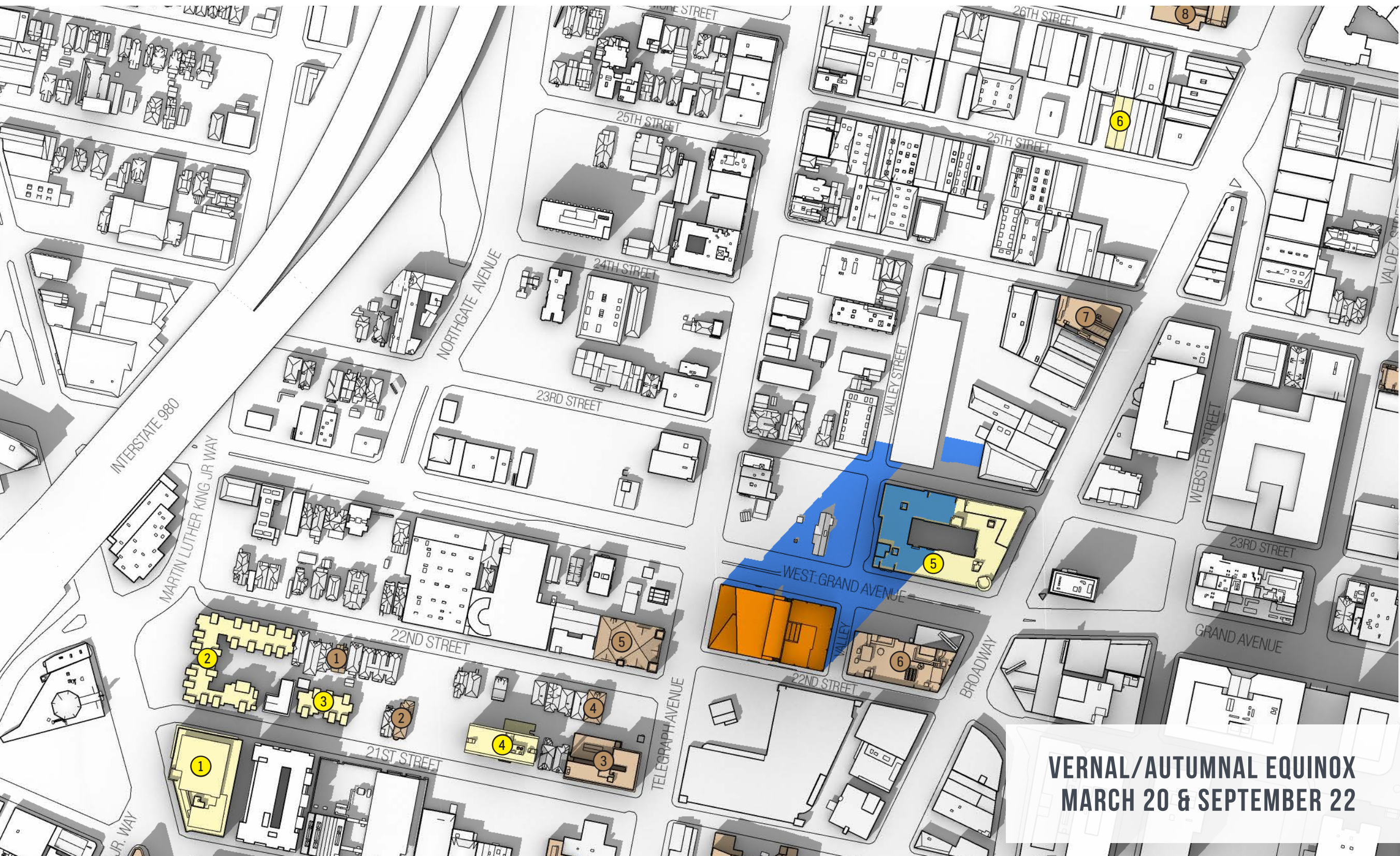
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2201 VALLEY STREET E.2-A2

Shading diagrams on the Vernal/Autumnal Equinoxes







LEGEND

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project

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VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

3:00 PM

2201 VALLEY STREET E.2-B3

Cumulative shading diagrams on the Vernal/Autumnal Equinoxes



LEGEND

- Proposed Project
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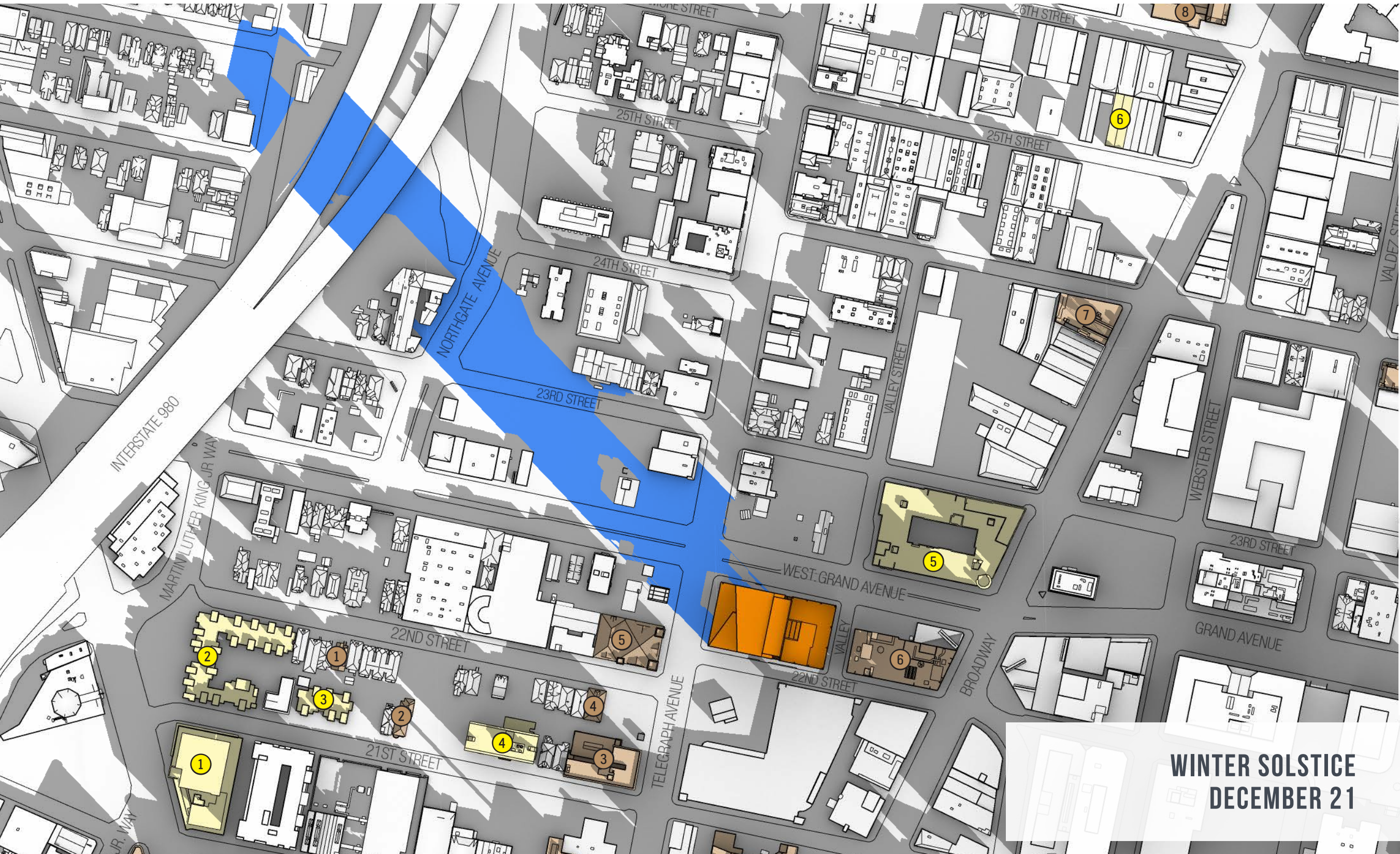
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VERNAL/AUTUMNAL EQUINOX
MARCH 20 & SEPTEMBER 22

3:00 PM



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WINTER SOLSTICE
DECEMBER 21

9:00 AM



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 - 2270 Broadway
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 - 2315 Valdez

WINTER SOLSTICE
DECEMBER 21

9:00 AM

2201 VALLEY STREET

Shading diagrams on the Winter Solstice

E.3-A2



2201 VALLEY STREET E.3-B2

Cumulative shading diagrams on the Winter Solstice

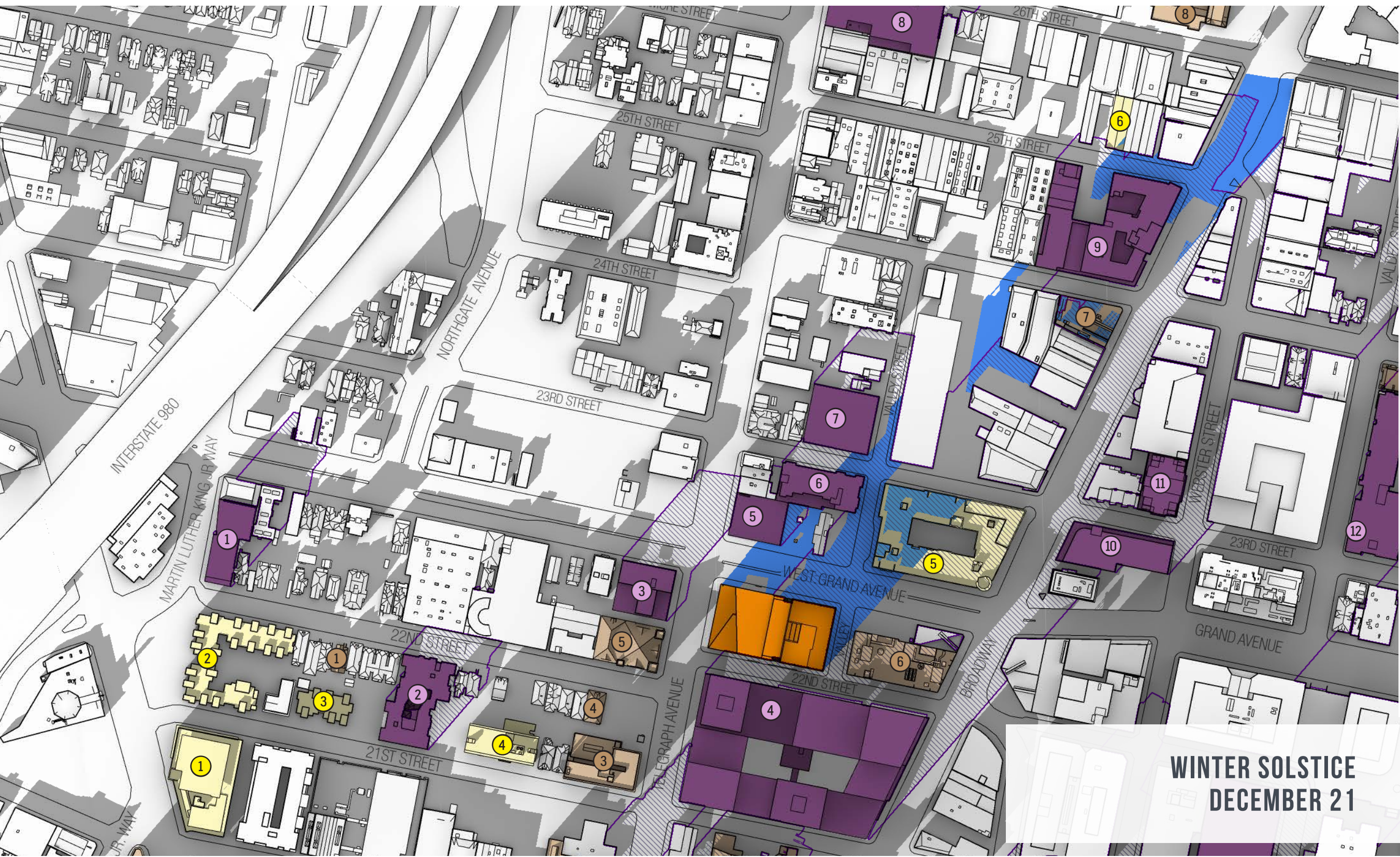


2201 VALLEY STREET

Shading diagrams on the Winter Solstice

E.3-A3





LEGEND

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WINTER SOLSTICE
DECEMBER 21

3:00 PM

Attachment E: Wind Study



2201 VALLEY STREET

OAKLAND, CA

PEDESTRIAN WIND STUDY

RWDI #1801767

August 2, 2018

SUBMITTED TO

Brandon Northart

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EXECUTIVE SUMMARY

The wind conditions around the proposed 2201 Valley Street development are discussed in detail within the content of this report and are summarized as follows:

Wind Hazard

- In the Existing + Project configuration, wind speeds that do not meet the wind hazard criterion are expected at three locations to the northeast of the proposed development and at one location to the west. The addition of four trees in the West Grand Avenue traffic median, between Telegraph Avenue and Valley Street, is anticipated to eliminate the one hazard exceedance to the west.
- The addition of the future buildings is predicted to eliminate all hazard exceedances around the project site, both with and without trees in the West Grand Avenue median.

Wind Comfort

- For the Existing configuration, most locations tested passed the 11 mph comfort criterion. Wind speeds are expected to increase slightly with the addition of the proposed development and the future buildings, with additional areas exceeding the 11 mph criterion.



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1 INTRODUCTION

RWDI was retained by Urban Planning Partners, Inc., to assess and consult on the pedestrian wind conditions on and around the proposed 2201 Valley Street development in Oakland, CA. This report presents the project objectives, background, approach, and provides a discussion of the results from RWDI's assessment.

1.1 Project Description

The project site, as shown in Image 1, is bound by Valley Street to the east, Telegraph Avenue to the west, West Grand Avenue to the north and 22nd Street to the south. The proposed building is roughly 450 ft tall, including terraces at Levels 5, 8, and 17, and on the roof.

1.2 Objectives

The purpose of the study is to assess the wind environment around the project in terms of pedestrian comfort and safety. The quantitative assessment was based on wind speed measurements on a scale model of the project and its surroundings in a boundary-layer wind tunnel. The assessment focused on critical pedestrian areas including the main and secondary entrances, outdoor terraces, and sidewalks along nearby streets.

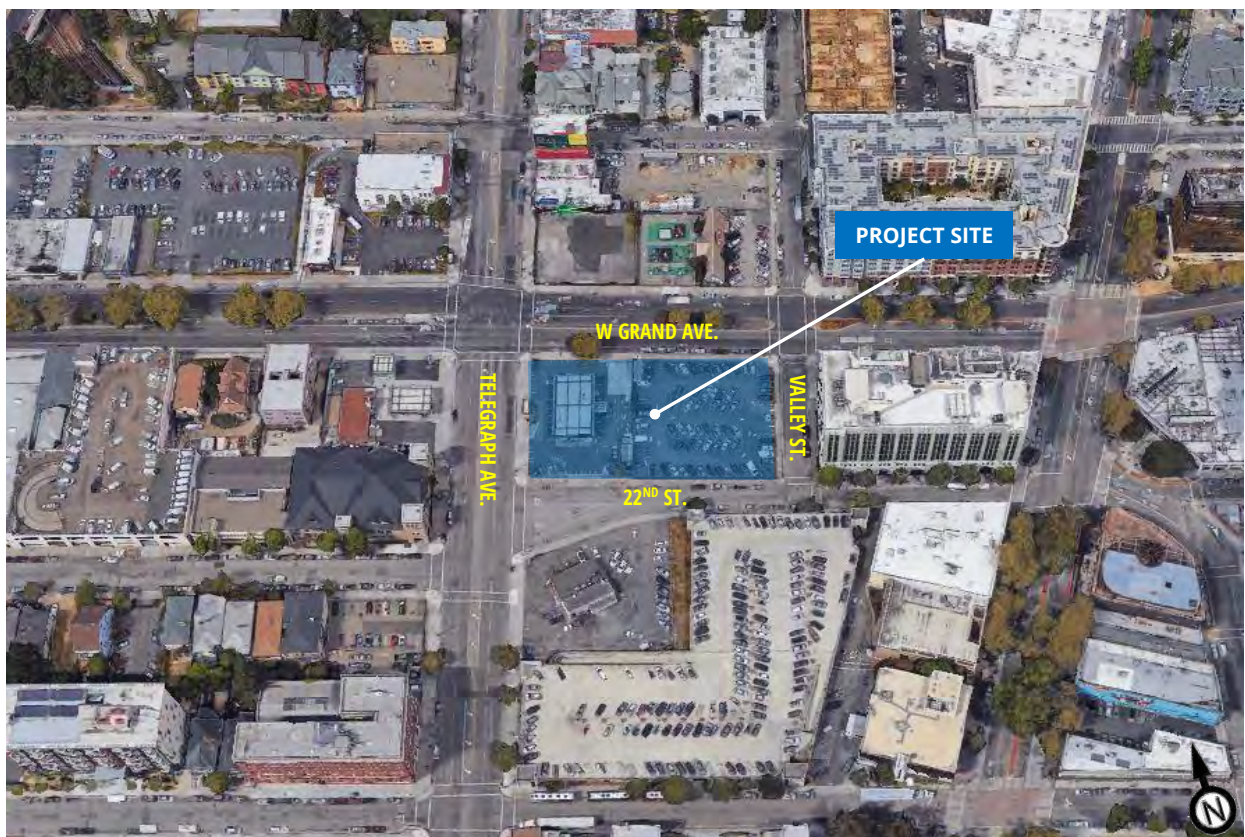


Image 1: Site Plan – Aerial view of site and surroundings (courtesy of Google™ Earth)



2 METHODOLOGY

2.1 Wind Tunnel Study Model

To assess the wind environment around the proposed Project, a 1:400 (1" = 33') scale model of the project site and surroundings was constructed for the wind tunnel tests and the following configurations were tested:

A – Existing:	Existing site with existing surroundings and landscaping, including buildings that are approved/under-construction (Image 2a).
B – Existing + Project:	Proposed 2201 Valley Street development present with existing and approved/under construction surrounding buildings, existing landscaping, and proposed landscaping (Image 2b).
C – Existing + Project + Median Trees:	Proposed 2201 Valley Street development present with existing and approved/under construction surrounding buildings, existing landscaping, proposed landscaping, and proposed landscaping in the West Grand Avenue traffic median (Image 2c).
D – Project + Cumulative:	Proposed 2201 Valley Street development present with existing and approved/under-construction surrounding buildings, anticipated future buildings, existing landscaping, and proposed landscaping (Image 2d).
E – Project + Cumulative + Median Trees:	Proposed 2201 Valley Street development present with existing and approved/under-construction surrounding buildings, anticipated future buildings, existing landscaping, proposed landscaping, and proposed landscaping in the West Grand Avenue traffic median (Image 2e).

The scale model of the proposed project (as shown in Images 2b through 2e) was constructed using the design information and drawings listed in Appendix A. The wind tunnel model included all relevant surrounding buildings and topography within an approximate 1600 ft radius of the study site. The boundary-layer wind conditions beyond the modeled area were also simulated in RWDI's wind tunnel. The wind tunnel model was instrumented with 60 grade level wind speed sensors (and 7 sensors above-grade for informational purposes) to measure mean and gust wind speeds at a full-scale height of 5 ft. The placement of wind measurement locations was based on our experience and understanding of the pedestrian usage for this site and reviewed by Urban Planning Partners. These measurements were recorded for 36 equally incremented wind directions.

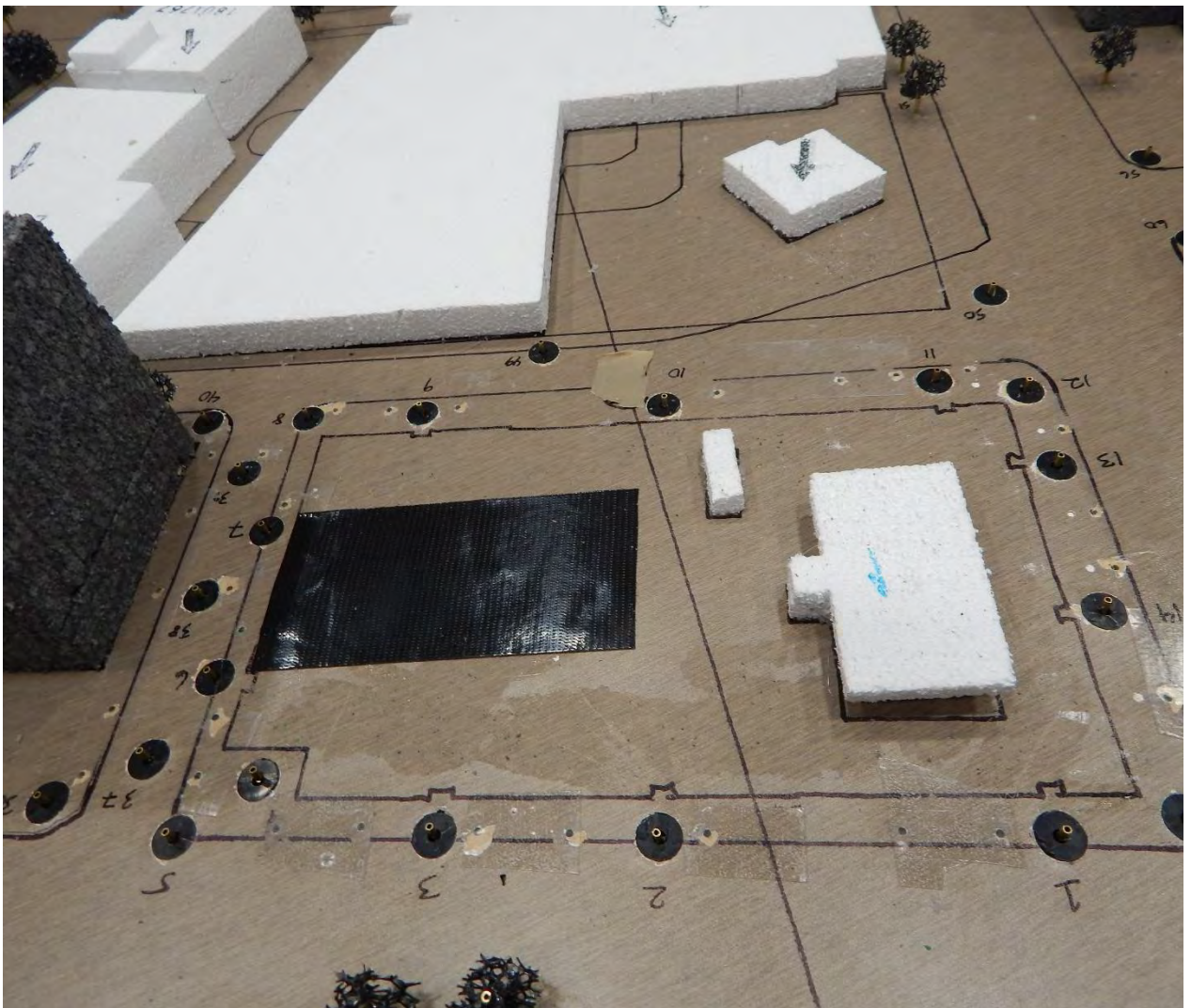


Image 2a: Wind tunnel study model – Existing configuration

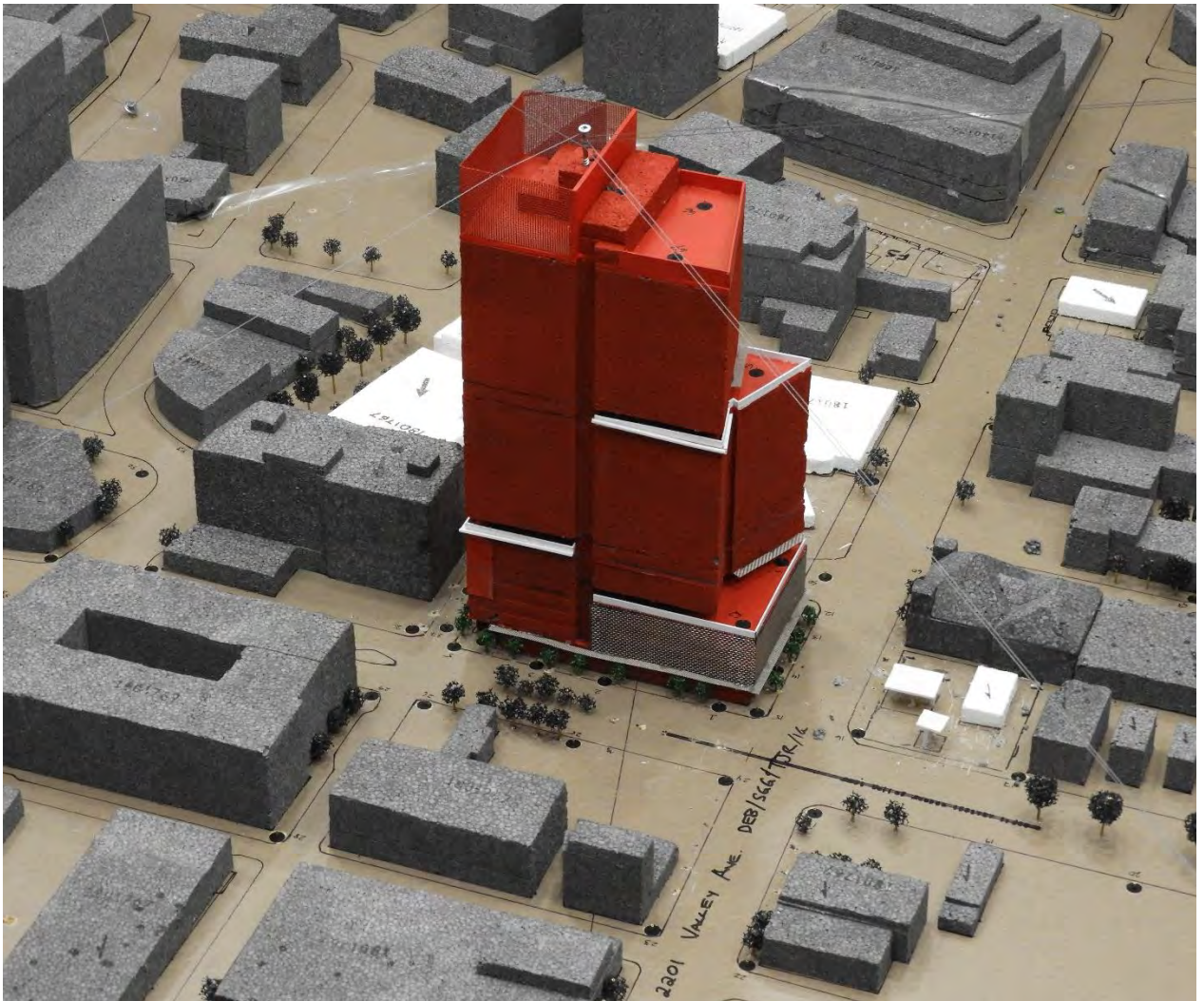


Image 2b: Wind tunnel study model – Existing + Project configuration

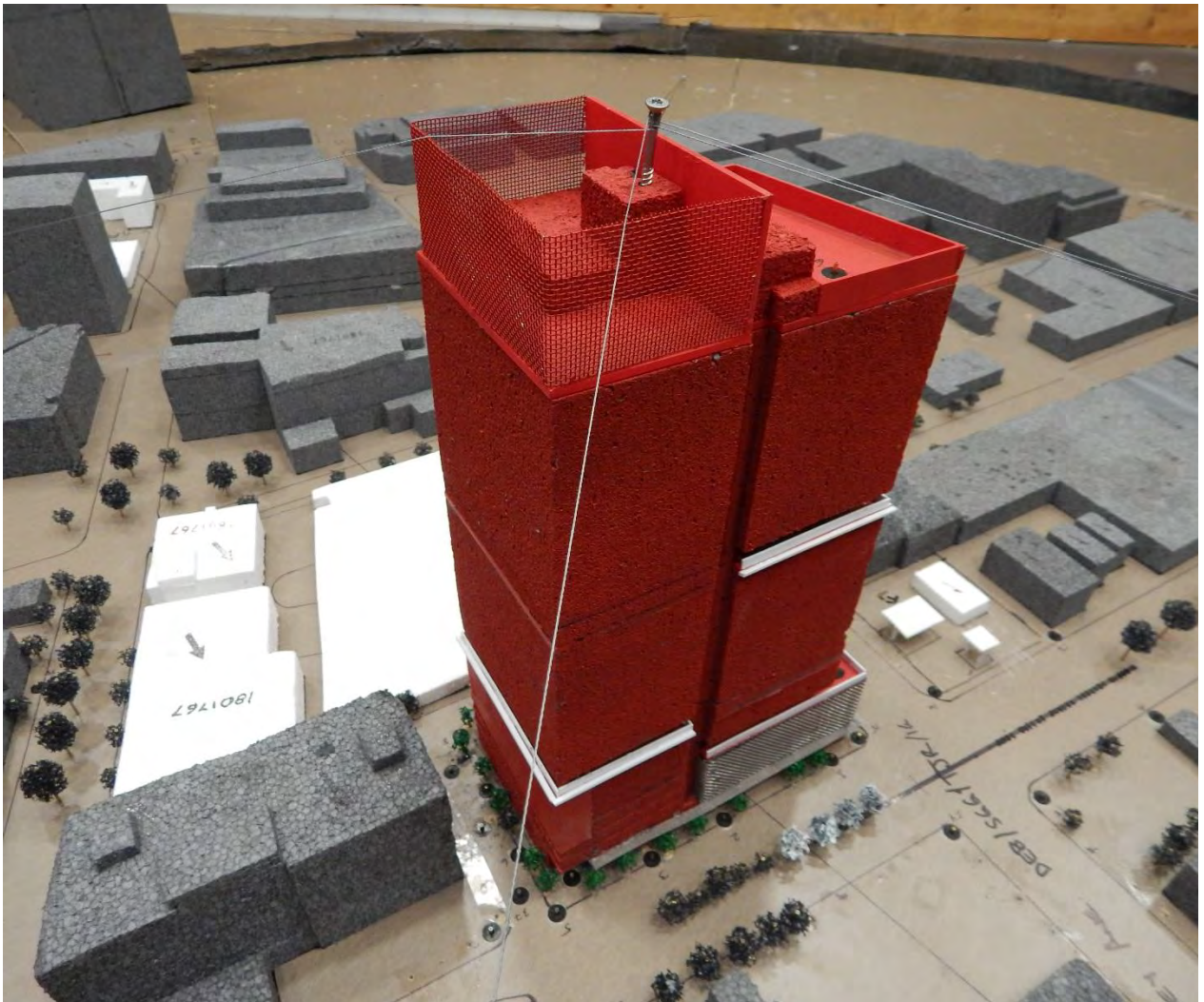


Image 2c: Wind tunnel study model – Existing + Project + Median Trees configuration



Image 2d: Wind tunnel study model – Project + Cumulative configuration



Image 2e: Wind tunnel study model – Project + Cumulative + Median Trees configuration

2.2 Meteorological Data

Wind statistics recorded at the Metropolitan Oakland International Airport from 1987 to 2017 were analyzed for annual wind conditions. Image 3 graphically depicts the directional distributions of annual wind frequencies and speeds. Winds are frequent from the northwest through west-southwest directions throughout the year, as indicated by the wind rose. Strong winds of a mean speed greater than 20 mph measured at the airport (at an anemometer height of 33 feet) occur 2.8% of the time annually.

Wind statistics from the Metropolitan Oakland International Airport were combined with the wind tunnel data in order to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the City of Oakland Significant Wind Impact Criterion.

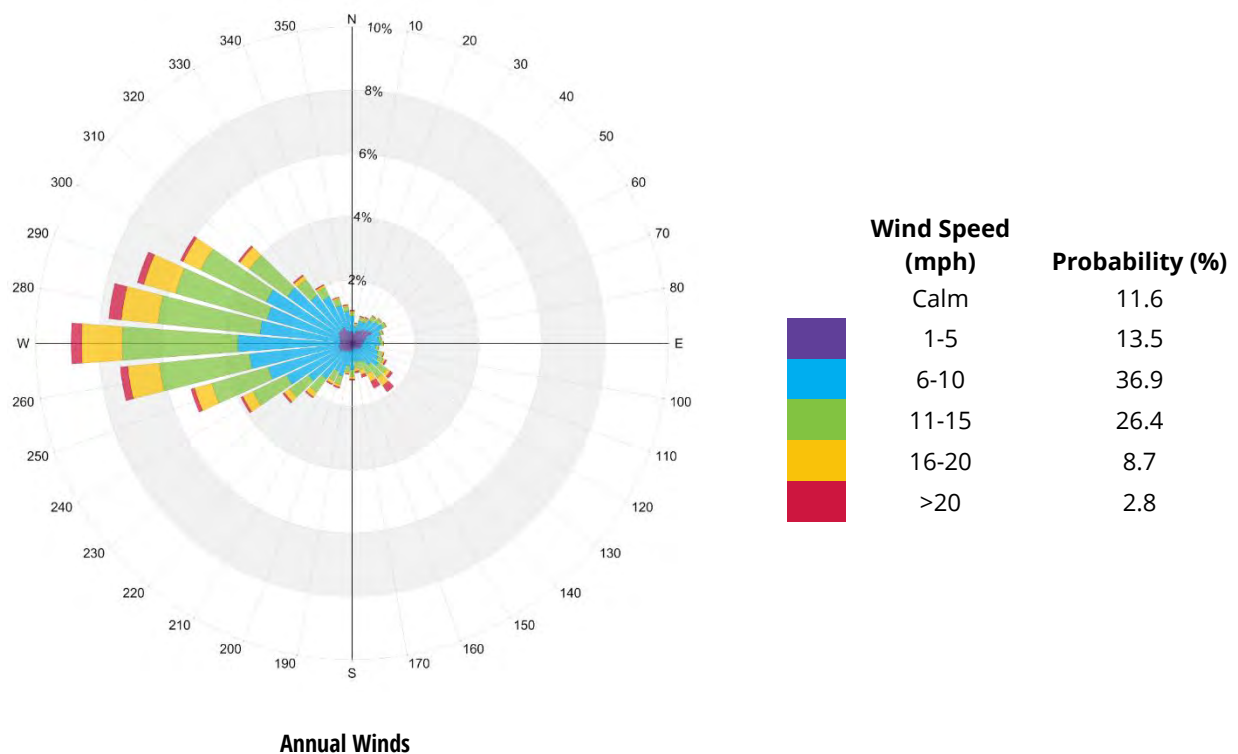


Image 3: Directional distribution of winds approaching Metropolitan Oakland International Airport from 1987 to 2017



2.3 Planning Code Requirements

A wind analysis needs to be done if the height of the project is 100 feet or greater (measured to the roof) and one of the following conditions exists: (a) the project is located adjacent to a substantial water body (i.e. Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located Downtown. Since the proposed project (approximately 450 feet tall) exceeds 100 feet in height and is located Downtown, it is subject to the thresholds of significance.

For the purposes of this study, the City of Oakland considers a significant wind impact to occur if a project were to "Create winds exceeding 36 mph for more than one hour during daylight hours during the year". The Planning Code defines these wind speeds in terms of equivalent wind speeds and average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence. Equivalent wind speeds were calculated according to the specifications in the City of Oakland Significant Wind Impact Criterion, whereby the mean hourly wind speed is increased when the turbulence intensity is greater than 15% according to the following formula:

$$EWS = V_m \times (2 \times TI + 0.7)$$

where **EWS** = equivalent wind speed

V_m = mean pedestrian-level wind speed

TI = turbulence intensity

2.4 Pedestrian Comfort

Although not applicable towards Significant Wind Impacts as defined by the City of Oakland, wind comfort speeds have been calculated for informational purposes. The comfort criteria are that wind speeds do not exceed 11 mph for more than 10% of the time during the year, when calculated for daylight hours, in substantial pedestrian use areas. A lower wind speed threshold of 7 mph may be considered for public seating areas where calmer wind conditions are ideal.

2.5 Cumulative Buildings

Anticipated future buildings were included in the Project + Cumulative and Project + Cumulative + Median Trees configurations. These sites are shown in Image 4 and listed in the table below.

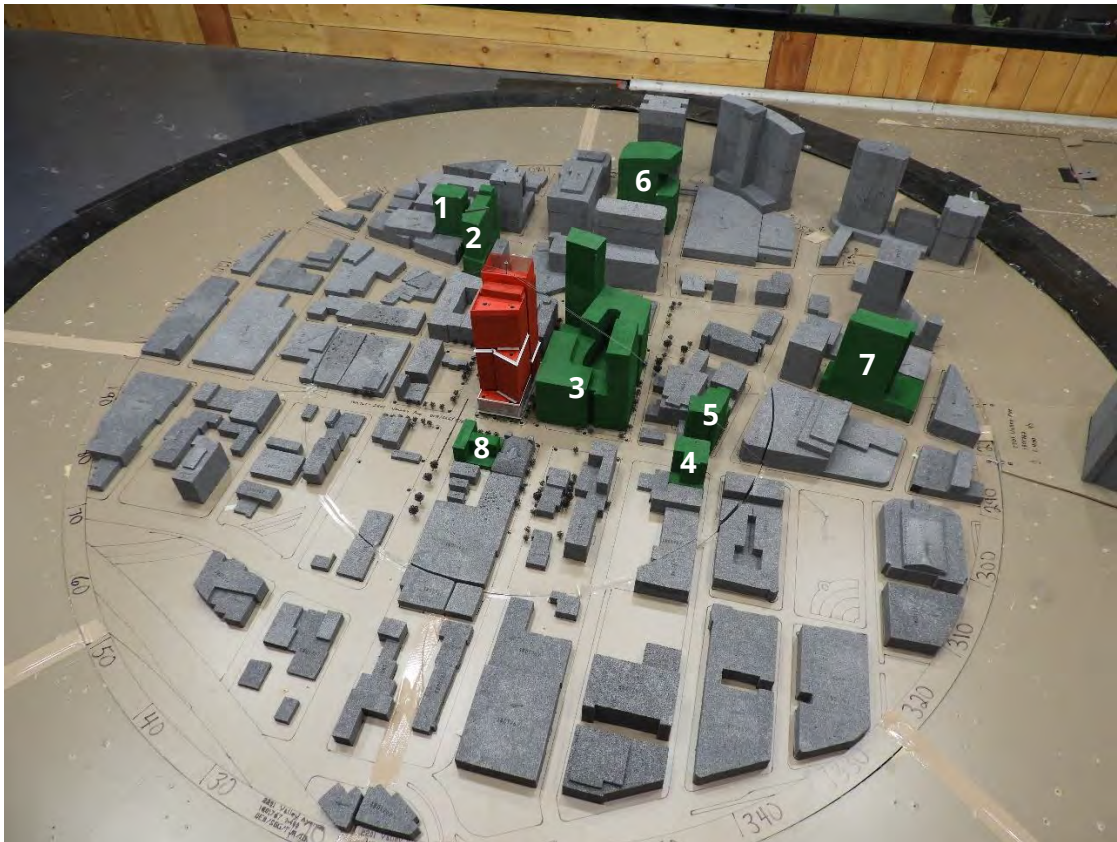


Image 4: Cumulative buildings

CUMULATIVE BUILDING LIST	
1	2305 Webster Street
2	2270 Broadway
3	2100 Telegraph
4	2015 Telegraph
5	2016 Telegraph
6	Kaiser Plaza – 325 22 nd Street
7	1900 Broadway
8	2225 Telegraph



3 PREDICTED WIND CONDITIONS

This section presents the results of the wind tunnel measurements analyzed in terms of equivalent wind speeds as defined by the equation in Section 2.3. The text in the report simply refers to the data as wind speeds.

Table 1 presents the wind hazard and wind comfort results for the five configurations tested. The wind hazard section lists the wind speed predicted to be exceeded one hour per year at each measurement point. The predicted number of hours per year that the City of Oakland Significant Wind Impact Criterion (one-minute wind speed of 36 mph) is exceeded is also provided. For wind comfort, the measured 10% exceeded (90th percentile) equivalent wind speed and the percentage of time that the wind speed exceeds 11 mph are shown for each measurement point and for areas considered to be used primarily for walking. A letter “e” in the last column of each configuration indicates an exceedance of the wind hazard of 36 mph or a wind comfort exceedance above 11 mph.

Above-grade wind hazard and wind comfort results are shown in Table 2 for informational purposes.

3.1 Wind Hazard Conditions

3.1.1 Existing

The Existing configuration was tested with all existing street trees around the site. Wind speeds at all 60 grade level locations tested are predicted to pass the wind hazard criterion with an average wind speed of 23 mph (Figure 1a and Table 1).

3.1.2 Existing + Project

In addition to the existing street trees, the Existing + Project configuration was tested with 24 proposed street trees along the perimeter of the proposed building.

In the Existing + Project configuration, wind speeds at most of the grade level locations tested are expected to pass the wind hazard criterion (Figure 1b and Table 1). Exceptions occur at the three locations to the northeast of the proposed building (Locations 5, 26, and 36) and at one location to the west (Location 16). The average wind speed is predicted to increase slightly to 28 mph with the addition of the proposed development.



3.1.3 Existing + Project + Median Trees

The Existing + Project + Median Trees configuration was tested with four trees in the West Grand Avenue traffic median, between Telegraph Avenue and Valley Street, in addition to all trees included in the Existing + Project configuration. The addition of the median trees does not change the general wind conditions, but is expected to eliminate the wind hazard exceedance at Location 16 (Figure 1c and Table 1), reducing the number of locations that do not meet the wind hazard criterion from four to three.

3.1.4 Project + Cumulative

The Project + Cumulative configuration was tested with the same existing and proposed street trees as in the Existing + Project configuration. Wind speeds for this configuration are not predicted to exceed the wind hazard criterion at any of the grade level locations tested (Figure 1d and Table 1).

3.1.5 Project + Cumulative + Median Trees

The Project + Cumulative + Median Trees configuration was tested with four trees in the West Grand Avenue traffic median, between Telegraph Avenue and Valley Street, in addition to all trees included in the Project + Cumulative configuration. Similar to the Project + Cumulative configuration, wind speeds for this configuration are not predicted to exceed the wind hazard criterion at any of the grade level locations tested (Figure 1e and Table 1).

3.2 Wind Comfort Conditions

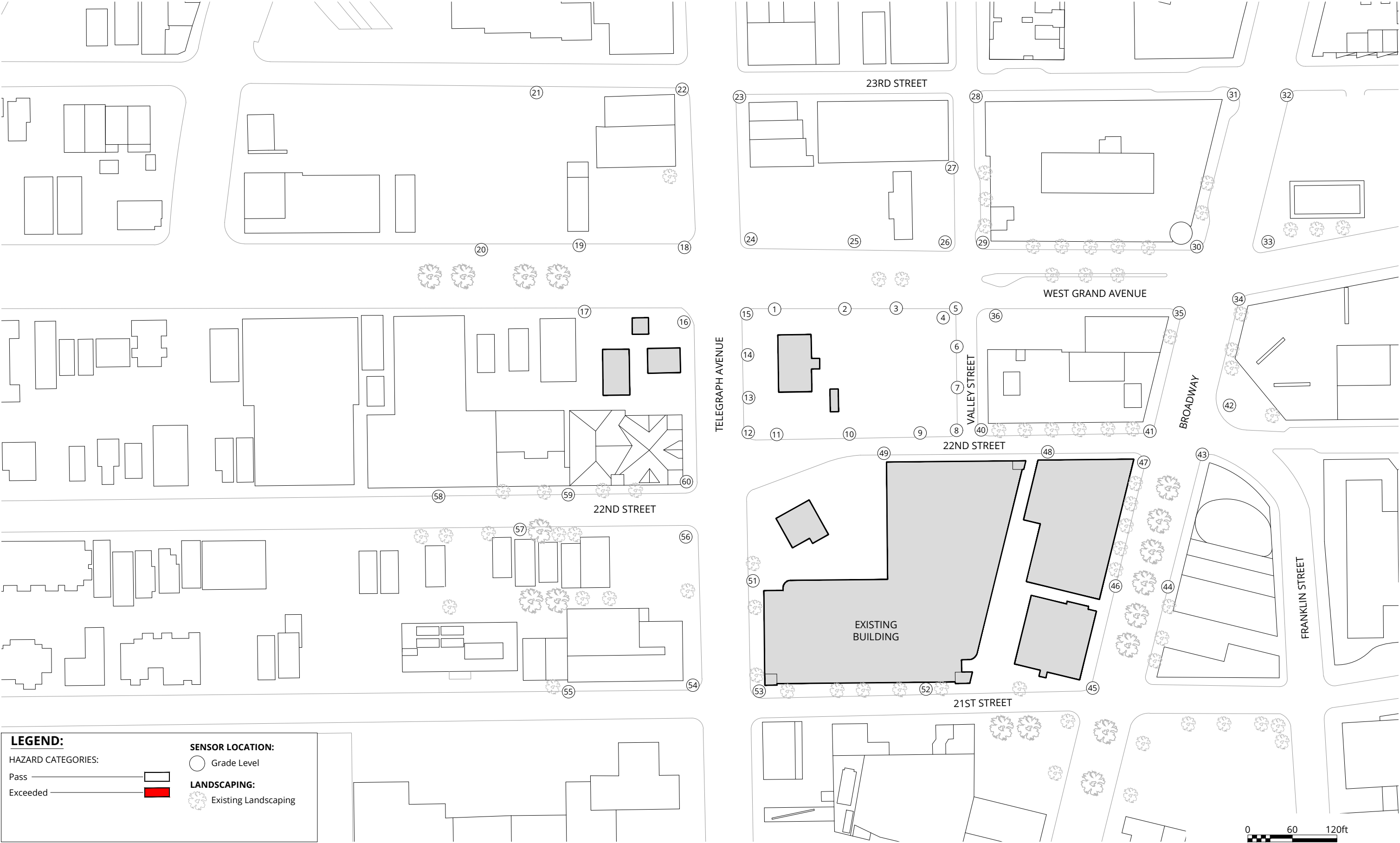
For the Existing configuration, wind speeds close to the project site are expected to be moderate, with most locations meeting the 11 mph criterion (Figure 2a and Table 1). Wind speeds that exceed the 11 mph criterion are generally predicted along Valley Street between West Grand Avenue and 22nd Street, to the east of the project site. Of the 60 grade level locations tested, 9 are anticipated to exceed to the 11 mph criterion with average wind speeds at 10 mph.

With the addition of the proposed project and future buildings, wind activity in the areas on and around the project site are predicted to increase slightly, with an average wind speed of 11 mph (Figures 2b – 2e and Table 1). The addition of four trees in the west Grand Avenue median is not expected to change these conditions.

4 APPLICABILITY

The wind conditions presented in this report pertain to the proposed 2201 Valley Street development as detailed in the architectural design drawings listed in Appendix A. Should there be any design changes that deviate from this list of drawings, the wind condition predictions presented may change. Therefore, if changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

FIGURES



Pedestrian Wind Hazard Conditions

Existing
Annual

2201 Valley Street - Oakland, CA

True North



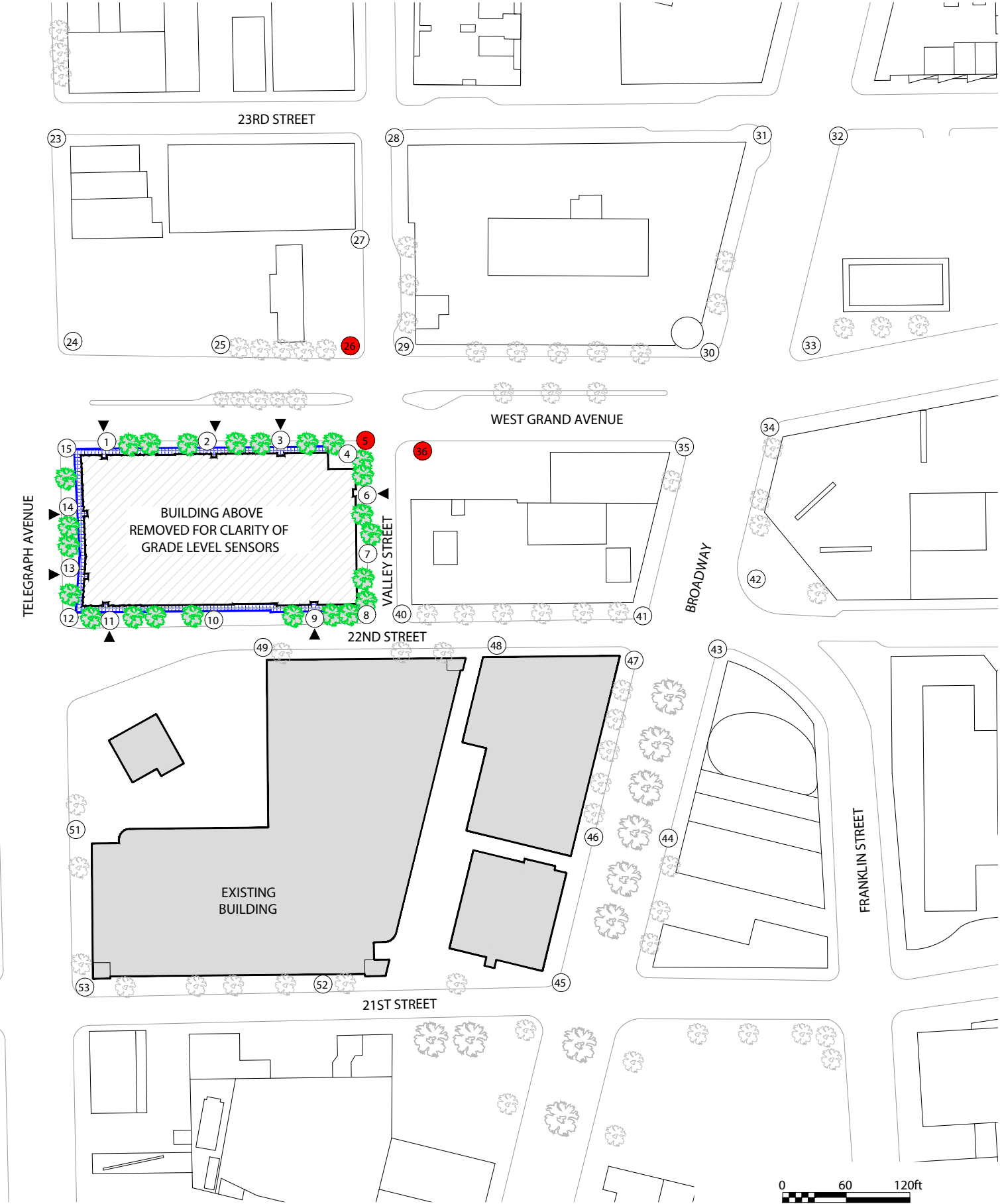
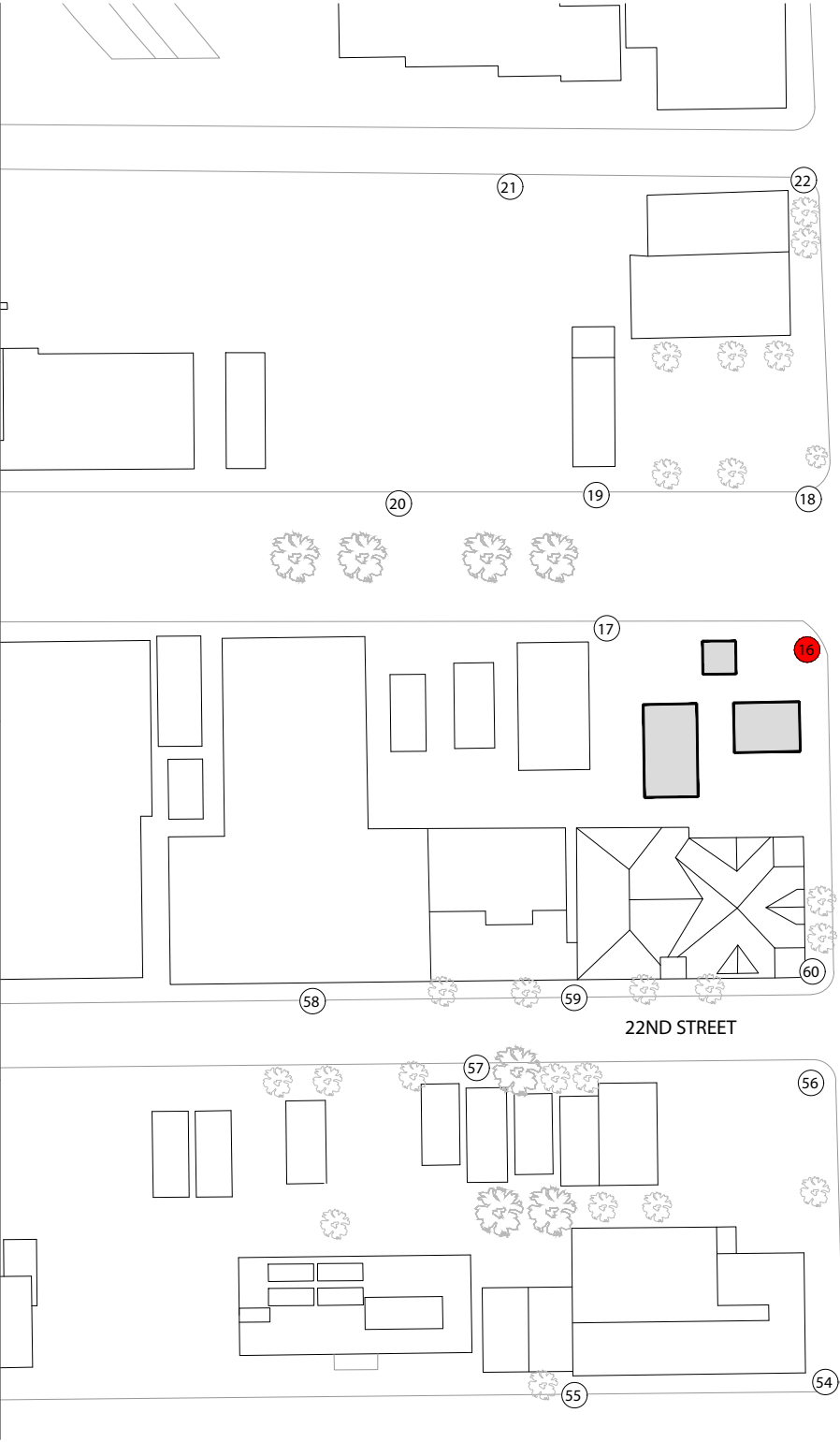
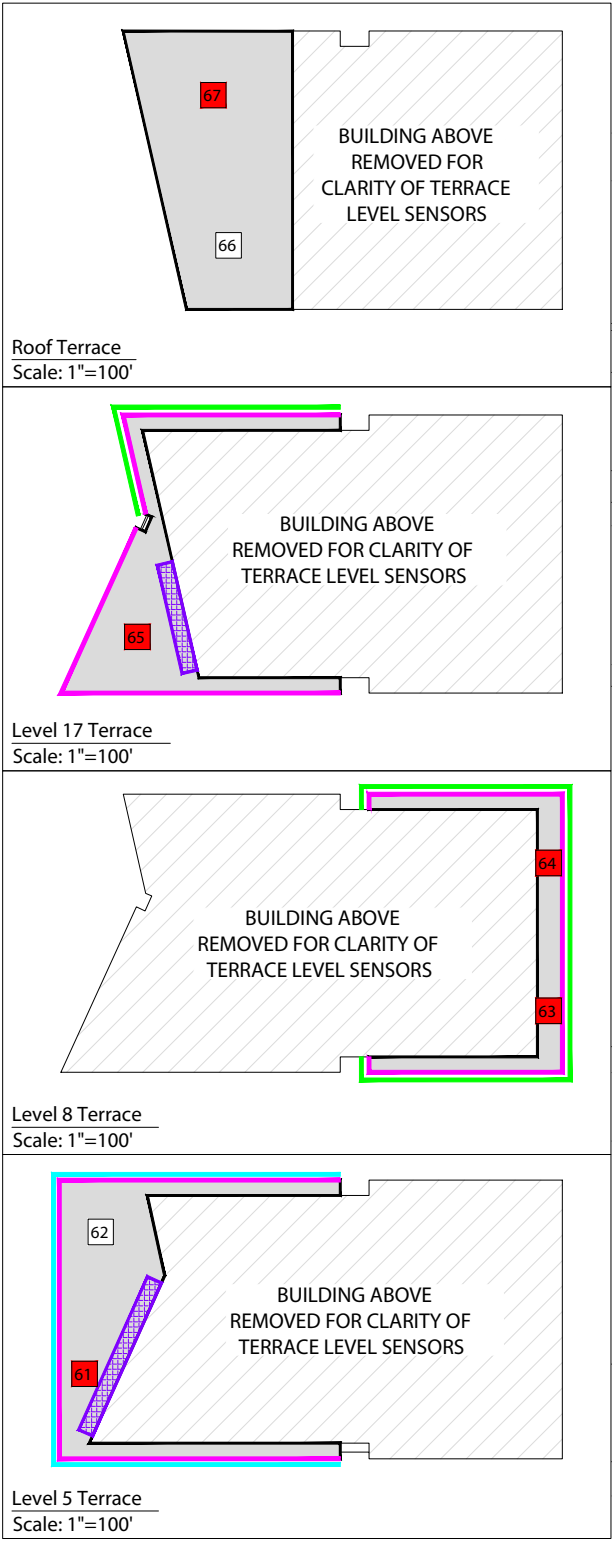
Drawn by: DBB | Figure: 1a

Approx. Scale: 1"=120'

Project #1801767

Date Revised: June 13, 2018





LEGEND:

HAZARD CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

○ Grade Level

□ Terrace Level

► Main Entrance Location

POTENTIAL MINIMIZING DESIGN FEATURES:

Existing Landscaping

Proposed Landscaping

6' Tall Solid Parapet

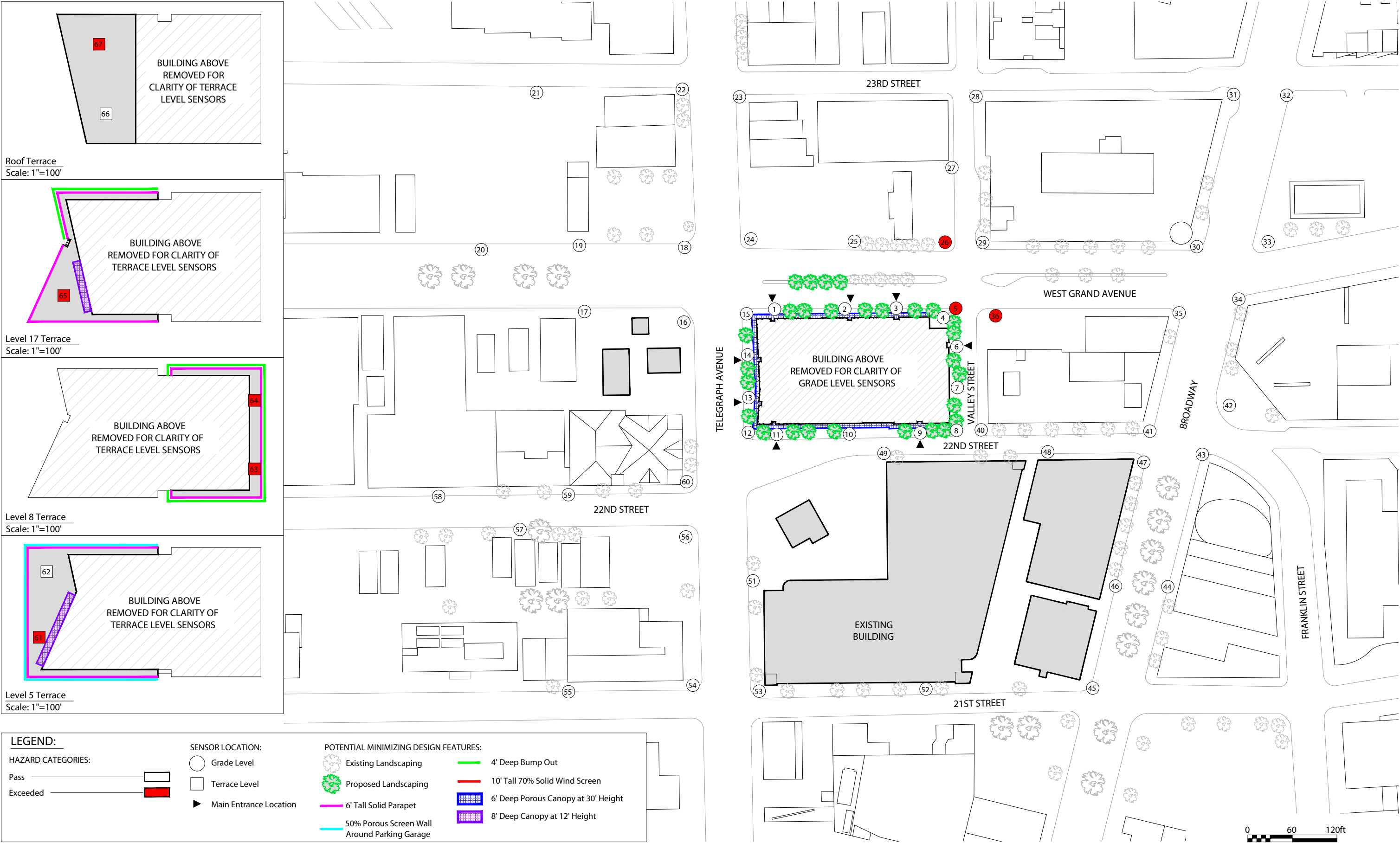
50% Porous Screen Wall Around Parking Garage

4' Deep Bump Out

10' Tall 70% Solid Wind Screen

6' Deep Porous Canopy at 30' Height

8' Deep Canopy at 12' Height



Pedestrian Wind Hazard Conditions
Existing + Project + Median Trees
Annual

2201 Valley Street - Oakland, CA



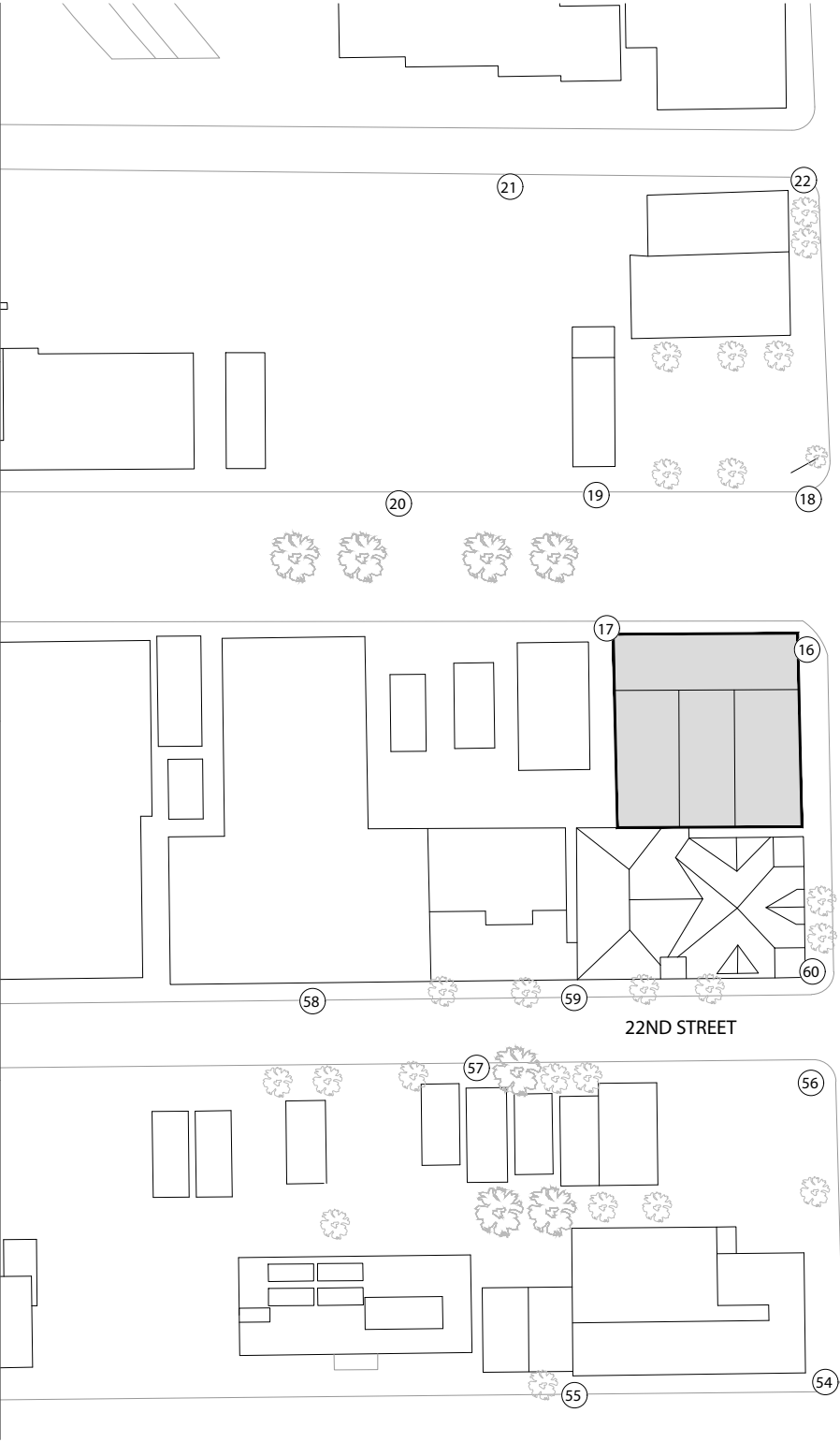
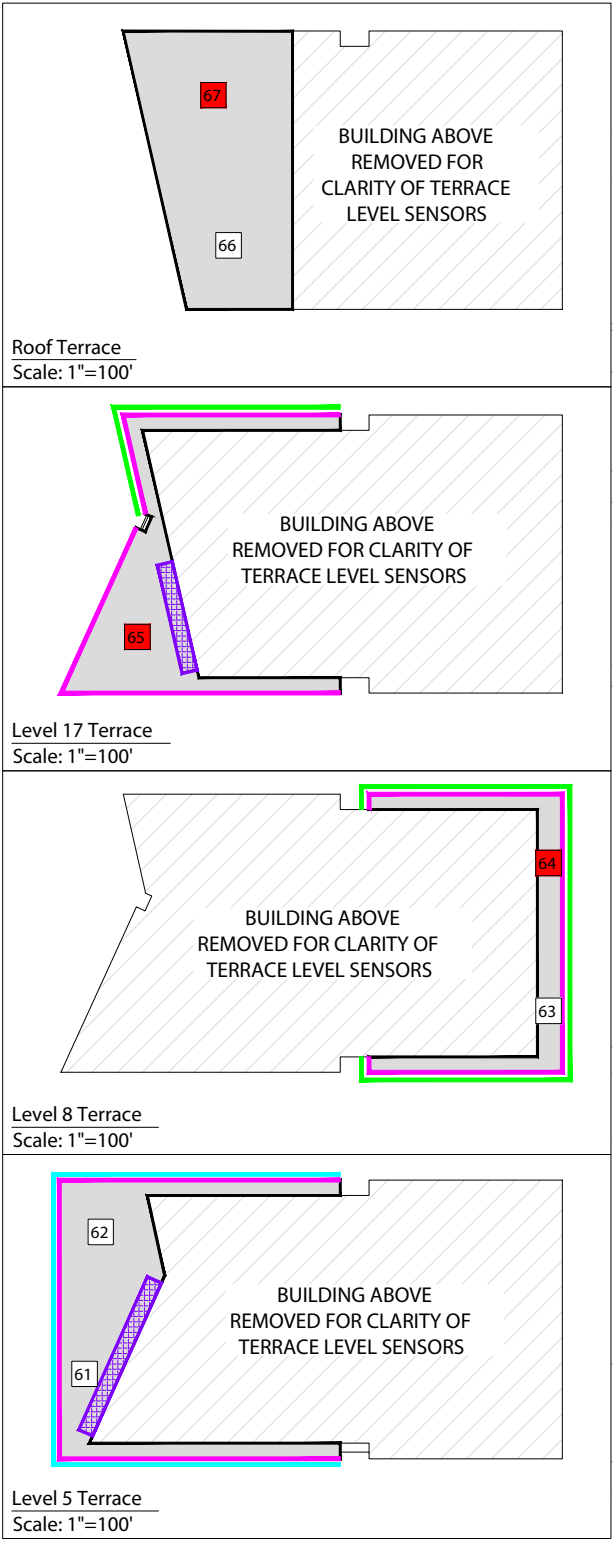
Project #1801767

Drawn by: DBB Figure: 1C

Approx. Scale: 1"=120'

Date Revised: July 24, 2018





LEGEND:

HAZARD CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

○ Grade Level

□ Terrace Level

► Main Entrance Location

POTENTIAL MINIMIZING DESIGN FEATURES:

Existing Landscaping

Proposed Landscaping

6' Tall Solid Parapet

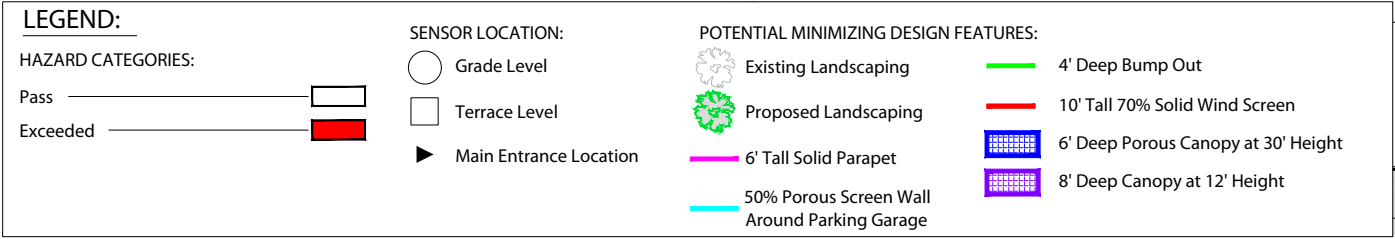
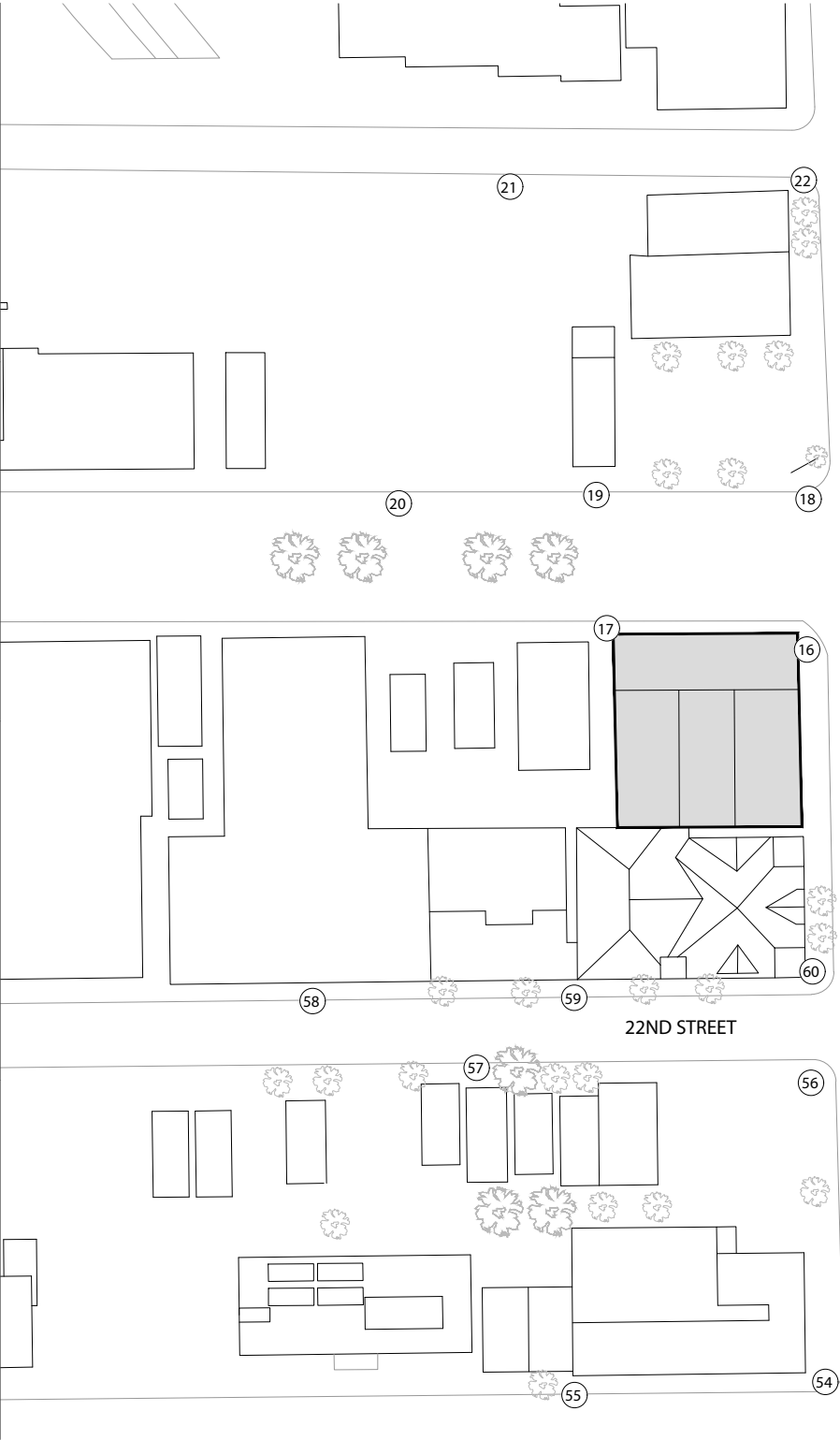
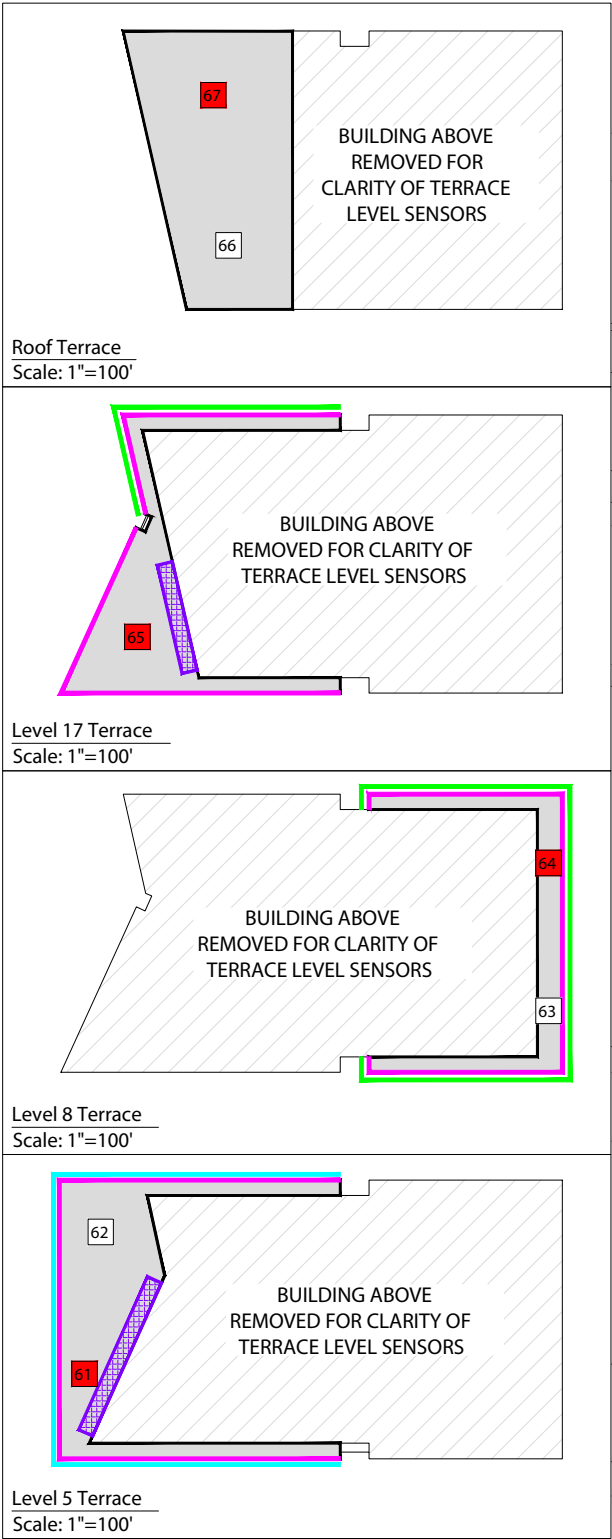
50% Porous Screen Wall Around Parking Garage

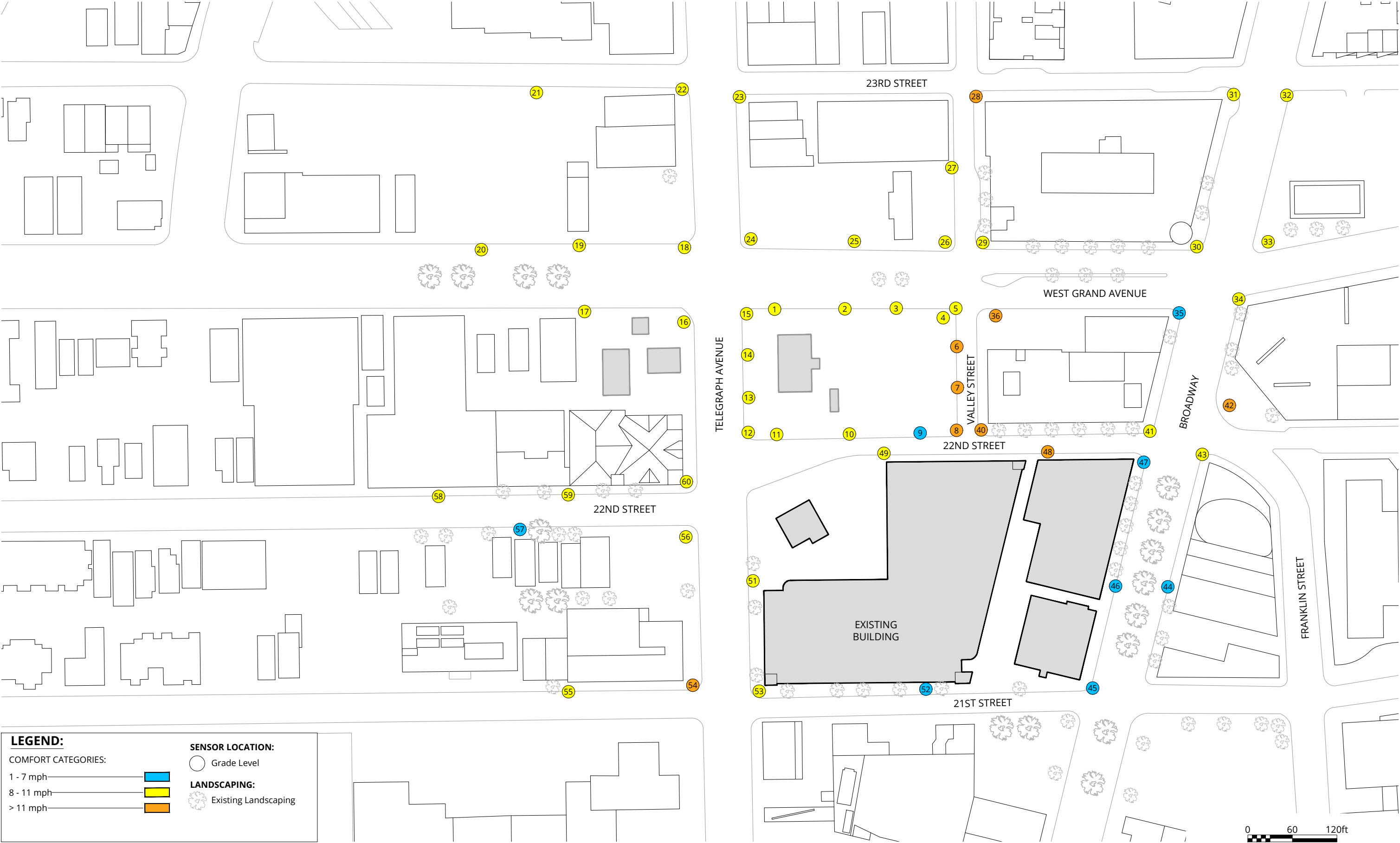
4' Deep Bump Out

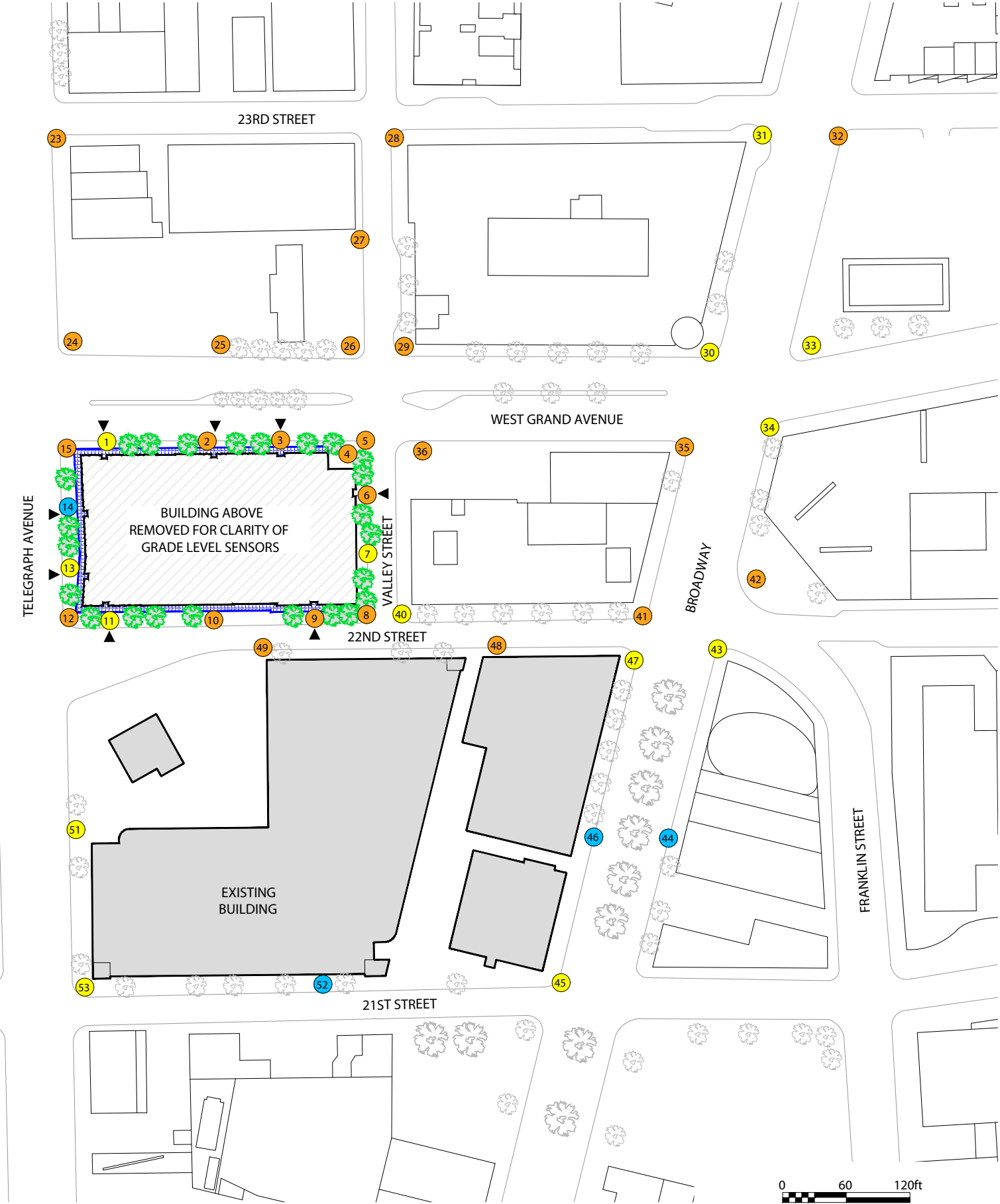
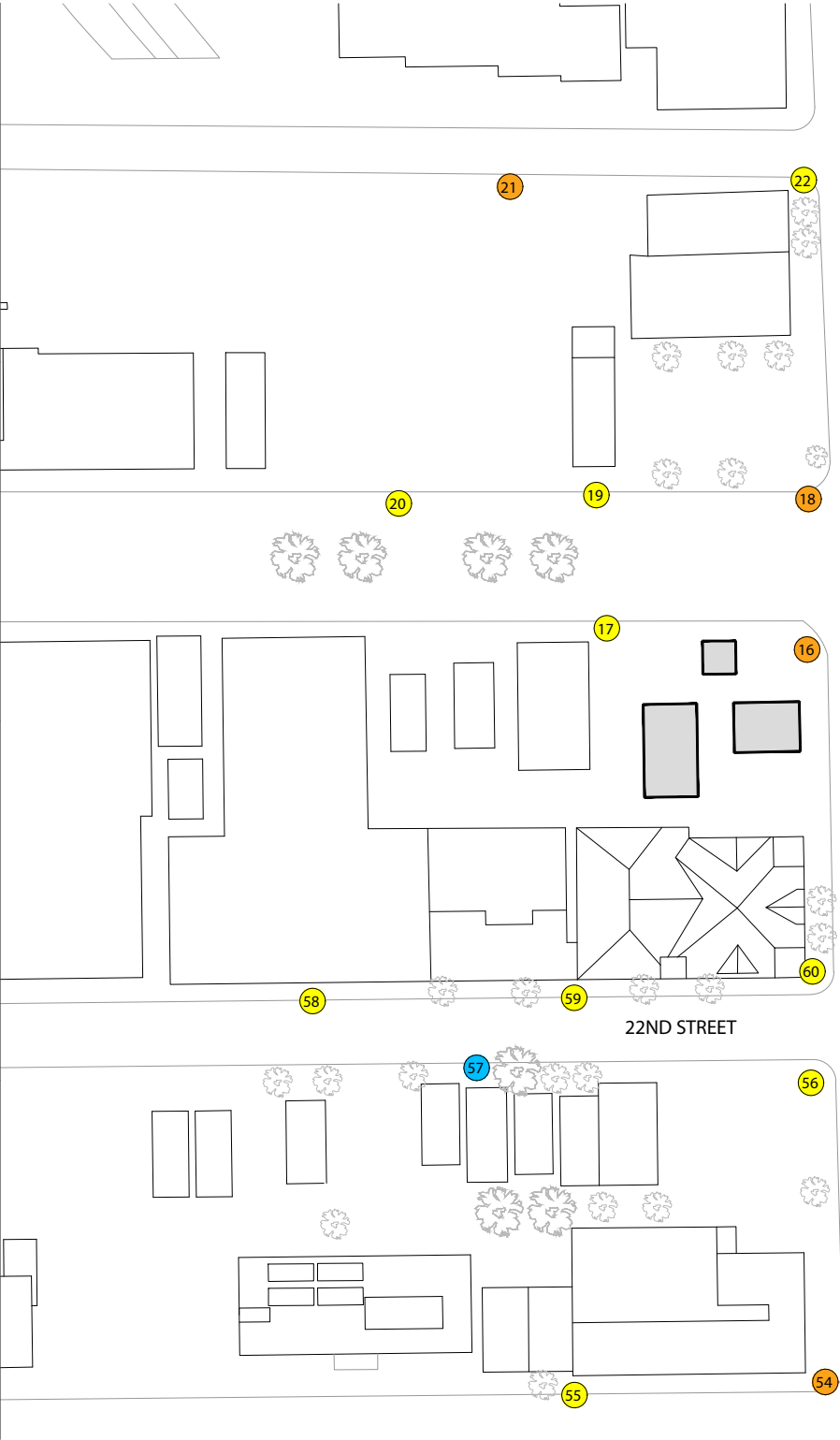
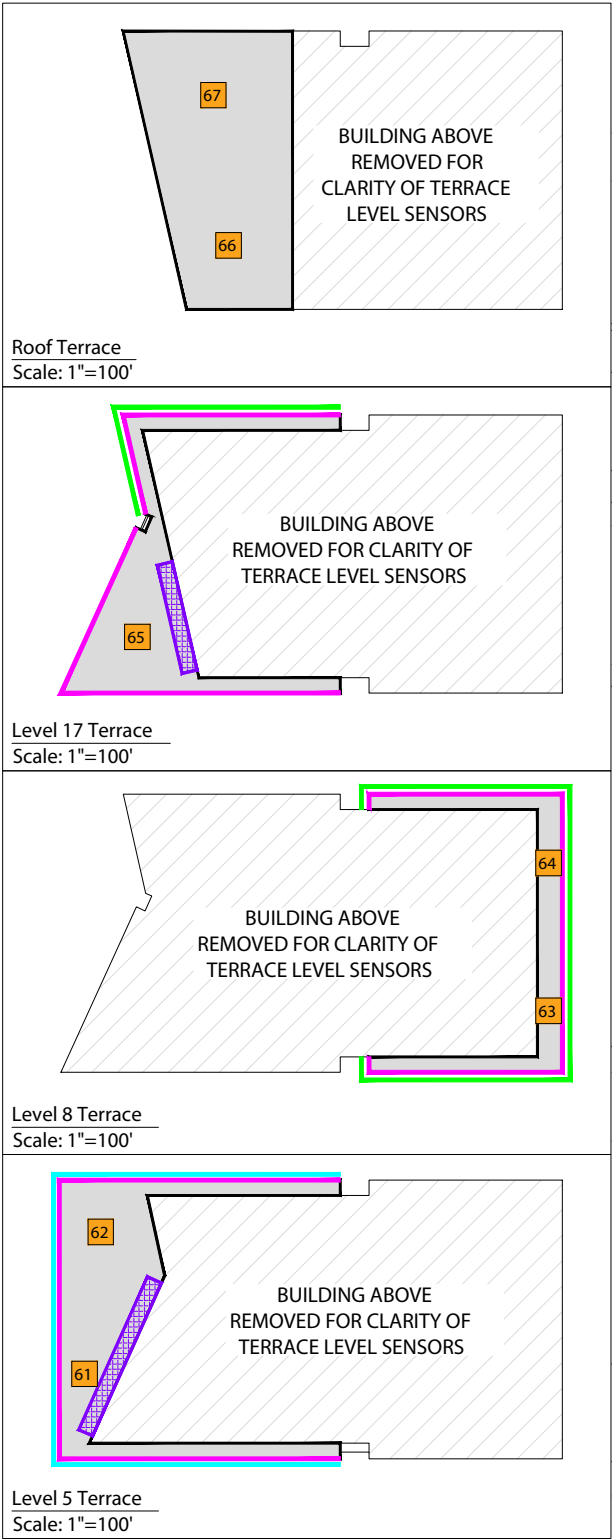
10' Tall 70% Solid Wind Screen

6' Deep Porous Canopy at 30' Height

8' Deep Canopy at 12' Height







LEGEND:

COMFORT CATEGORIES:

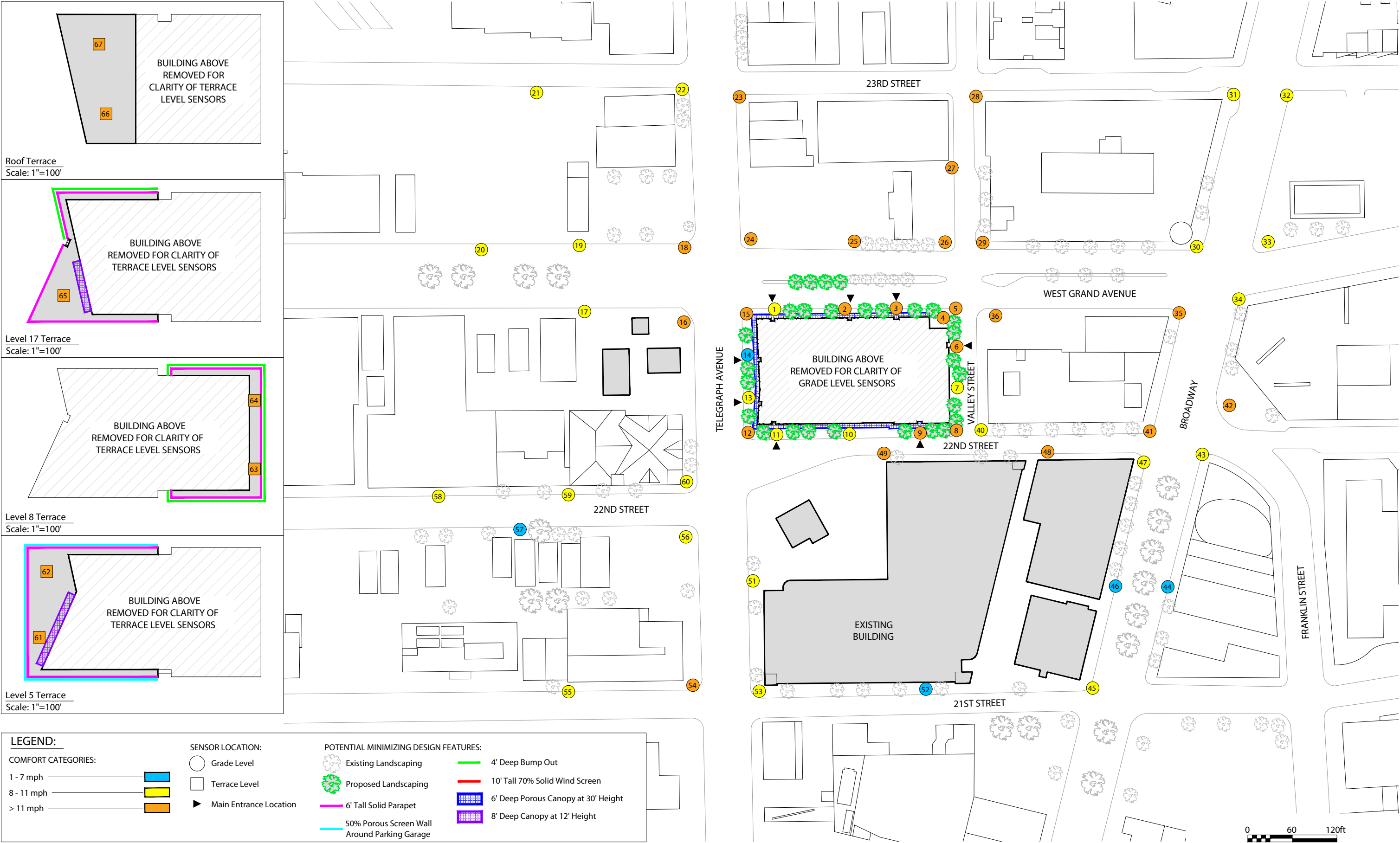
- 1 - 7 mph
- 8 - 11 mph
- > 11 mph

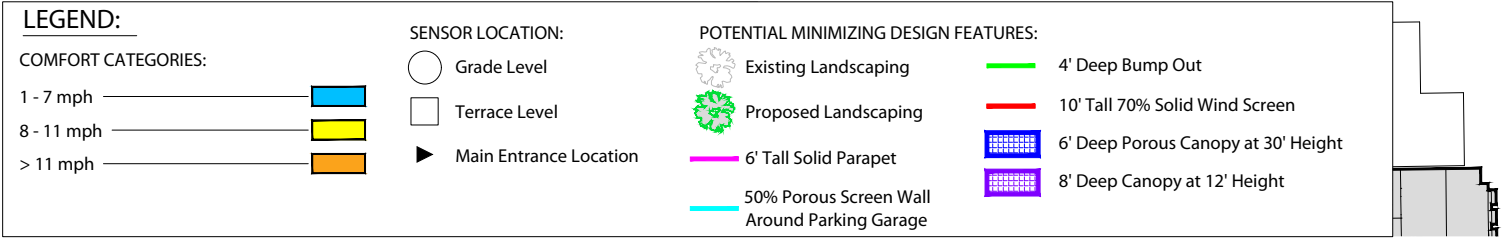
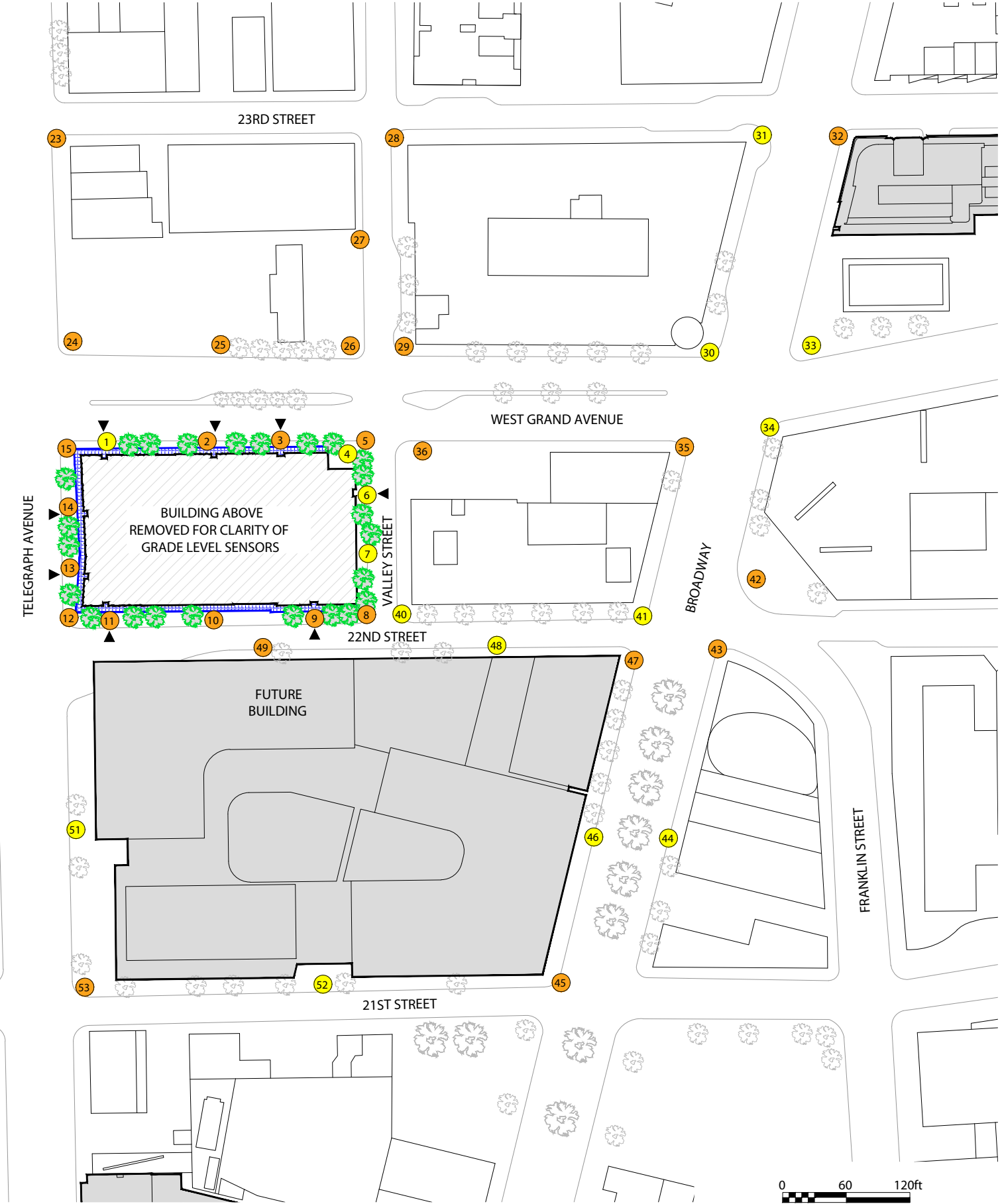
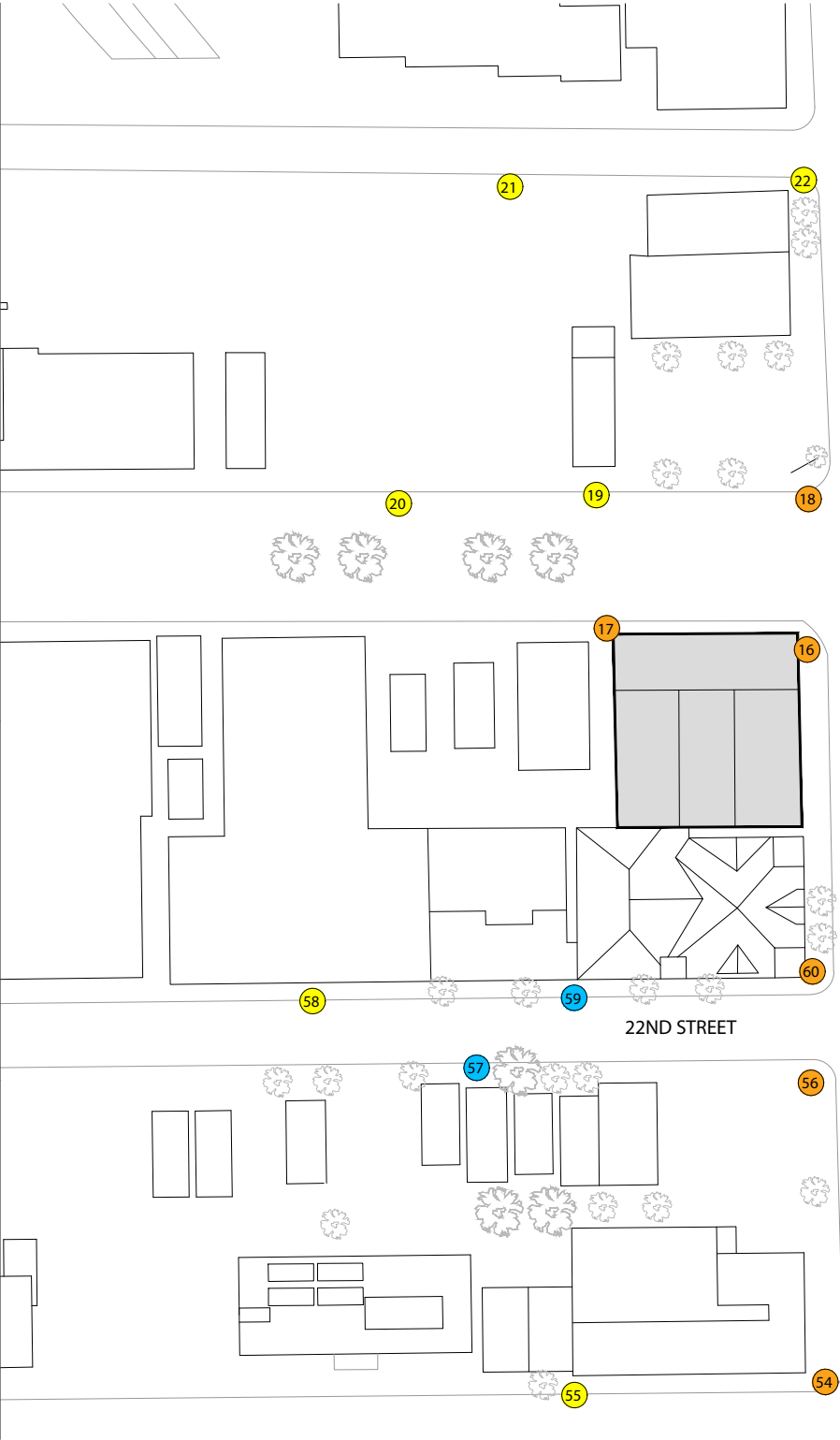
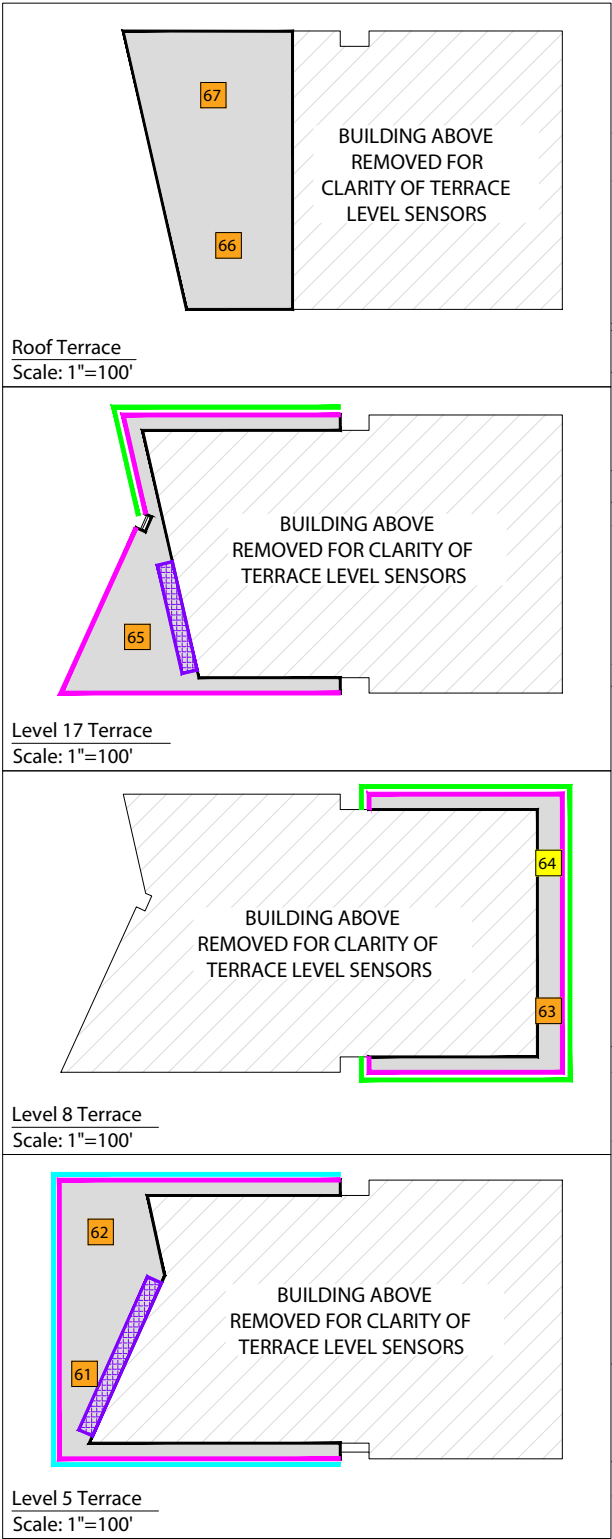
SENSOR LOCATION:

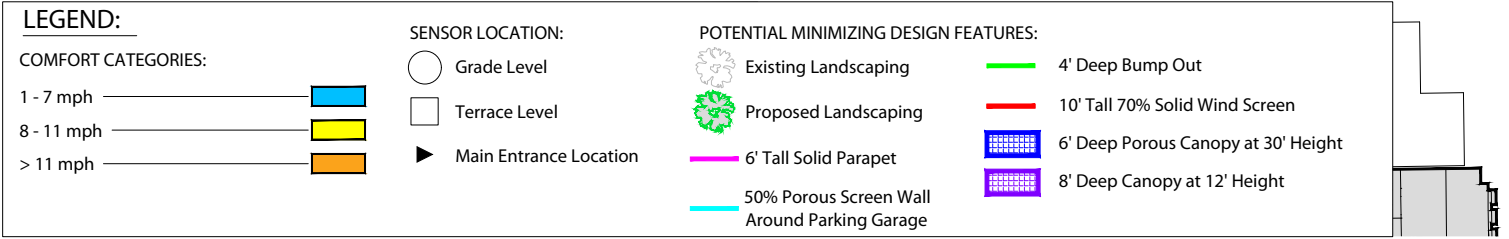
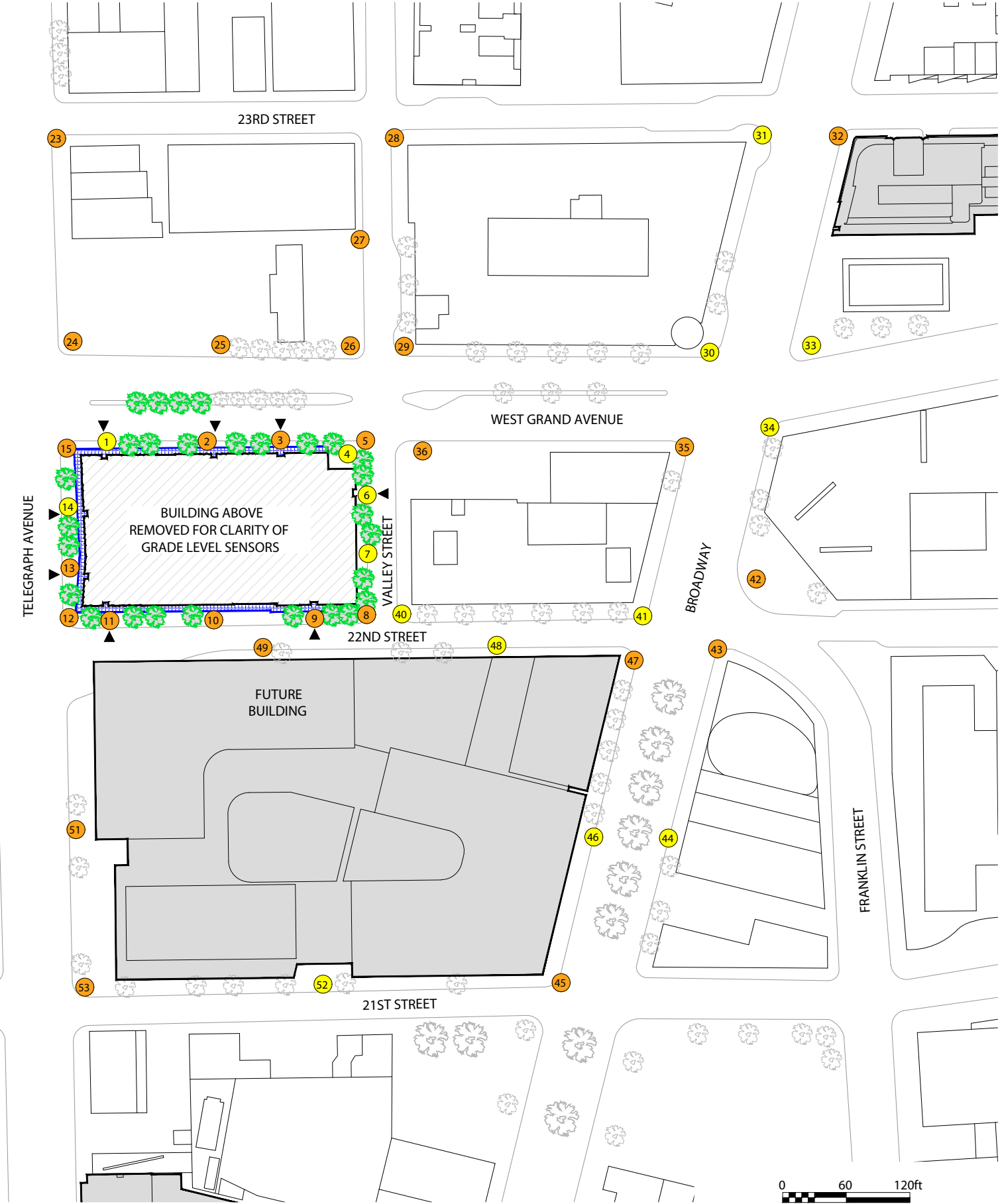
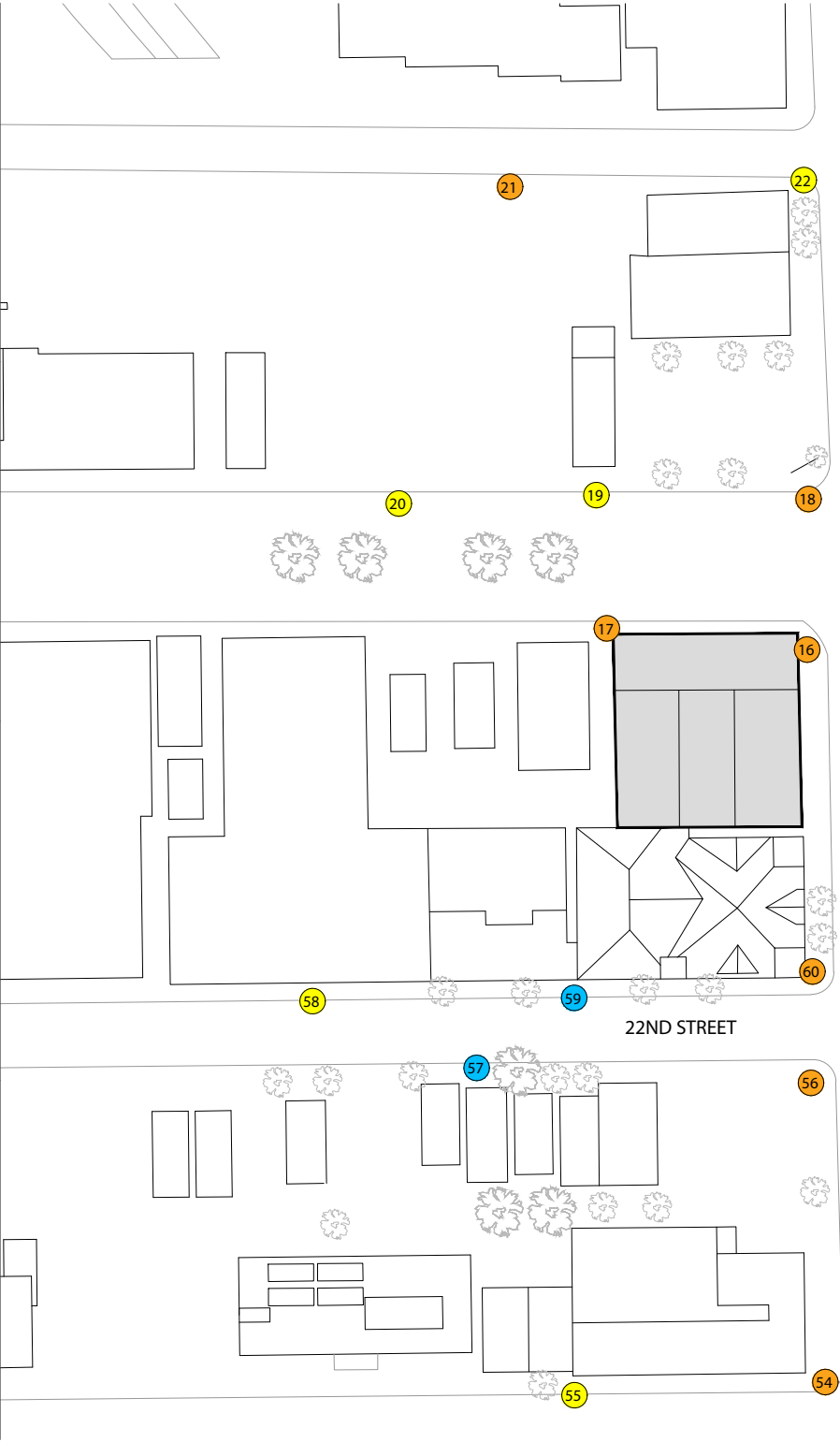
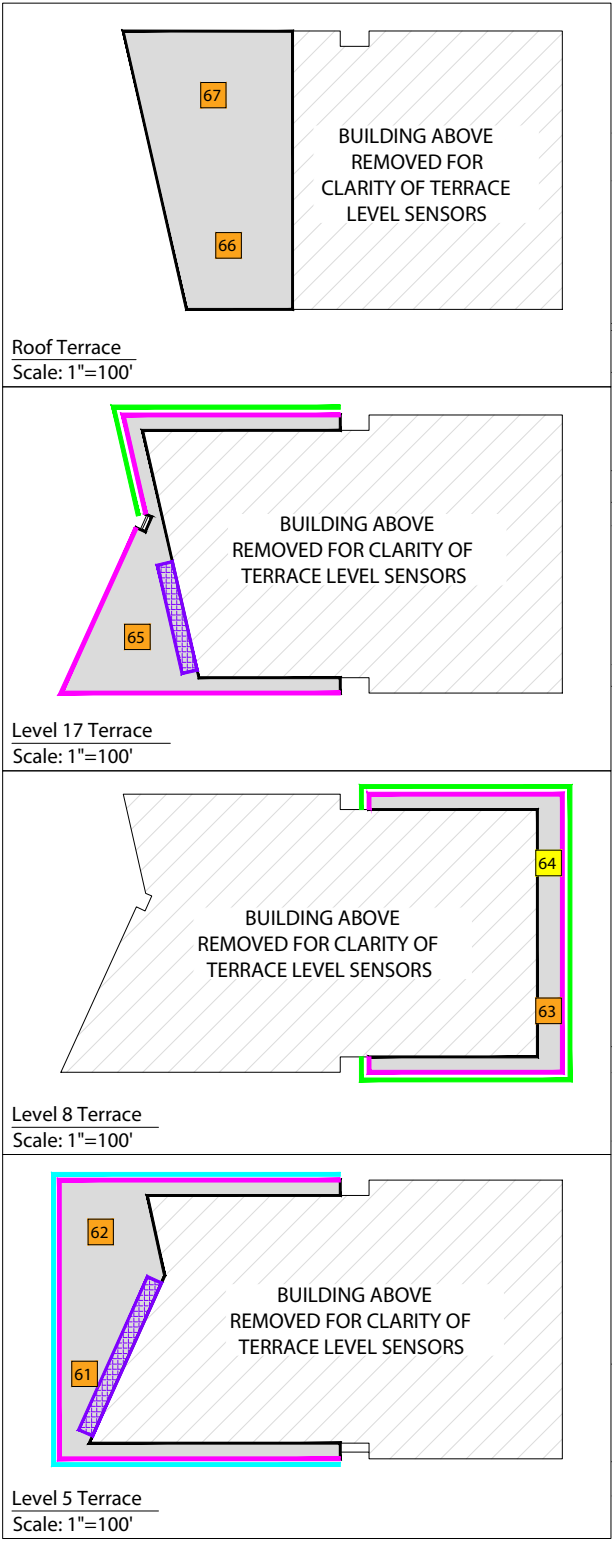
- Grade Level
- Terrace Level
- Main Entrance Location

POTENTIAL MINIMIZING DESIGN FEATURES:

- Existing Landscaping
- Proposed Landscaping
- 6' Tall Solid Parapet
- 50% Porous Screen Wall Around Parking Garage
- 4' Deep Bump Out
- 10' Tall 70% Solid Wind Screen
- 6' Deep Porous Canopy at 30' Height
- 8' Deep Canopy at 12' Height









TABLES

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
1	A	21	0	--		10	7	--	
	B	27	0	0		8	3	-2	
	C	25	0	0		8	2	-2	
	D	24	0	0		8	2	-2	
	E	24	0	0		8	2	-2	
2	A	22	0	--		11	10	--	
	B	33	0	0		15	27	5	e
	C	32	0	0		15	29	4	e
	D	34	0	0		16	27	5	e
	E	34	0	0		16	29	5	e
3	A	24	0	--		10	7	--	
	B	30	0	0		14	25	4	e
	C	28	0	0		14	23	3	e
	D	27	0	0		13	18	2	e
	E	27	0	0		13	17	2	e
4	A	30	0	--		9	4	--	
	B	35	0	0		12	15	3	e
	C	33	0	0		11	10	2	e
	D	33	0	0		10	6	0	
	E	33	0	0		10	9	1	
5	A	32	0	--		11	10	--	
	B	39	3	3	e	18	44	7	e
	C	38	2	2	e	18	42	7	e
	D	34	0	0		15	27	4	e
	E	34	0	0		15	30	4	e
6	A	28	0	--		13	17	--	e
	B	34	0	0		13	15	0	e
	C	33	0	0		13	15	0	e
	D	27	0	0		10	7	-3	
	E	27	0	0		10	7	-3	
7	A	29	0	--		13	18	--	e
	B	32	0	0		9	5	-4	
	C	31	0	0		9	6	-4	
	D	27	0	0		9	5	-4	
	E	27	0	0		9	5	-4	
8	A	25	0	--		12	12	--	e
	B	33	0	0		14	24	2	e
	C	31	0	0		14	22	2	e
	D	31	0	0		13	18	1	e
	E	33	0	0		13	18	1	e

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
9	A	21	0	--		8	1	--	
	B	28	0	0		13	21	6	e
	C	26	0	0		13	18	5	e
	D	28	0	0		13	19	5	e
	E	30	0	0		13	21	6	e
10	A	22	0	--		8	2	--	
	B	24	0	0		11	10	3	e
	C	23	0	0		11	8	3	
	D	27	0	0		12	16	4	e
	E	28	0	0		13	18	5	e
11	A	21	0	--		10	5	--	
	B	23	0	0		8	2	-2	
	C	23	0	0		8	2	-2	
	D	27	0	0		13	20	4	e
	E	28	0	0		13	21	4	e
12	A	22	0	--		10	6	--	
	B	34	0	0		16	32	6	e
	C	32	0	0		15	26	5	e
	D	25	0	0		12	16	2	e
	E	25	0	0		13	18	3	e
13	A	23	0	--		11	10	--	
	B	22	0	0		9	3	-2	
	C	21	0	0		9	2	-2	
	D	29	0	0		13	17	3	e
	E	29	0	0		13	17	2	e
14	A	22	0	--		10	6	--	
	B	18	0	0		7	1	-3	
	C	18	0	0		6	1	-4	
	D	25	0	0		11	10	1	e
	E	25	0	0		11	10	1	
15	A	22	0	--		11	10	--	
	B	35	0	0		15	30	5	e
	C	33	0	0		14	28	4	e
	D	31	0	0		14	23	3	e
	E	31	0	0		14	22	3	e
16	A	24	0	--		9	4	--	
	B	37	1	1	e	13	19	4	e
	C	35	0	0		13	17	4	e
	D	26	0	0		12	15	3	e
	E	26	0	0		12	16	3	e

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
17	A	21	0	--		9	4	--	
	B	27	0	0		9	4	0	
	C	26	0	0		8	3	-1	
	D	29	0	0		11	10	2	e
	E	30	0	0		12	12	3	e
18	A	23	0	--		11	10	--	
	B	33	0	0		12	13	1	e
	C	33	0	0		12	13	1	e
	D	31	0	0		11	10	0	e
	E	30	0	0		12	12	1	e
19	A	21	0	--		10	7	--	
	B	23	0	0		9	4	-1	
	C	20	0	0		9	2	-1	
	D	25	0	0		9	3	-1	
	E	26	0	0		10	5	-1	
20	A	21	0	--		10	6	--	
	B	22	0	0		9	4	-1	
	C	22	0	0		10	5	-1	
	D	21	0	0		9	2	-2	
	E	22	0	0		10	6	0	
21	A	23	0	--		11	10	--	
	B	24	0	0		11	10	0	e
	C	23	0	0		10	7	-1	
	D	23	0	0		11	10	0	
	E	24	0	0		11	10	0	e
22	A	20	0	--		9	3	--	
	B	21	0	0		8	2	-1	
	C	21	0	0		8	1	-2	
	D	21	0	0		8	2	-2	
	E	22	0	0		8	2	-1	
23	A	24	0	--		10	7	--	
	B	30	0	0		12	17	2	e
	C	29	0	0		12	16	2	e
	D	24	0	0		11	10	1	e
	E	24	0	0		12	14	1	e
24	A	21	0	--		10	7	--	
	B	35	0	0		14	24	4	e
	C	33	0	0		14	23	4	e
	D	32	0	0		13	19	3	e
	E	30	0	0		13	20	3	e

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
25	A	20	0	--		10	5	--	
	B	31	0	0		14	24	4	e
	C	29	0	0		13	19	3	e
	D	29	0	0		14	21	4	e
	E	30	0	0		14	19	4	e
26	A	21	0	--		10	4	--	
	B	40	3	3	e	15	29	6	e
	C	38	2	2	e	16	32	6	e
	D	33	0	0		14	26	5	e
	E	34	0	0		15	28	5	e
27	A	27	0	--		11	10	--	
	B	30	0	0		14	24	2	e
	C	29	0	0		14	23	2	e
	D	28	0	0		14	22	2	e
	E	28	0	0		14	23	2	e
28	A	28	0	--		12	15	--	e
	B	26	0	0		12	12	-1	e
	C	25	0	0		11	10	-1	e
	D	28	0	0		12	15	0	e
	E	27	0	0		12	16	0	e
29	A	21	0	--		9	3	--	
	B	35	0	0		15	30	6	e
	C	34	0	0		15	29	6	e
	D	31	0	0		15	29	6	e
	E	31	0	0		15	32	7	e
30	A	26	0	--		11	10	--	
	B	24	0	0		9	3	-2	
	C	23	0	0		9	3	-2	
	D	23	0	0		8	3	-3	
	E	24	0	0		8	3	-3	
31	A	24	0	--		9	4	--	
	B	27	0	0		10	7	1	
	C	25	0	0		10	7	1	
	D	23	0	0		9	3	0	
	E	25	0	0		10	4	0	
32	A	24	0	--		11	10	--	
	B	26	0	0		12	15	1	e
	C	24	0	0		11	10	0	
	D	25	0	0		12	13	1	e
	E	27	0	0		13	16	1	e

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
33	A	18	0	--		8	1	--	
	B	22	0	0		10	7	2	
	C	22	0	0		10	6	2	
	D	19	0	0		9	3	1	
	E	20	0	0		9	3	1	
34	A	25	0	--		8	2	--	
	B	28	0	0		10	6	1	
	C	27	0	0		9	4	1	
	D	26	0	0		8	2	0	
	E	27	0	0		8	3	0	
35	A	20	0	--		7	1	--	
	B	35	0	0		12	16	5	e
	C	35	0	0		12	16	5	e
	D	30	0	0		11	10	4	e
	E	30	0	0		11	10	4	e
36	A	29	0	--		13	21	--	e
	B	38	2	2	e	17	39	4	e
	C	37	2	2	e	16	35	3	e
	D	33	0	0		14	24	1	e
	E	33	0	0		15	26	2	e
37	A	--	--	--	--	--	--	--	--
	B	--	--	--	--	--	--	--	--
	C	--	--	--	--	--	--	--	--
	D	--	--	--	--	--	--	--	--
	E	--	--	--	--	--	--	--	--
38	A	--	--	--	--	--	--	--	--
	B	--	--	--	--	--	--	--	--
	C	--	--	--	--	--	--	--	--
	D	--	--	--	--	--	--	--	--
	E	--	--	--	--	--	--	--	--
39	A	--	--	--	--	--	--	--	--
	B	--	--	--	--	--	--	--	--
	C	--	--	--	--	--	--	--	--
	D	--	--	--	--	--	--	--	--
	E	--	--	--	--	--	--	--	--
40	A	29	0	--		14	22	--	e
	B	32	0	0		11	8	-3	
	C	31	0	0		10	7	-4	
	D	27	0	0		10	6	-4	
	E	27	0	0		10	8	-3	

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
41	A	25	0	--		8	2	--	
	B	28	0	0		12	12	4	e
	C	27	0	0		12	13	4	e
	D	32	0	0		10	6	2	
	E	34	0	0		10	6	2	
42	A	27	0	--		13	18	--	e
	B	35	0	0		16	33	4	e
	C	34	0	0		16	31	3	e
	D	29	0	0		12	12	-1	e
	E	29	0	0		11	10	-1	e
43	A	24	0	--		11	8	--	
	B	29	0	0		11	10	0	
	C	28	0	0		10	6	-1	
	D	31	0	0		11	10	1	e
	E	32	0	0		12	12	1	e
44	A	14	0	--		6	0	--	
	B	24	0	0		6	1	0	
	C	24	0	0		6	0	-1	
	D	28	0	0		10	6	4	
	E	29	0	0		10	5	3	
45	A	17	0	--		6	1	--	
	B	25	0	0		10	5	4	
	C	25	0	0		9	3	3	
	D	32	0	0		14	22	8	e
	E	33	0	0		14	23	8	e
46	A	18	0	--		5	1	--	
	B	24	0	0		6	1	1	
	C	23	0	0		6	1	1	
	D	24	0	0		9	4	5	
	E	24	0	0		9	4	5	
47	A	20	0	--		7	1	--	
	B	29	0	0		9	5	3	
	C	27	0	0		8	3	2	
	D	34	0	0		14	24	7	e
	E	35	0	0		14	24	8	e
48	A	29	0	--		14	24	--	e
	B	32	0	0		13	16	-1	e
	C	32	0	0		13	19	0	e
	D	29	0	0		9	5	-4	
	E	29	0	0		9	6	-4	

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
49	A	20	0	--		9	3	--	
	B	35	0	0		17	32	8	e
	C	33	0	0		15	27	6	e
	D	32	0	0		14	24	5	e
	E	35	0	0		14	26	5	e
50	A	--	--	--	--	--	--	--	--
	B	--	--	--	--	--	--	--	--
	C	--	--	--	--	--	--	--	--
	D	--	--	--	--	--	--	--	--
	E	--	--	--	--	--	--	--	--
51	A	20	0	--		8	2	--	
	B	31	0	0		10	6	2	
	C	29	0	0		9	4	1	
	D	27	0	0		11	10	3	
	E	27	0	0		11	10	3	e
52	A	14	0	--		6	0	--	
	B	19	0	0		7	1	1	
	C	18	0	0		6	0	1	
	D	20	0	0		9	3	3	
	E	21	0	0		9	4	4	
53	A	20	0	--		9	4	--	
	B	26	0	0		11	10	1	
	C	25	0	0		11	10	1	
	D	34	0	0		16	35	7	e
	E	34	0	0		17	37	7	e
54	A	28	0	--		12	12	--	e
	B	25	0	0		12	13	0	e
	C	24	0	0		11	10	0	e
	D	25	0	0		12	15	0	e
	E	25	0	0		12	16	0	e
55	A	20	0	--		9	3	--	
	B	22	0	0		10	5	1	
	C	22	0	0		9	4	0	
	D	21	0	0		7	2	-2	
	E	22	0	0		8	2	-1	
56	A	22	0	--		10	6	--	
	B	27	0	0		10	7	1	
	C	26	0	0		10	6	0	
	D	34	0	0		16	36	7	e
	E	34	0	0		17	37	7	e

Table 1: Pedestrian Wind Hazard and Comfort Results

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
57	A	16	0	--		7	0	--	
	B	18	0	0		6	1	0	
	C	17	0	0		6	1	-1	
	D	15	0	0		5	0	-1	
	E	16	0	0		6	0	-1	
58	A	23	0	--		10	5	--	
	B	21	0	0		9	3	-1	
	C	19	0	0		9	2	-1	
	D	20	0	0		8	2	-2	
	E	22	0	0		8	2	-2	
59	A	17	0	--		8	1	--	
	B	20	0	0		8	2	0	
	C	19	0	0		8	1	0	
	D	19	0	0		6	0	-2	
	E	20	0	0		6	0	-2	
60	A	25	0	--		10	7	--	
	B	28	0	0		10	6	0	
	C	28	0	0		10	5	-1	
	D	27	0	0		13	20	3	e
	E	27	0	0		13	21	3	e

SUMMARY	Configurations	WIND HAZARD				WIND COMFORT			
		Average (mph)	Total Hours	Hours Change	Total	Average (mph)	Average (%)	Speed Change (mph)	Total
	A	23 mph	0 Hrs	-	0	10 mph	7%	-	9
	B	28 mph	9 Hrs	9	4	11 mph	13%	1	28
	C	27 mph	6 Hrs	6	3	11 mph	12%	1	25
	D	27 mph	0 Hrs	0	0	11 mph	13%	1	33
	E	28 mph	0 Hrs	0	0	11 mph	14%	1	34

A - Existing

- Existing site with existing landscaping and surroundings.

B - Existing + Project

- Proposed project with existing landscaping and existing surroundings.

C - Existing + Project + Median Trees

- Proposed project with existing landscaping, existing surroundings, and four trees in the West Grand Avenue median.

D - Project + Cumulative

- Proposed project with existing landscaping and future surroundings.

E - Project + Cumulative + Median Trees

- Proposed project with existing landscaping, future surroundings, and four trees in the West Grand Avenue median.

Notes:1) Wind Hazard = Wind speeds exceeding 36 mph for ≥ 1 hour/year2) Wind Comfort = Wind speeds exceeding 11 mph for $> 10\%$ of the time

Table 2: Pedestrian Wind Hazard and Comfort Results - Above Grade

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds
61	A	--	--	--	--	--	--	--	--
	B	42	5	--	e	17	36	--	e
	C	40	3	--	e	16	32	--	e
	D	35	0	--		15	28	--	e
	E	36	1	--	e	15	30	--	e
62	A	--	--	--	--	--	--	--	--
	B	32	0	--		13	19	--	e
	C	30	0	--		12	16	--	e
	D	32	0	--		12	13	--	e
	E	33	0	--		12	15	--	e
63	A	--	--	--	--	--	--	--	--
	B	47	11	--	e	16	27	--	e
	C	45	7	--	e	16	26	--	e
	D	34	0	--		14	21	--	e
	E	34	0	--		14	20	--	e
64	A	--	--	--	--	--	--	--	--
	B	52	19	--	e	12	12	--	e
	C	50	16	--	e	11	10	--	e
	D	48	11	--	e	9	5	--	
	E	48	14	--	e	9	6	--	
65	A	--	--	--	--	--	--	--	--
	B	40	4	--	e	14	22	--	e
	C	38	2	--	e	13	18	--	e
	D	36	1	--	e	13	16	--	e
	E	37	1	--	e	14	19	--	e
66	A	--	--	--	--	--	--	--	--
	B	35	0	--		17	36	--	e
	C	33	0	--		16	29	--	e
	D	33	0	--		15	23	--	e
	E	35	0	--		15	27	--	e
67	A	--	--	--	--	--	--	--	--
	B	44	18	--	e	19	42	--	e
	C	43	6	--	e	19	38	--	e
	D	41	4	--	e	18	37	--	e
	E	43	13	--	e	19	40	--	e

SUMMARY	Configurations	WIND HAZARD				WIND COMFORT			
		Average (mph)	Total Hours	Hours Change	Total	Average (mph)	Average (%)	Speed Change (mph)	Total
	A	--	--	--	--	--	--	--	--
	B	42 mph	57 Hrs	--	5	15 mph	28%	--	7
	C	40 mph	34 Hrs	--	5	15 mph	24%	--	7
	D	37 mph	17 Hrs	--	3	14 mph	20%	--	6
	E	38 mph	30 Hrs	--	4	14 mph	22%	--	6

Table 2: Pedestrian Wind Hazard and Comfort Results - Above Grade

Location	Configuration	WIND HAZARD				WIND COMFORT			
		Wind Speed Exceeded (mph)	Hours per Year Exceeding	Hours Change	Exceeds	Wind Speed Exceeded (mph)	% of Time Exceeding	Speed Change (mph)	Exceeds

A - Existing

- Existing site with existing landscaping and surroundings.

B - Existing + Project

- Proposed project with existing landscaping and existing surroundings.

C - Existing + Project + Median Trees

- Proposed project with existing landscaping, existing surroundings, and four trees in the West Grand Avenue median.

D - Project + Cumulative

- Proposed project with existing landscaping and future surroundings.

E - Project + Cumulative + Median Trees

- Proposed project with existing landscaping, future surroundings, and four trees in the West Grand Avenue median.

Notes:

1) Wind Hazard = Wind speeds exceeding 36 mph for ≥ 1 hour/year

2) Wind Comfort = Wind speeds exceeding 11 mph for $> 10\%$ of the time

The graphic for Appendix A features a large, light beige circle on the right side of the page. To its left is a solid blue triangle. A thin white curved line separates the blue triangle from the beige circle. The text 'APPENDIX A' is centered in the white space between the blue triangle and the beige circle.

APPENDIX A

Drawing List for Model Construction

The drawings and information listed below were received from Urban Planning Partners, Inc., and were used to construct the scale model of the proposed 2201 Valley Street. Should there be any design changes that deviate from this list of drawings, the results may change. Therefore, if changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

File Name	File Type	Date Received (dd/mm/yyyy)
TMGV_LandscapePlan_180228.pdf	PDF	02/04/2018
2018_0207_2201_Valley St.dxf	AutoCAD	20/03/2018
2018_0423_2201V_WM_01.pdf	PDF	24/04/2018
2018_0423_2201V_WM_02.pdf	PDF	24/04/2018
2018_0423_2201V_WM_03.pdf	PDF	24/04/2018
2018_0423_2201V_WM_04.pdf	PDF	24/04/2018
2201 Valley_Model Wind Mitigations.skp	SketchUp	04/06/2018

Attachment F: Air Quality and Greenhouse Gas Emissions Estimates and Health Risk Analysis

2201 Valley Existing Conditions - Alameda County, Annual

2201 Valley Existing Conditions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	10.00	Pump	0.39	16,900.00	0
Parking Lot	21.90	1000sqft	0.50	21,900.00	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)	427	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E's default 2008 CO2 intensity factor updated to the most recent (2013) emission factor verified by a 3rd party in PG&E's (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers.

Land Use - Information provided by project sponsor.

Construction Phase - Construction emissions do not matter

Vehicle Trips - Trip rates modified according to the transportation assessment

Energy Use -

Water And Wastewater - EBMUD provides applies 100 percent aerobic process and 100 percent co-generation.

Grading -

2201 Valley Existing Conditions - Alameda County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	1.00	0.00
tblConstructionPhase	PhaseEndDate	11/18/2020	11/11/2020
tblConstructionPhase	PhaseEndDate	11/4/2020	6/17/2020
tblConstructionPhase	PhaseEndDate	6/12/2020	5/31/2020
tblConstructionPhase	PhaseEndDate	6/17/2020	6/15/2020
tblConstructionPhase	PhaseEndDate	11/11/2020	11/4/2020
tblConstructionPhase	PhaseEndDate	6/15/2020	6/12/2020
tblLandUse	LandUseSquareFeet	1,411.75	16,900.00
tblLandUse	LotAcreage	0.03	0.39
tblProjectCharacteristics	CO2IntensityFactor	641.35	427
tblVehicleTrips	ST_TR	168.56	163.00
tblVehicleTrips	SU_TR	168.56	163.00
tblVehicleTrips	WD_TR	168.56	163.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

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tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2201 Valley Existing Conditions - Alameda County, Annual

2.1 Overall Construction

Unmitigated Construction

[illegible]

Mitigated Construction

[illegible][illegible]

2201 Valley Existing Conditions - 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	0.0767	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Energy	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	48.5512	48.5512	2.2100e-003	7.8000e-004	48.8382
Mobile	0.3749	2.0093	2.6328	6.1500e-003	0.3513	7.3700e-003	0.3586	0.0944	6.9300e-003	0.1014	0.0000	567.9251	567.9251	0.0463	0.0000	569.0826
Waste						0.0000	0.0000		0.0000	0.0000	1.0941	0.0000	1.0941	0.0647	0.0000	2.7106
Water						0.0000	0.0000		0.0000	0.0000	0.0470	0.1814	0.2284	1.7000e-004	1.0000e-004	0.2640
Total	0.4539	2.0298	2.6503	6.2700e-003	0.3513	8.9300e-003	0.3602	0.0944	8.4900e-003	0.1029	1.1411	616.6582	617.7994	0.1133	8.8000e-004	620.8960

2201 Valley Existing Conditions - Alameda County, Annual

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	0.0767	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Energy	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	48.5512	48.5512	2.2100e-003	7.8000e-004	48.8382
Mobile	0.3749	2.0093	2.6328	6.1500e-003	0.3513	7.3700e-003	0.3586	0.0944	6.9300e-003	0.1014	0.0000	567.9251	567.9251	0.0463	0.0000	569.0826
Waste						0.0000	0.0000		0.0000	0.0000	1.0941	0.0000	1.0941	0.0647	0.0000	2.7106
Water						0.0000	0.0000		0.0000	0.0000	0.0470	0.1814	0.2284	1.7000e-004	1.0000e-004	0.2640
Total	0.4539	2.0298	2.6503	6.2700e-003	0.3513	8.9300e-003	0.3602	0.0944	8.4900e-003	0.1029	1.1411	616.6582	617.7994	0.1133	8.8000e-004	620.8960

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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**

2201 Valley Existing Conditions - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	5/31/2020	5	0	
2	Site Preparation	Site Preparation	6/13/2020	6/12/2020	5	0	
3	Grading	Grading	6/16/2020	6/15/2020	5	0	
4	Building Construction	Building Construction	6/18/2020	6/17/2020	5	0	
5	Paving	Paving	11/5/2020	11/4/2020	5	0	
6	Architectural Coating	Architectural Coating	11/12/2020	11/11/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 25,350; Non-Residential Outdoor: 8,450; Striped Parking Area: 1,314 (Architectural Coating – sqft)

OffRoad Equipment

2201 Valley Existing Conditions - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	15.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

[illegible]

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3.2 Demolition - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

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3.2 Demolition - 2020

Mitigated Construction Off-Site

[illegible]

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

[illegible]

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3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2020

Unmitigated Construction On-Site

[illegible]

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3.4 Grading - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

3.4 Grading - 2020

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2020

Unmitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

3.5 Building Construction - 2020

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2020

Unmitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

3.6 Paving - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

3.6 Paving - 2020

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

2201 Valley Existing Conditions - Alameda County, Annual

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**

2201 Valley Existing Conditions - 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
Category	tons/yr										MT/yr					
Mitigated	0.3749	2.0093	2.6328	6.1500e-003	0.3513	7.3700e-003	0.3586	0.0944	6.9300e-003	0.1014	0.0000	567.9251	567.9251	0.0463	0.0000	569.0826
Unmitigated	0.3749	2.0093	2.6328	6.1500e-003	0.3513	7.3700e-003	0.3586	0.0944	6.9300e-003	0.1014	0.0000	567.9251	567.9251	0.0463	0.0000	569.0826

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	1,630.00	1,630.00	1630.00	939,154	939,154
Parking Lot	0.00	0.00	0.00		
Total	1,630.00	1,630.00	1,630.00	939,154	939,154

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
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
Gasoline/Service Station	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

2201 Valley Existing Conditions - Alameda County, Annual

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	26.2304	26.2304	1.7800e-003	3.7000e-004	26.3848
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	26.2304	26.2304	1.7800e-003	3.7000e-004	26.3848
NaturalGas Mitigated	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3208	22.3208	4.3000e-004	4.1000e-004	22.4534
NaturalGas Unmitigated	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3208	22.3208	4.3000e-004	4.1000e-004	22.4534

2201 Valley Existing Conditions - Alameda County, Annual

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					
Gasoline/Service Station	418275	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3208	22.3208	4.3000e-004	4.1000e-004	22.4534
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		2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3208	22.3208	4.3000e-004	4.1000e-004	22.4534

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					
Gasoline/Service Station	418275	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3208	22.3208	4.3000e-004	4.1000e-004	22.4534
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		2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3208	22.3208	4.3000e-004	4.1000e-004	22.4534

2201 Valley Existing Conditions - Alameda County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Gasoline/Service Station	127764	24.7458	1.6800e-003	3.5000e-004	24.8915
Parking Lot	7665	1.4846	1.0000e-004	2.0000e-005	1.4933
Total		26.2304	1.7800e-003	3.7000e-004	26.3848

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Gasoline/Service Station	127764	24.7458	1.6800e-003	3.5000e-004	24.8915
Parking Lot	7665	1.4846	1.0000e-004	2.0000e-005	1.4933
Total		26.2304	1.7800e-003	3.7000e-004	26.3848

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0767	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Unmitigated	0.0767	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004

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	9.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0674					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Total	0.0767	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004

2201 Valley Existing Conditions - Alameda County, Annual

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	9.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0674					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Total	0.0767	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.2284	1.7000e-004	1.0000e-004	0.2640
Unmitigated	0.2284	1.7000e-004	1.0000e-004	0.2640

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Gasoline/Service Station	0.132819 / 0.0814051	0.2284	1.7000e-004	1.0000e-004	0.2640
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.2284	1.7000e-004	1.0000e-004	0.2640

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Gasoline/Service Station	0.132819 / 0.0814051	0.2284	1.7000e-004	1.0000e-004	0.2640
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.2284	1.7000e-004	1.0000e-004	0.2640

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0941	0.0647	0.0000	2.7106
Unmitigated	1.0941	0.0647	0.0000	2.7106

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Gasoline/Service Station	5.39	1.0941	0.0647	0.0000	2.7106
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		1.0941	0.0647	0.0000	2.7106

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Gasoline/Service Station	5.39	1.0941	0.0647	0.0000	2.7106
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		1.0941	0.0647	0.0000	2.7106

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

2201 Valley Existing Conditions - Alameda County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

2201 Valley Oakland - Alameda County, Annual

2201 Valley Oakland

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	739.36	1000sqft	3.00	739,360.00	0
Enclosed Parking with Elevator	350.00	Space	0.00	109,270.00	0
Regional Shopping Center	26.70	1000sqft	0.00	26,740.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	63
Climate Zone	5			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	427	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - PG&E's default 2008 CO2 intensity factor updated to the most recent (2013) emission factor verified by a 3rd party in PG&E's (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers.

Land Use - Maximum office scenario. Changed Lot Acreage to 3 acres in order to generate a construction equipment list for multi-story buildings.

Construction Phase - Use CalEEMod default schedule and equipment list to obtain total emissions during project construction.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Pile driving is anticipated to be used during the grading phase.

Off-road Equipment -

Off-road Equipment -

Demolition - Building demo assumption: (Area of building)(CalEEMod conversion factor) = (16.9 KSF)(0.046 tons/ft²) = 778 tons

Parking lot demo assumption: (Area of parking lot)(Depth of asphalt)(Density asphalt)=(21.9 KSF)(0.25 ft)(0.0725 tons/ft³) = 397 tons

Grading - No fill anticipated. Estimated soil offhaul is about 9,5000 cubic yards.

Vehicle Trips - Modified according to the Preliminary Transportation Assessment

Energy Use -

Water And Wastewater - EBMUD would service the proposed project and applies 100 percent aerobic process and 100 percent cogeneration

Construction Off-road Equipment Mitigation - SCA-AIR-1 Enhanced Controls (#19) require use of Tier 4 engines. These emission reductions are considered part of the project's unmitigated emissions.

Water Mitigation - CALGreen Code mandatory requirement. These emission reductions are considered part of the project's unmitigated emissions.

Fleet Mix - No bus trips or mobile home trips would be generated by the project.

Stationary Sources - Emergency Generators and Fire Pumps - 1 operational emergency diesel generator is proposed.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFleetMix	HHD	0.05	0.05
tblFleetMix	HHD	0.05	0.05
tblFleetMix	HHD	0.05	0.05

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tblFleetMix	LDA	0.56	0.56
tblFleetMix	LDA	0.56	0.56
tblFleetMix	LDA	0.56	0.56
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LDT2	0.19	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.2020e-003	5.2320e-003
tblFleetMix	LHD2	5.2020e-003	5.2320e-003
tblFleetMix	LHD2	5.2020e-003	5.2320e-003
tblFleetMix	MCY	5.5240e-003	5.5560e-003
tblFleetMix	MCY	5.5240e-003	5.5560e-003
tblFleetMix	MCY	5.5240e-003	5.5560e-003
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	7.2100e-004	0.00
tblFleetMix	MH	7.2100e-004	0.00
tblFleetMix	MH	7.2100e-004	0.00
tblFleetMix	MHD	0.02	0.02
tblFleetMix	MHD	0.02	0.02
tblFleetMix	MHD	0.02	0.02

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tblFleetMix	OBUS	2.1840e-003	0.00
tblFleetMix	OBUS	2.1840e-003	0.00
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tblFleetMix	SBUS	3.2600e-004	0.00
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tblFleetMix	UBUS	2.5610e-003	0.00
tblFleetMix	UBUS	2.5610e-003	0.00
tblFleetMix	UBUS	2.5610e-003	0.00
tblGrading	MaterialExported	0.00	9,500.00
tblLandUse	LandUseSquareFeet	140,000.00	109,270.00
tblLandUse	LandUseSquareFeet	26,700.00	26,740.00
tblLandUse	LotAcreage	16.97	3.00
tblLandUse	LotAcreage	3.15	0.00
tblLandUse	LotAcreage	0.61	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	427
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblVehicleTrips	ST_TR	2.46	0.96
tblVehicleTrips	ST_TR	49.97	26.53
tblVehicleTrips	SU_TR	1.05	0.41
tblVehicleTrips	SU_TR	25.24	13.40
tblVehicleTrips	WD_TR	11.03	4.32
tblVehicleTrips	WD_TR	42.70	22.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00

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tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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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					
2020	0.2826	2.9722	2.0987	6.6600e-003	0.2752	0.1003	0.3755	0.0857	0.0941	0.1798	0.0000	609.7804	609.7804	0.0693	0.0000	611.5132
2021	4.1808	1.6488	1.3504	4.3100e-003	0.1570	0.0512	0.2082	0.0428	0.0481	0.0909	0.0000	393.8611	393.8611	0.0413	0.0000	394.8932
Maximum	4.1808	2.9722	2.0987	6.6600e-003	0.2752	0.1003	0.3755	0.0857	0.0941	0.1798	0.0000	609.7804	609.7804	0.0693	0.0000	611.5132

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					
2020	0.1300	1.4566	2.1630	6.6600e-003	0.2752	9.9400e-003	0.2851	0.0857	9.6200e-003	0.0954	0.0000	609.7802	609.7802	0.0693	0.0000	611.5130
2021	4.1008	0.8705	1.3988	4.3100e-003	0.1570	4.3700e-003	0.1614	0.0428	4.2500e-003	0.0471	0.0000	393.8610	393.8610	0.0413	0.0000	394.8930
Maximum	4.1008	1.4566	2.1630	6.6600e-003	0.2752	9.9400e-003	0.2851	0.0857	9.6200e-003	0.0954	0.0000	609.7802	609.7802	0.0693	0.0000	611.5130

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	5.21	49.64	-3.27	0.00	0.00	90.55	23.50	0.00	90.24	47.39	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	1.5008	0.6654
2	9-1-2020	11-30-2020	1.3141	0.7050
3	12-1-2020	2-28-2021	1.2246	0.6637
4	3-1-2021	5-31-2021	2.1787	1.6794
5	6-1-2021	8-31-2021	2.8770	2.8713
		Highest	2.8770	2.8713

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	3.4018	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213
Energy	0.0777	0.7066	0.5936	4.2400e-003		0.0537	0.0537		0.0537	0.0537	0.0000	2,734.6905	2,734.6905	0.1482	0.0417	2,750.8289
Mobile	0.7855	5.0338	8.5147	0.0326	2.5359	0.0248	2.5607	0.6791	0.0232	0.7023	0.0000	3,003.0375	3,003.0375	0.1276	0.0000	3,006.2277
Stationary	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873
Waste						0.0000	0.0000		0.0000	0.0000	145.2685	0.0000	145.2685	8.5851	0.0000	359.8964
Water						0.0000	0.0000		0.0000	0.0000	47.1925	182.1920	229.3845	0.1748	0.1052	265.1008
Total	4.2793	5.7806	9.1552	0.0369	2.5359	0.0806	2.6166	0.6791	0.0790	0.7581	192.4610	5,926.6039	6,119.0649	9.0367	0.1469	6,388.7623

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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	3.4018	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213
Energy	0.0777	0.7066	0.5936	4.2400e-003		0.0537	0.0537		0.0537	0.0537	0.0000	2,734.6905	2,734.6905	0.1482	0.0417	2,750.8289
Mobile	0.7855	5.0338	8.5147	0.0326	2.5359	0.0248	2.5607	0.6791	0.0232	0.7023	0.0000	3,003.0375	3,003.0375	0.1276	0.0000	3,006.2277
Stationary	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873
Waste						0.0000	0.0000		0.0000	0.0000	145.2685	0.0000	145.2685	8.5851	0.0000	359.8964
Water						0.0000	0.0000		0.0000	0.0000	37.7540	156.8376	194.5916	0.1406	0.0843	223.2299
Total	4.2793	5.7806	9.1552	0.0369	2.5359	0.0806	2.6166	0.6791	0.0790	0.7581	183.0225	5,901.2495	6,084.2720	9.0025	0.1260	6,346.8914

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.90	0.43	0.57	0.38	14.21	0.66

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	6/26/2020	5	20	
2	Site Preparation	Site Preparation	6/27/2020	7/1/2020	5	3	
3	Grading	Grading	7/2/2020	7/9/2020	5	6	
4	Building Construction	Building Construction	7/10/2020	5/13/2021	5	220	
5	Paving	Paving	5/14/2021	5/27/2021	5	10	
6	Architectural Coating	Architectural Coating	5/28/2021	6/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,149,150; Non-Residential Outdoor: 383,050; Striped Parking Area: 6,556 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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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	6	15.00	0.00	116.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	1,188.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	291.00	143.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	58.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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					
Fugitive Dust					0.0126	0.0000	0.0126	1.9000e-003	0.0000	1.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	0.0331	0.3320	0.2175	3.9000e-004	0.0126	0.0166	0.0292	1.9000e-003	0.0154	0.0173	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386

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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	4.9000e-004	0.0169	2.9700e-003	5.0000e-005	9.8000e-004	5.0000e-005	1.0400e-003	2.7000e-004	5.0000e-005	3.2000e-004	0.0000	4.4406	4.4406	2.2000e-004	0.0000	4.4462
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	5.2000e-004	3.8000e-004	3.9200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0543	1.0543	3.0000e-005	0.0000	1.0550
Total	1.0100e-003	0.0173	6.8900e-003	6.0000e-005	2.1700e-003	6.0000e-005	2.2300e-003	5.9000e-004	6.0000e-005	6.4000e-004	0.0000	5.4949	5.4949	2.5000e-004	0.0000	5.5012

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					0.0126	0.0000	0.0126	1.9000e-003	0.0000	1.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0200	0.2328	3.9000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	4.6200e-003	0.0200	0.2328	3.9000e-004	0.0126	6.2000e-004	0.0132	1.9000e-003	6.2000e-004	2.5200e-003	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385

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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	4.9000e-004	0.0169	2.9700e-003	5.0000e-005	9.8000e-004	5.0000e-005	1.0400e-003	2.7000e-004	5.0000e-005	3.2000e-004	0.0000	4.4406	4.4406	2.2000e-004	0.0000	4.4462
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	5.2000e-004	3.8000e-004	3.9200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0543	1.0543	3.0000e-005	0.0000	1.0550
Total	1.0100e-003	0.0173	6.8900e-003	6.0000e-005	2.1700e-003	6.0000e-005	2.2300e-003	5.9000e-004	6.0000e-005	6.4000e-004	0.0000	5.4949	5.4949	2.5000e-004	0.0000	5.5012

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					0.0276	0.0000	0.0276	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1100e-003	0.0636	0.0323	6.0000e-005		3.3000e-003	3.3000e-003		3.0300e-003	3.0300e-003	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0552
Total	6.1100e-003	0.0636	0.0323	6.0000e-005	0.0276	3.3000e-003	0.0309	0.0150	3.0300e-003	0.0180	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0552

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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	5.0300e-003	0.1732	0.0305	4.7000e-004	0.0101	5.5000e-004	0.0106	2.7700e-003	5.3000e-004	3.3000e-003	0.0000	45.4783	45.4783	2.2900e-003	0.0000	45.5356
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	9.0000e-005	7.0000e-005	7.1000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1898	0.1898	0.0000	0.0000	0.1899
Total	5.1200e-003	0.1733	0.0312	4.7000e-004	0.0103	5.5000e-004	0.0108	2.8300e-003	5.3000e-004	3.3600e-003	0.0000	45.6681	45.6681	2.2900e-003	0.0000	45.7255

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					0.0276	0.0000	0.0276	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-004	3.0300e-003	0.0313	6.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0551
Total	7.0000e-004	3.0300e-003	0.0313	6.0000e-005	0.0276	9.0000e-005	0.0277	0.0150	9.0000e-005	0.0151	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0551

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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	5.0300e-003	0.1732	0.0305	4.7000e-004	0.0101	5.5000e-004	0.0106	2.7700e-003	5.3000e-004	3.3000e-003	0.0000	45.4783	45.4783	2.2900e-003	0.0000	45.5356
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	9.0000e-005	7.0000e-005	7.1000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1898	0.1898	0.0000	0.0000	0.1899
Total	5.1200e-003	0.1733	0.0312	4.7000e-004	0.0103	5.5000e-004	0.0108	2.8300e-003	5.3000e-004	3.3600e-003	0.0000	45.6681	45.6681	2.2900e-003	0.0000	45.7255

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1200e-003	0.0897	0.0544	1.2000e-004		4.1200e-003	4.1200e-003		3.7900e-003	3.7900e-003	0.0000	10.2937	10.2937	3.3300e-003	0.0000	10.3769
Total	8.1200e-003	0.0897	0.0544	1.2000e-004	0.0197	4.1200e-003	0.0238	0.0101	3.7900e-003	0.0139	0.0000	10.2937	10.2937	3.3300e-003	0.0000	10.3769

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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	1.6000e-004	1.1000e-004	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3163	0.3163	1.0000e-005	0.0000	0.3165
Total	1.6000e-004	1.1000e-004	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3163	0.3163	1.0000e-005	0.0000	0.3165

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4400e-003	6.2400e-003	0.0661	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.2937	10.2937	3.3300e-003	0.0000	10.3769
Total	1.4400e-003	6.2400e-003	0.0661	1.2000e-004	0.0197	1.9000e-004	0.0199	0.0101	1.9000e-004	0.0103	0.0000	10.2937	10.2937	3.3300e-003	0.0000	10.3769

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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	1.6000e-004	1.1000e-004	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3163	0.3163	1.0000e-005	0.0000	0.3165
Total	1.6000e-004	1.1000e-004	1.1800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3163	0.3163	1.0000e-005	0.0000	0.3165

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	0.1325	1.1991	1.0530	1.6800e-003		0.0698	0.0698		0.0657	0.0657	0.0000	144.7562	144.7562	0.0353	0.0000	145.6391
Total	0.1325	1.1991	1.0530	1.6800e-003		0.0698	0.0698		0.0657	0.0657	0.0000	144.7562	144.7562	0.0353	0.0000	145.6391

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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	0.0336	1.0506	0.2264	2.4700e-003	0.0587	4.8700e-003	0.0636	0.0170	4.6600e-003	0.0216	0.0000	236.4061	236.4061	0.0136	0.0000	236.7460
Worker	0.0629	0.0464	0.4759	1.4100e-003	0.1438	1.0000e-003	0.1448	0.0383	9.2000e-004	0.0392	0.0000	127.8318	127.8318	3.3000e-003	0.0000	127.9143
Total	0.0965	1.0970	0.7022	3.8800e-003	0.2025	5.8700e-003	0.2084	0.0552	5.5800e-003	0.0608	0.0000	364.2379	364.2379	0.0169	0.0000	364.6603

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	0.0205	0.1397	1.0913	1.6800e-003		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	144.7561	144.7561	0.0353	0.0000	145.6390
Total	0.0205	0.1397	1.0913	1.6800e-003		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	144.7561	144.7561	0.0353	0.0000	145.6390

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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	0.0336	1.0506	0.2264	2.4700e-003	0.0587	4.8700e-003	0.0636	0.0170	4.6600e-003	0.0216	0.0000	236.4061	236.4061	0.0136	0.0000	236.7460
Worker	0.0629	0.0464	0.4759	1.4100e-003	0.1438	1.0000e-003	0.1448	0.0383	9.2000e-004	0.0392	0.0000	127.8318	127.8318	3.3000e-003	0.0000	127.9143
Total	0.0965	1.0970	0.7022	3.8800e-003	0.2025	5.8700e-003	0.2084	0.0552	5.5800e-003	0.0608	0.0000	364.2379	364.2379	0.0169	0.0000	364.6603

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	0.0903	0.8280	0.7873	1.2800e-003		0.0455	0.0455		0.0428	0.0428	0.0000	110.0277	110.0277	0.0265	0.0000	110.6913
Total	0.0903	0.8280	0.7873	1.2800e-003		0.0455	0.0455		0.0428	0.0428	0.0000	110.0277	110.0277	0.0265	0.0000	110.6913

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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	0.0210	0.7266	0.1539	1.8600e-003	0.0446	1.5100e-003	0.0461	0.0129	1.4500e-003	0.0144	0.0000	177.9435	177.9435	9.7700e-003	0.0000	178.1879
Worker	0.0441	0.0315	0.3295	1.0400e-003	0.1093	7.3000e-004	0.1100	0.0291	6.8000e-004	0.0298	0.0000	93.7819	93.7819	2.2400e-003	0.0000	93.8379
Total	0.0652	0.7580	0.4833	2.9000e-003	0.1539	2.2400e-003	0.1562	0.0420	2.1300e-003	0.0441	0.0000	271.7254	271.7254	0.0120	0.0000	272.0258

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	0.0156	0.1062	0.8294	1.2800e-003		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	110.0276	110.0276	0.0265	0.0000	110.6912
Total	0.0156	0.1062	0.8294	1.2800e-003		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	110.0276	110.0276	0.0265	0.0000	110.6912

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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	0.0210	0.7266	0.1539	1.8600e-003	0.0446	1.5100e-003	0.0461	0.0129	1.4500e-003	0.0144	0.0000	177.9435	177.9435	9.7700e-003	0.0000	178.1879
Worker	0.0441	0.0315	0.3295	1.0400e-003	0.1093	7.3000e-004	0.1100	0.0291	6.8000e-004	0.0298	0.0000	93.7819	93.7819	2.2400e-003	0.0000	93.8379
Total	0.0652	0.7580	0.4833	2.9000e-003	0.1539	2.2400e-003	0.1562	0.0420	2.1300e-003	0.0441	0.0000	271.7254	271.7254	0.0120	0.0000	272.0258

3.6 Paving - 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	5.4700e-003	0.0542	0.0613	9.0000e-005		2.8900e-003	2.8900e-003		2.6700e-003	2.6700e-003	0.0000	8.1853	8.1853	2.5700e-003	0.0000	8.2496
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.4700e-003	0.0542	0.0613	9.0000e-005		2.8900e-003	2.8900e-003		2.6700e-003	2.6700e-003	0.0000	8.1853	8.1853	2.5700e-003	0.0000	8.2496

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3.6 Paving - 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	3.2000e-004	2.3000e-004	2.3800e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6785	0.6785	2.0000e-005	0.0000	0.6789
Total	3.2000e-004	2.3000e-004	2.3800e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6785	0.6785	2.0000e-005	0.0000	0.6789

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	1.1000e-003	4.7500e-003	0.0677	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	8.1853	8.1853	2.5700e-003	0.0000	8.2496
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1000e-003	4.7500e-003	0.0677	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	8.1853	8.1853	2.5700e-003	0.0000	8.2496

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3.6 Paving - 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	3.2000e-004	2.3000e-004	2.3800e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6785	0.6785	2.0000e-005	0.0000	0.6789
Total	3.2000e-004	2.3000e-004	2.3800e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6785	0.6785	2.0000e-005	0.0000	0.6789

3.7 Architectural Coating - 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					
Archit. Coating	4.0175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	4.0186	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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3.7 Architectural Coating - 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	9.3000e-004	6.6000e-004	6.9100e-003	2.0000e-005	2.2900e-003	2.0000e-005	2.3100e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.9676	1.9676	5.0000e-005	0.0000	1.9688
Total	9.3000e-004	6.6000e-004	6.9100e-003	2.0000e-005	2.2900e-003	2.0000e-005	2.3100e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.9676	1.9676	5.0000e-005	0.0000	1.9688

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	4.0175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	4.0177	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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3.7 Architectural Coating - 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	9.3000e-004	6.6000e-004	6.9100e-003	2.0000e-005	2.2900e-003	2.0000e-005	2.3100e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.9676	1.9676	5.0000e-005	0.0000	1.9688
Total	9.3000e-004	6.6000e-004	6.9100e-003	2.0000e-005	2.2900e-003	2.0000e-005	2.3100e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.9676	1.9676	5.0000e-005	0.0000	1.9688

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.7855	5.0338	8.5147	0.0326	2.5359	0.0248	2.5607	0.6791	0.0232	0.7023	0.0000	3,003.0375	3,003.0375	0.1276	0.0000	3,006.2277
Unmitigated	0.7855	5.0338	8.5147	0.0326	2.5359	0.0248	2.5607	0.6791	0.0232	0.7023	0.0000	3,003.0375	3,003.0375	0.1276	0.0000	3,006.2277

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	3,194.04	709.79	303.14	5,797,916	5,797,916
Regional Shopping Center	605.29	708.32	357.78	1,025,069	1,025,069
Total	3,799.32	1,418.11	660.92	6,822,985	6,822,985

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
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
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.563636	0.039514	0.191487	0.108875	0.016116	0.005232	0.024121	0.045463	0.000000	0.000000	0.005556	0.000000	0.000000
General Office Building	0.563636	0.039514	0.191487	0.108875	0.016116	0.005232	0.024121	0.045463	0.000000	0.000000	0.005556	0.000000	0.000000
Regional Shopping Center	0.563636	0.039514	0.191487	0.108875	0.016116	0.005232	0.024121	0.045463	0.000000	0.000000	0.005556	0.000000	0.000000

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	1,965.4601	1,965.4601	0.1335	0.0276	1,977.0274
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,965.4601	1,965.4601	0.1335	0.0276	1,977.0274
NaturalGas Mitigated	0.0777	0.7066	0.5936	4.2400e-003		0.0537	0.0537		0.0537	0.0537	0.0000	769.2304	769.2304	0.0147	0.0141	773.8015
NaturalGas Unmitigated	0.0777	0.7066	0.5936	4.2400e-003		0.0537	0.0537		0.0537	0.0537	0.0000	769.2304	769.2304	0.0147	0.0141	773.8015

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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					
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	1.42918e+007	0.0771	0.7006	0.5885	4.2000e-003		0.0532	0.0532		0.0532	0.0532	0.0000	762.6664	762.6664	0.0146	0.0140	767.1986
Regional Shopping Center	123004	6.6000e-004	6.0300e-003	5.0600e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5640	6.5640	1.3000e-004	1.2000e-004	6.6030
Total		0.0777	0.7066	0.5936	4.2400e-003		0.0537	0.0537		0.0537	0.0537	0.0000	769.2304	769.2304	0.0148	0.0141	773.8015

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					
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	1.42918e+007	0.0771	0.7006	0.5885	4.2000e-003		0.0532	0.0532		0.0532	0.0532	0.0000	762.6664	762.6664	0.0146	0.0140	767.1986
Regional Shopping Center	123004	6.6000e-004	6.0300e-003	5.0600e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5640	6.5640	1.3000e-004	1.2000e-004	6.6030
Total		0.0777	0.7066	0.5936	4.2400e-003		0.0537	0.0537		0.0537	0.0537	0.0000	769.2304	769.2304	0.0148	0.0141	773.8015

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	640322	124.0201	8.4200e-003	1.7400e-003	124.7500
General Office Building	9.22721e+006	1,787.1630	0.1214	0.0251	1,797.6808
Regional Shopping Center	280235	54.2771	3.6900e-003	7.6000e-004	54.5965
Total		1,965.4601	0.1335	0.0276	1,977.0274

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	640322	124.0201	8.4200e-003	1.7400e-003	124.7500
General Office Building	9.22721e+006	1,787.1630	0.1214	0.0251	1,797.6808
Regional Shopping Center	280235	54.2771	3.6900e-003	7.6000e-004	54.5965
Total		1,965.4601	0.1335	0.0276	1,977.0274

6.0 Area Detail

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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	3.4018	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213
Unmitigated	3.4018	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213

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	0.4018					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9991					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.6000e-004	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213
Total	3.4018	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213

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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	0.4018					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9991					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.6000e-004	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213
Total	3.4018	9.0000e-005	0.0103	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0199	0.0199	5.0000e-005	0.0000	0.0213

7.0 Water Detail**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	194.5916	0.1406	0.0843	223.2299
Unmitigated	229.3845	0.1748	0.1052	265.1008

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	131.409 / 80.5411	225.9834	0.1722	0.1036	261.1701
Regional Shopping Center	1.97774 / 1.21216	3.4011	2.5900e-003	1.5600e-003	3.9307
Total		229.3845	0.1748	0.1052	265.1008

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	105.127 / 80.5411	191.7064	0.1385	0.0831	219.9200
Regional Shopping Center	1.58219 / 1.21216	2.8852	2.0800e-003	1.2500e-003	3.3098
Total		194.5916	0.1406	0.0843	223.2298

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	145.2685	8.5851	0.0000	359.8964
Unmitigated	145.2685	8.5851	0.0000	359.8964

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	687.6	139.5766	8.2487	0.0000	345.7951
Regional Shopping Center	28.04	5.6919	0.3364	0.0000	14.1014
Total		145.2685	8.5851	0.0000	359.8964

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	687.6	139.5766	8.2487	0.0000	345.7951
Regional Shopping Center	28.04	5.6919	0.3364	0.0000	14.1014
Total		145.2685	8.5851	0.0000	359.8964

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	350	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

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Equipment Type	Number
----------------	--------

10.1 Stationary Sources**Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873
Total	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873

11.0 Vegetation

Summary DPM Emissions from On-Road Vehicles Accessing the Project Site

Phase Name	Worker Vehicles		Vendor Trucks		Haul Trucks		Total Emissions (grams)	Emission Rate (grams/day)
	Total Trips	Emissions (grams)	Total Trips	Emissions (grams)	Total Trips	Emissions (grams)		
Demolition	300	0.9	0	0	116	2.1	3.0	0.005
Site Preparation	54	0.2	0	0	1,188	21.5	21.7	0.034
Grading, Excavation, Shoring, and Trenching	90	0.3	0	0	0	0.0	0.3	0.000
Building Construction	64,020	185.5	31,460	329.3	0	0.0	514.8	0.813
Paving	200	0.6	0	0	0	0.0	0.6	0.001
Architectural Coatings and General Construction	580	1.7	0	0	0	0.0	1.7	0.003
Grand Total							542.0	0.9

Notes:

Emission estimates include vehicles traveling, idling, and stop/starting along the site access roadways.

Vehicle trip rates and emission factors used to calculate emissions for each construction phase are based on default parameters from CalEEMod.

Emission rates are based on total emissions averaged over 633 work days.

Summary of ISCST3 Model Parameters, Assumptions, and Results for DPM and PM_{2.5} Emissions during Construction

ISCST3 Model Parameters and Assumptions				
Source Type	Units	Value	Notes	
Volume Source: Off-Road Equipment Exhaust (without SCA-AIR-1)				
Hours/Work Day	hours/day	8	Typical work day	
DPM Emission Rate	gram/second	0.00711	Exhaust PM ₁₀ from off-road equipment	
Number of Sources	count	37	SMAQMD, 2015	
Emission Rate/Source	gram/second	0.00019		
Release Height	meters	5.0	SMAQMD, 2015	
Length of Side	meters	10.0	SMAQMD, 2015	
Initial Lateral Dimension	meters	2.3	ISCST3 Calculator	
Initial Vertical Dimension	meters	1.0	SMAQMD, 2015	
Volume Source: Off-Road Equipment Exhaust (with SCA-AIR-1)				
Hours/Work Day	hours/day	8	Typical work day	
DPM Emission Rate	gram/second	0.00027	Exhaust PM ₁₀ from off-road equipment	
Number of Sources	count	37	SMAQMD, 2015	
Emission Rate/Source	gram/second	7.40E-06		
Release Height	meters	5.0	SMAQMD, 2015	
Length of Side	meters	10.0	SMAQMD, 2015	
Initial Lateral Dimension	meters	2.3	ISCST3 Calculator	
Initial Vertical Dimension	meters	1.0	SMAQMD, 2015	
Line-Area Source: On-Road Vehicle Exhaust				
Hours/Work Day	hours/day	8		
DPM Emission Rate	gram/second	0.000030	Exhaust PM ₁₀ from on-road vehicles	
Road length	meters	323.500000	Sum of two road segments from ISCST3	
DPM Emission Rate per length	grams/second/m2	1.022E-08		
Number of Sources	count	2	Based on maximum 1 width:10 length ratio	
Length of Side	meters	9.0	ISCST3 Calculator	
Release Height	meters	3.0	BAAQMD, 2012	
Initial Vertical Dimension	meters	2.8	ISCST3 Calculator	
ISCST3 Model Results				
Location Type	Emissions Source	Pollutant	Annual Average Concentration	Notes
Residential 420 W Grand, 2nd floor	Construction (without SCA-AIR-1)	DPM (µg/m ³)	0.085	MEIR (Second-story residential receptor)
		PM _{2.5} (µg/m ³)	0.080	MEIR (Second-story residential receptor)
	Construction (with SCA-AIR-1)	DPM (µg/m ³)	0.004	MEIR (Second-story residential receptor)
		PM _{2.5} (µg/m ³)	0.004	MEIR (Second-story residential receptor)
Pre-school 460 W Grand, ground floor	Construction (without SCA-AIR-1)	DPM (µg/m ³)	0.106	MEIS (Ground level receptor)
		PM _{2.5} (µg/m ³)	0.103	MEIS (Ground level receptor)
	Construction (with SCA-AIR-1)	DPM (µg/m ³)	0.004	MEIS (Ground level receptor)
		PM _{2.5} (µg/m ³)	0.004	MEIS (Ground level receptor)

Notes:

DPM = diesel particulate matter

PM₁₀ = particulate matter with aerodynamic resistance diameters equal to or less than 10 microns

PM_{2.5} = particulate matter with aerodynamic resistance diameters equal to or less than 2.5 microns

µg/m³ = micrograms per cubic meter

Sacramento Metropolitan Air Quality Management District (SMAQMD), 2015. *Guide to Air Quality Assessment in Sacramento County*. June.

Summary of Health Risk Assessment at MEIR for DPM Emissions during Construction

Health Risk Assessment Parameters and Results					
DPM Emissions without SCA-AIR-1					
Inhalation Cancer Risk Assessment for DPM	Units	Age Group			Notes
		3rd Trimester	0-2 Years	2-9 Years	
DPM Concentration (C)	µg/m ³	0.085	0.085	0.085	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1090	861	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF _D)	mg-m ³ /µg-L	0.000001	0.000001	0.000001	Conversion of µg to mg and L to m ³
Dose	mg/kg/day	0.000029	0.000089	0.000070	C*DBR*A*EF*CF _D (OEHHA, 2015)
Cancer Potency Factor (CPF)	(mg/kg/day) ⁻¹	1.1	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	2.00	0.17	Based on total construction period of 29 months
Averaging Time (AT)	years	70	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.85	0.85	0.72	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	m ³ /L	1000000	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.98	23.73	0.40	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk	per million	25.11			At MEIR location
Hazard Index for DPM	Units	Value	Notes		
Chronic REL	µg/m ³	5.0	OEHHA, 2015		
Chronic Hazard Index for DPM	unitless	0.02	At MEIR location		
DPM Emissions with SCA-AIR-1					
Inhalation Cancer Risk Assessment for DPM	Units	Age Group			Notes
		3rd Trimester	0-2 Years	2-9 Years	
DPM Concentration (C)	µg/m ³	0.004	0.004	0.004	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1090	861	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF _D)	mg-m ³ /µg-L	0.000001	0.000001	0.000001	Conversion of µg to mg and L to m ³
Dose	mg/kg/day	0.000001	0.000004	0.000003	C*DBR*A*EF*CF _D (OEHHA, 2015)
Cancer Potency Factor (CPF)	(mg/kg/day) ⁻¹	1.1	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	2.00	0.17	Based on total construction period of 29 months
Averaging Time (AT)	years	70	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.85	0.85	0.72	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	m ³ /L	1000000	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.05	1.12	0.02	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk	per million	1.16			At MEIR location
Hazard Index for DPM	Units	Value	Notes		
Chronic REL	µg/m ³	5.0	OEHHA, 2015		
Chronic Hazard Index for DPM	unitless	0.0008	At MEIR location		

Notes:

DPM = diesel particulate matter

REL = reference exposure level

µg/m³ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m³/L = cubic meters per liter

(mg/kg/day)⁻¹ = 1/milligrams per kilograms per day

MEIR = maximum exposed individual resident

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. February.

Summary of Health Risk Assessment at MEIS for DPM Emissions during Construction

Health Risk Assessment Parameters and Results			
DPM Emissions without SCA-AIR-1			
Inhalation Cancer Risk Assessment for DPM	Units	Age Group	Notes
		2-9 Years	
DPM Concentration (C)	$\mu\text{g}/\text{m}^3$	0.106	ISCST3 Annual Average
Worker Adjustment Factor (WAF)	unitless	4.2	Adjustment factor for 8-hour construction day (OEHHA, 2015)
Daily Breathing Rate (DBR)	L/kg-8 Hr	640	95th percentile, moderate intensity (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.68	250 days/365 days(OEHHA, 2015)
Dose Conversion Factor (CF_D)	$\text{mg}\cdot\text{m}^3/\mu\text{g}\cdot\text{L}$	0.000001	Conversion of μg to mg and L to m^3
Dose	mg/kg/day	0.000194	$C\cdot\text{WAF}\cdot\text{DBR}\cdot A\cdot\text{EF}\cdot\text{CF}_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(\text{mg}/\text{kg}/\text{day})^{-1}$	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	2.42	Based on total construction period of 29 months
Averaging Time (AT)	years	70	70 years for residents (OEHHA, 2015)
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	22.07	$D\cdot\text{CPF}\cdot\text{ASF}\cdot\text{ED}/\text{AT}\cdot\text{CF}$ (OEHHA, 2015)
Hazard Index for DPM	Units	Value	Notes
Chronic REL	$\mu\text{g}/\text{m}^3$	5.0	OEHHA, 2015
Chronic Hazard Index for DPM	unitless	0.02	At MEIS location
DPM Emissions with SCA-AIR-1			
Inhalation Cancer Risk Assessment for DPM	Units	Age Group	Notes
		2-9 Years	
DPM Concentration (C)	$\mu\text{g}/\text{m}^3$	0.004	ISCST3 Annual Average
Adjustment factor	unitless	4.2	Adjustment factor for 8-hour construction day (OEHHA, 2015)
Daily Breathing Rate (DBR)	L/kg-day	640	95th percentile, moderate intensity (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.68	250 days/365 days(OEHHA, 2015)
Dose Conversion Factor (CF_D)	$\text{mg}\cdot\text{m}^3/\mu\text{g}\cdot\text{L}$	0.000001	Conversion of μg to mg and L to m^3
Dose	mg/kg/day	0.000007	$C\cdot\text{WAF}\cdot\text{DBR}\cdot A\cdot\text{EF}\cdot\text{CF}_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(\text{mg}/\text{kg}/\text{day})^{-1}$	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	2.42	Based on total construction period of 29 months
Averaging Time (AT)	years	70	70 years for lifetime exposure (OEHHA, 2015)
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.83	$D\cdot\text{CPF}\cdot\text{ASF}\cdot\text{ED}/\text{AT}\cdot\text{CF}$ (OEHHA, 2015)
Hazard Index for DPM	Units	Value	Notes
Chronic REL	$\mu\text{g}/\text{m}^3$	5.0	OEHHA, 2015
Chronic Hazard Index for DPM	unitless	0.0008	At MEIS location

Notes:

DPM = diesel particulate matter

REL = reference exposure level

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m^3/L = cubic meters per liter

$(\text{mg}/\text{kg}/\text{day})^{-1}$ = 1/milligrams per kilograms per day

MEIS = maximum exposed individual student

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. February.

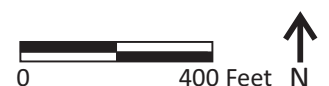
TAC Sources and Sensitive Receptors



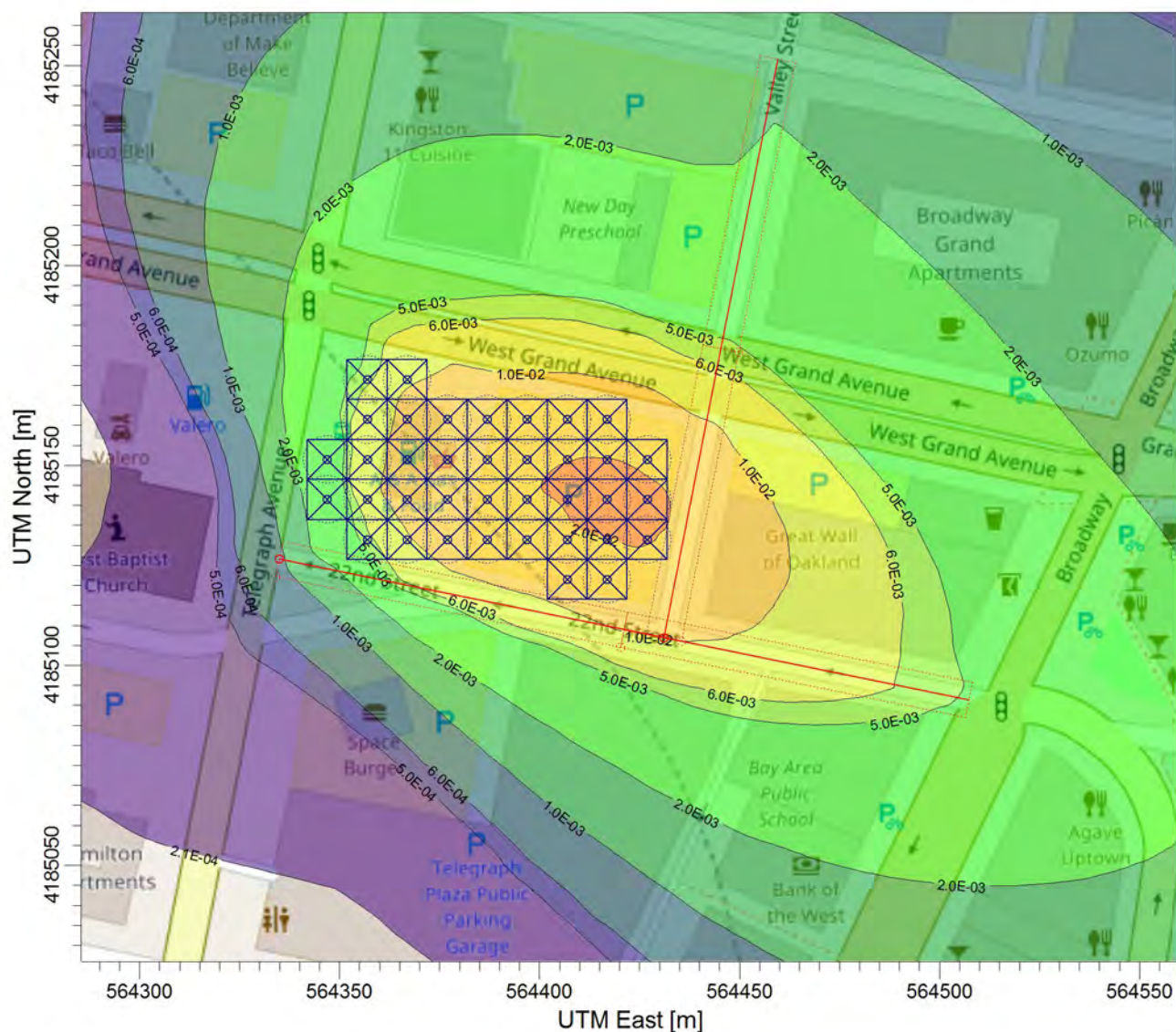
Base: Google Earth Pro, 2018.

- Project Site
- 1,000-Foot Buffer around Maximally Exposed Individual Resident
- Existing Stationary Source (with Permit ID)
- Future Emergency Generator
- ★ Maximally Exposed Individual Student (MEIS)
- ★ Maximally Exposed Individual Resident (MEIR)

2201 Valley Street Project
Oakland



PROJECT TITLE:
2201 Valley Street, Oakland



PLOT FILE OF ANNUAL VALUES FOR SOURCE GROUP: ALL

ug/m³

Max: 2.1E-02 [ug/m³] at (564418.81, 4185144.25)



COMMENTS:

Emissions with SCA-AIR-1 for second-floor receptors.

SOURCES:

39

RECEPTORS:

750

OUTPUT TYPE:

Concentration

MAX:

2.1E-02 ug/m³

COMPANY NAME:

BASELINE Environmental Consulting

MODELER:

SCALE:

1:1,726

0 0.05 km

DATE:

4/18/2018

PROJECT NO.:

Attachment G: Traffic Noise Outputs

* * * * * CASE INFORMATION * * * * *

* * * * * Results calculated with TNM Version 2.5 * * * * *

22nd Street between Valley Street and Broadway am peak

* * * * * TRAFFIC VOLUME/SPEED INFORMATION * * * * *

Automobile volume (v/h):	180.0
Average automobile speed (mph):	25.0
Medium truck volume (v/h):	6.0
Average medium truck speed (mph):	25.0
Heavy truck volume (v/h):	4.0
Average heavy truck speed (mph):	25.0
Bus volume (v/h):	2.0
Average bus speed (mph):	25.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * * TERRAIN SURFACE INFORMATION * * * * *

Terrain surface: hard

* * * * * RECEIVER INFORMATION * * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 56.4

* * * * * CASE INFORMATION * * * * *

* * * * * Results calculated with TNM Version 2.5 * * * * *

West Grand Avenue east of Northgate Avenue am peak

* * * * * TRAFFIC VOLUME/SPEED INFORMATION * * * * *

Automobile volume (v/h):	1236.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	40.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	26.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	13.0
Average bus speed (mph):	30.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * * TERRAIN SURFACE INFORMATION * * * * *

Terrain surface: hard

* * * * * RECEIVER INFORMATION * * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 65.8