CHAPTER 5
Project Variants

The proposed Project includes two variants. These potential Project features are identified as variants because they may or may not be included by the Project sponsor as part of the proposed Project. In addition, the implementation of the variants would require the Project sponsor to obtain an interest in or control over properties they do not currently have. They are included as variants so that they can be incorporated into the Project in the event the necessary land can be acquired and the necessary approvals can be obtained. There is no way to determine at this time whether the variants can be implemented. The variants are not "alternatives" within the meaning of CEQA, however, in that they address specific elements of the Project, and are not alternatives to the Project as a whole. A further explanation of the reasons why these two elements are included as variants is described below in the sections of this chapter describing and analyzing each variant. The two variants are initially introduced in Section 3.18 of Chapter 3, *Project Description.* Full descriptions are provided in the following sections of this chapter:

5.1 Peaker Power Plant Variant

5.2 Aerial Gondola Variant

Figure 5-1 shows the locations of the variants relative to the Project site. **Figure 5-2** illustrates the proposed Project with the variants. The two variants are not mutually exclusive. Either or both could be incorporated into the Project.

Chapter 4 of this Draft EIR analyzes the proposed Project without any variants. This chapter describes each variant and analyzes the environmental impacts of the Project *with* each variant. The analysis starts by identifying the applicable study area and environmental setting, if these differ from those used for the analysis of the proposed Project (as presented in Chapter 4). This analysis then identifies the environmental impacts and/or mitigation measures associated with the proposed Project *with* each variant, if these differ from those presented in the analysis of the Project.

The significance thresholds and approach to the analysis used in this chapter are consistent with those presented in Chapter 4. Section 5.3 discusses impacts that would occur if the Project were implemented with both variants, and Section 5.4 discusses the Maritime Reservation Scenario with both variants. Also, **Table 5-24** presented at the end of the chapter, summarizes the impacts and/or mitigation measures identified that would occur only with the Project variants.

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SOURCE: BIG/JCFO, 2020

Oakland Waterfront Ballpark District Project

Figure 5-1
Variant Key Plan

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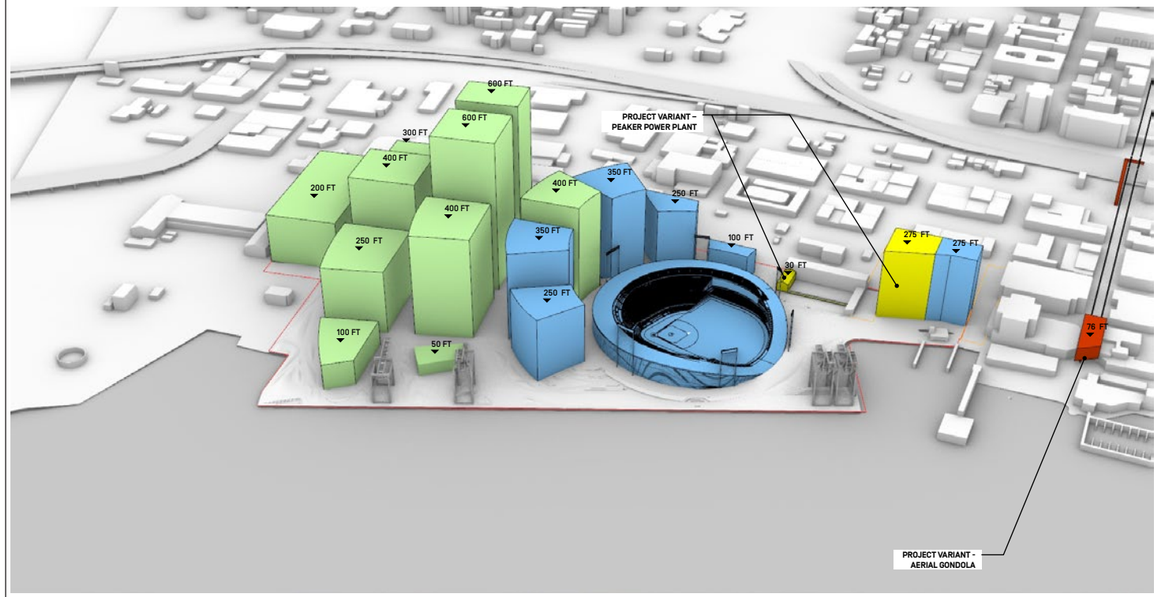

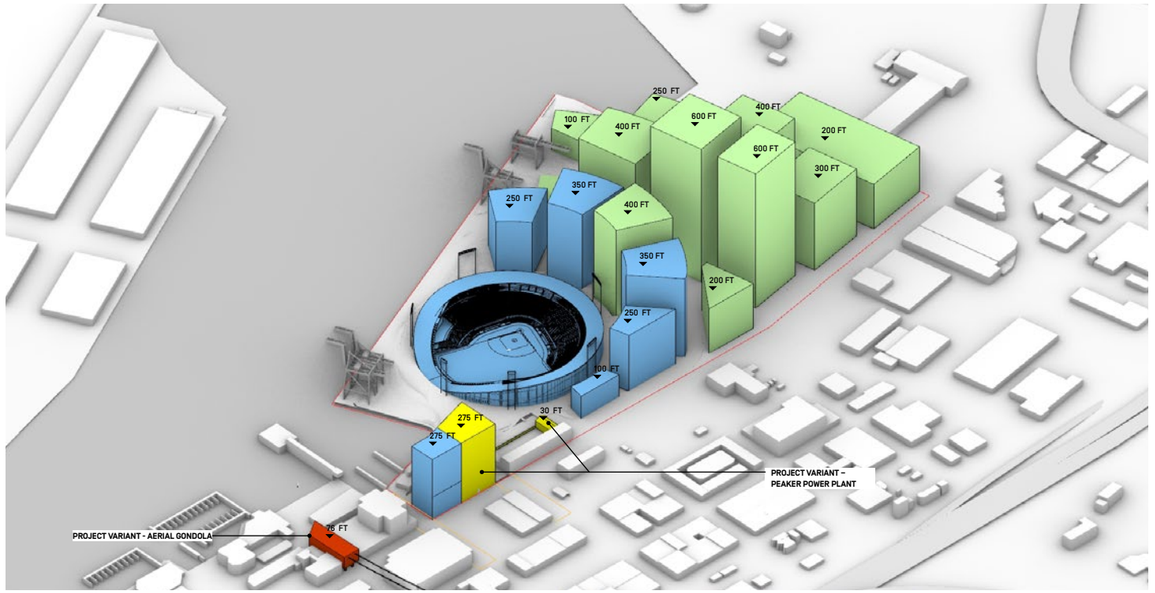

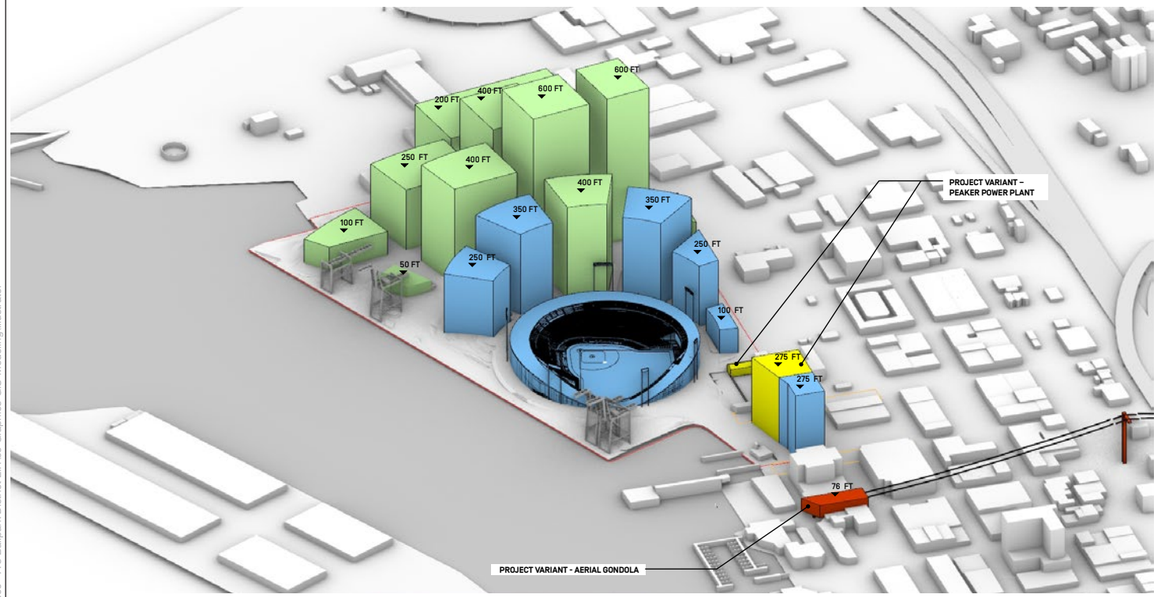

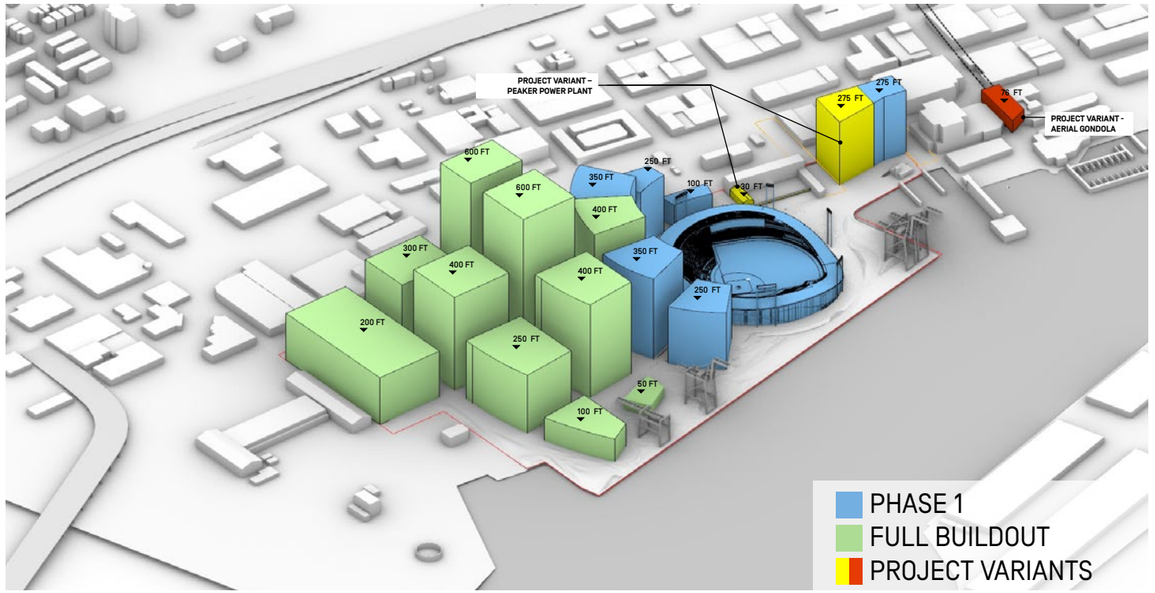

**NOTE: BUILDING ENVELOPE ELEVATIONS ARE MEASURED FROM THE CITY OF OAKLAND DATUM (ELEVATION 10' AT FINISHED FLOOR) AND BASED ON CURRENT ZONING REGULATIONS*

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SOURCE: BIG/JFCO, 2020

Oakland Waterfront Ballpark District Project

Figure 5-2
Maximum Building Massing Model and Height Plan - Variants

ESA

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5.1 Peaker Power Plant Variant

5.1.1 Background

The existing Oakland Power Plant (referred to in this Draft EIR as the "Peaker Power Plant") on the Project site is under a Federal Energy Regulatory Commission jurisdictional Reliability Must-Run (RMR) agreement between the California Independent System Operator Corporation (CAISO) and Dynegy Oakland.[1] The RMR agreement gives CAISO the right to call on the Peaker Power Plant to operate anytime it is needed for system reliability, and to ensure that there is enough on-hand generation to satisfy local reliability needs. Each year, CAISO makes a determination regarding the continued need to operate the Peaker Power Plant for system reliability. The RMR agreement provides CAISO with the unilateral right to extend the RMR agreement for another calendar year on an annual basis. On September 23, 2020, CAISO issued a notice extending Vistra Energy's "must run" agreement through December 31, 2021 (California ISO, 2020).

To address the system reliability issues currently addressed by the Peaker Power Plant, as well as other clean energy initiatives, Pacific Gas and Electric Company (PG&E) and CAISO developed the Oakland Clean Energy Initiative. The Oakland Clean Energy Initiative is a plan that, when completed, would allow the RMR agreement to be terminated. A Vistra Energy battery storage project with East Bay Community Energy (EBCE) is one of several battery storage projects and energy initiatives that are proposed for the Oakland Clean Energy Initiative. On June 5, 2019, EBCE approved a contract to receive the power generated from a proposed 20-megawatt (MW)/80-megawatt-hour (MWh) battery energy storage project that would be built at the Peaker Power Plant site (EBCE, 2019). However, Vistra Energy has indicated that it intends to operate the Vistra Energy/EBCE battery storage project in parallel with the burning of jet fuel for energy at the Peaker Power Plant.

According to the Project sponsor, although the RMR agreement must be terminated before the Peaker Power Plant can be shut down, terminating the RMR agreement may not result in the shutdown of the burning of jet fuel for energy at the Peaker Power Plant. The RMR agreement does not require the Peaker Power Plant to terminate the burning of jet fuel for energy when the RMR agreement terminates (Oakland Athletics, 2019).

5.1.2 Description

The Peaker Power Plant Variant involves the planned conversion of the existing Peaker Power Plant to a battery energy storage system (referred to throughout as "battery storage"); physical changes to the existing buildings, as described below; removal of the jet fuel tank; and construction of buildings on the jet fuel tank site.[2]

1 Dynegy Energy is a wholly owned subsidiary of Vistra Energy.

2 The Peaker Power Plant serves the critical function of providing power to jurisdictions to cover "peak" energy demand periods.

The plan for the Peaker Power Plant site is considered a variant to the proposed Project in this EIR because the Oakland A's have not entered into an agreement with Vistra Energy to give the A's an interest in and control over the property to implement the proposed activities under this variant. At this time, Vistra Energy, as the landowner, has the authority to decide what activities occur on the site, including when and whether the Peaker Power Plant would shut down or continue to operate and whether to implement battery storage.

The Oakland A's are negotiating an agreement with Vistra Energy, but the agreement has not been reached at this time; therefore, the terms of the agreement are unknown. However, the A's have made certain representations to the City of Oakland (City) on the agreement terms related to the anticipated future plan to gain control of the site, decommission the Peaker Power Plant, add battery storage, and construct new buildings (Oakland Athletics, 2019). The A's have identified the following potential agreement terms:

(1) A proposed term requiring the decommissioning and remediation of the Peaker Power Plant and jet fuel tank, termination of the burning of jet fuel as energy, and conversion of the plant to a non-emitter; and

(2) A proposed term allowing battery storage on the Peaker Power Plant site related to the A's proposed ballpark Project.

Note that, at the time this Draft EIR is being prepared, it appears that a 90 MW battery storage system (based on clarified assumptions provided in the Ramboll *Air Quality Technical Report* [footnote 115], in Appendix AIR to this Draft EIR) may be built on the site before the A's take ownership; this element is factored into the analysis of this variant. There is also the possibility that the burning of jet fuel would terminate before the Oakland A's enter into an agreement with Vistra Energy for control of the site.

No final agreements have been reached at the time of preparation of this Draft EIR, and the dates when the above events would occur – either under the agreement or otherwise – are not known. Therefore, this document cannot make a final determination of the amount of any credit for reductions in emissions of criteria pollutants or greenhouse gases (GHG) at the Peaker Power Plant Variant site allocated to the A's proposed ballpark Project. Such a determination would need to be based on when certain actions and events would occur and whether those actions or events could be attributable to the A's under the actual terms of the agreement and other facts that were not known when this Draft EIR was prepared.

However, based on the information provided by the Project sponsor, it was assumed that the burning of jet fuel at the Peaker Power Plant site would terminate, and direct emissions of criteria pollutants and GHGs associated with fuel combustion for electricity would no longer occur. Although the exact direct emissions reductions are currently not known, and the final direct emissions reduction credit would need to be reevaluated in the future once more detail is available, these direct emissions reductions are assumed in the analysis presented below. Further, the indirect emissions reductions associated with the battery storage are more uncertain than the direct emissions reductions, and therefore were not included in the analysis.

As shown in **Figure 5-3**, this variant addresses the U-shaped building at 601 Embarcadero West occupying the parcel south of Embarcadero West between Martin Luther King Jr. Way (MLK Jr. Way) and Jefferson Street and the fuel storage tank to the east.[3] This building has been historically associated with both the fuel storage tank east of Jefferson Street and the block occupied by 101 Jefferson Street. Together, 101 Jefferson Street and 601 Embarcadero West compose the PG&E Station C Area of Primary Importance (API),[4] a historic resource for the purposes of CEQA (see **Appendix CUL-1**). The variant site is included within the Project site boundaries (location 1 in Figure 5-1).

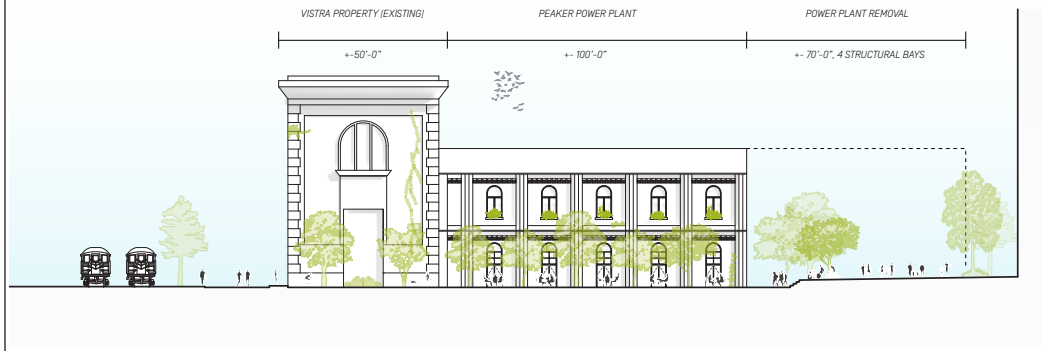
Figure 5-4 shows the existing condition and configuration of the variant site. **Figure 5-5** shows the existing appearance of the structure from Embarcadero West. **Figure 5-6** details key energy conversion components of the variant within the existing PG&E Station C site. **Figure 5-7** shows the building in the context of the historical resource area.

The Project sponsor is seeking to acquire the Peaker Power Plant; if it does so, the variant would include both interior and exterior modifications to the building. The interior modifications would include a battery storage facility. The exterior modifications would include shortening the existing wings of the building. The proposed modifications to the building's exterior proposed in the variant would widen the space between the building and the proposed ballpark, particularly pedestrian access to the new ballpark. The Project variant therefore proposes a different site plan than the proposed Project, because the proposed Project would retain the existing exterior building form and massing of the Peaker Power Plant building and would not modify the Project site accordingly. (Proposed building modifications are described in greater detail below.) This variant would also include redevelopment of the fuel tank site, as described in more detail below.

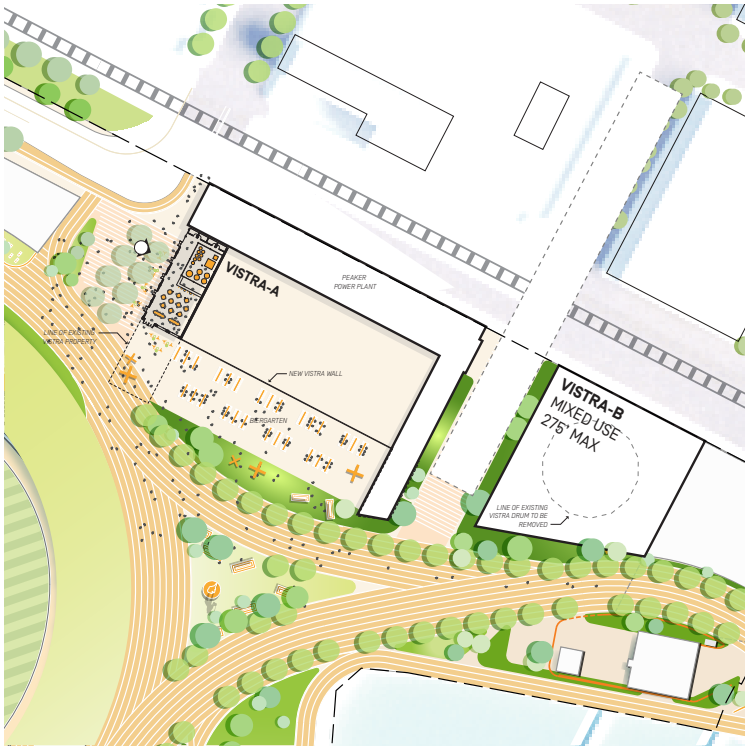
As discussed in detail in Section 4.4, *Cultural and Tribal Cultural Resources*, the PG&E Station C API, including 601 Embarcadero West, is a local historic resource (Oakland Cultural Historic Survey rating of A1+) and appears to be eligible for listing in the National Register of Historic Places (National Register). (Detailed descriptions of the architecture and conditions of the buildings are included in Appendix CUL-1 to this Draft EIR.)

[3] Prior historic resource documentation on both DPR 529 forms and on Oakland Cultural History Survey forms used a number of addresses to denote the subject building at 601 Embarcadero West. These stem from a series of construction projects between 1888 and 1938, in which smaller buildings were joined or additions made to result in the current U-shaped configuration that remains today. These addresses include: 601, 605, 629, 635, and 645 Embarcadero (also noted as 601-645 Embarcadero), 64 and 74 MLK Jr. Way (formerly Grove Street), and 51 and 75 Jefferson Street. See Appendix CUL-1 for more information regarding the history and context for 601 Embarcadero West.

[4] Areas of Primary Importance (APIs) are City of Oakland zoning–designated historic resources for the purposes of CEQA.



PROPOSED PEAKER POWER PLANT ELEVATION



ILLUSTRATIVE PEAKER POWER PLANT PLAN

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SOURCE: BIG/JCFO, 2020

Oakland Waterfront Ballpark District Project

Figure 5-3
Peaker Power Plant Site Plan

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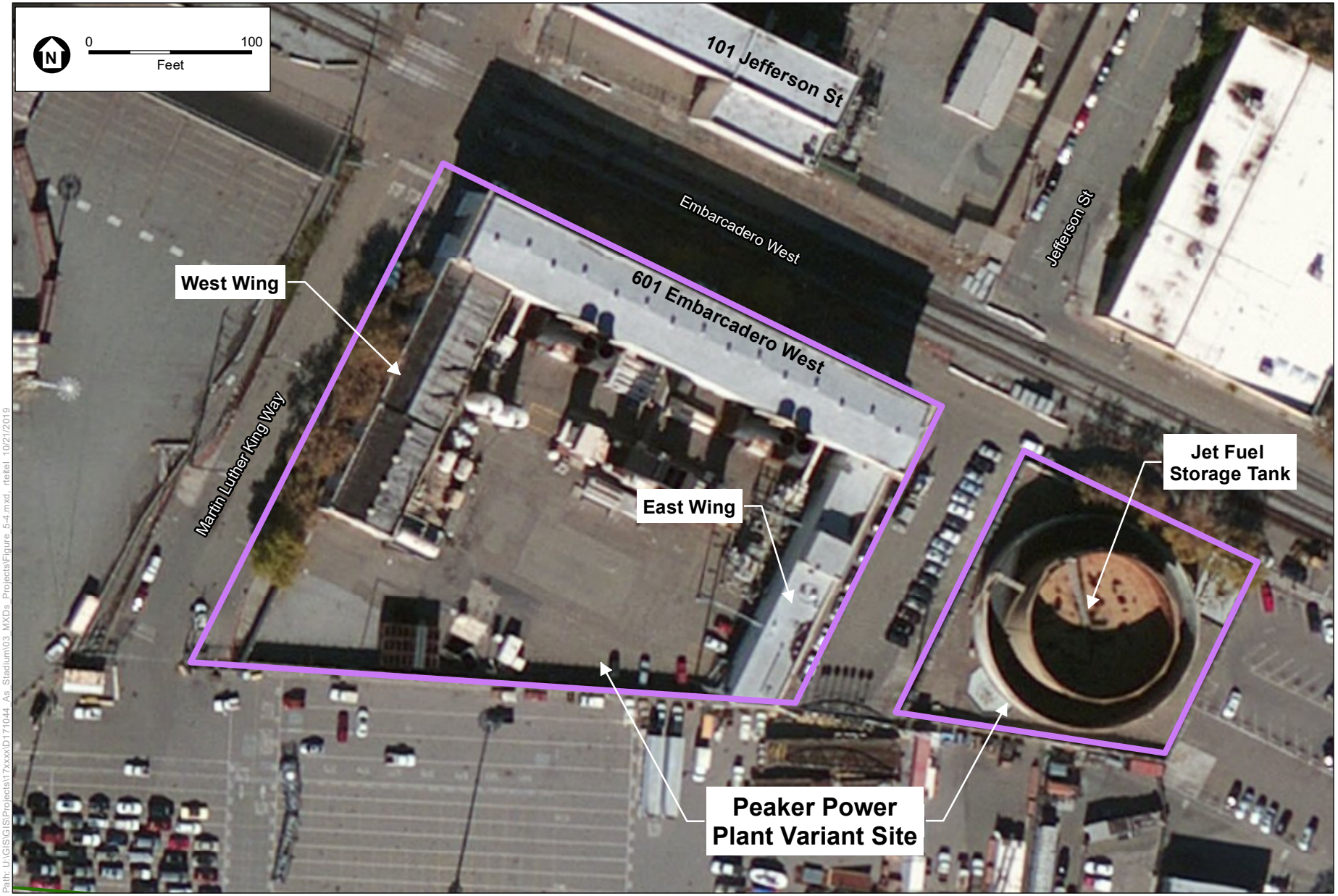

SOURCE: ESRI, 2019

Oakland Waterfront Ballpark District Project

Figure 5-4

Existing Peaker Power Plant Site

ESA

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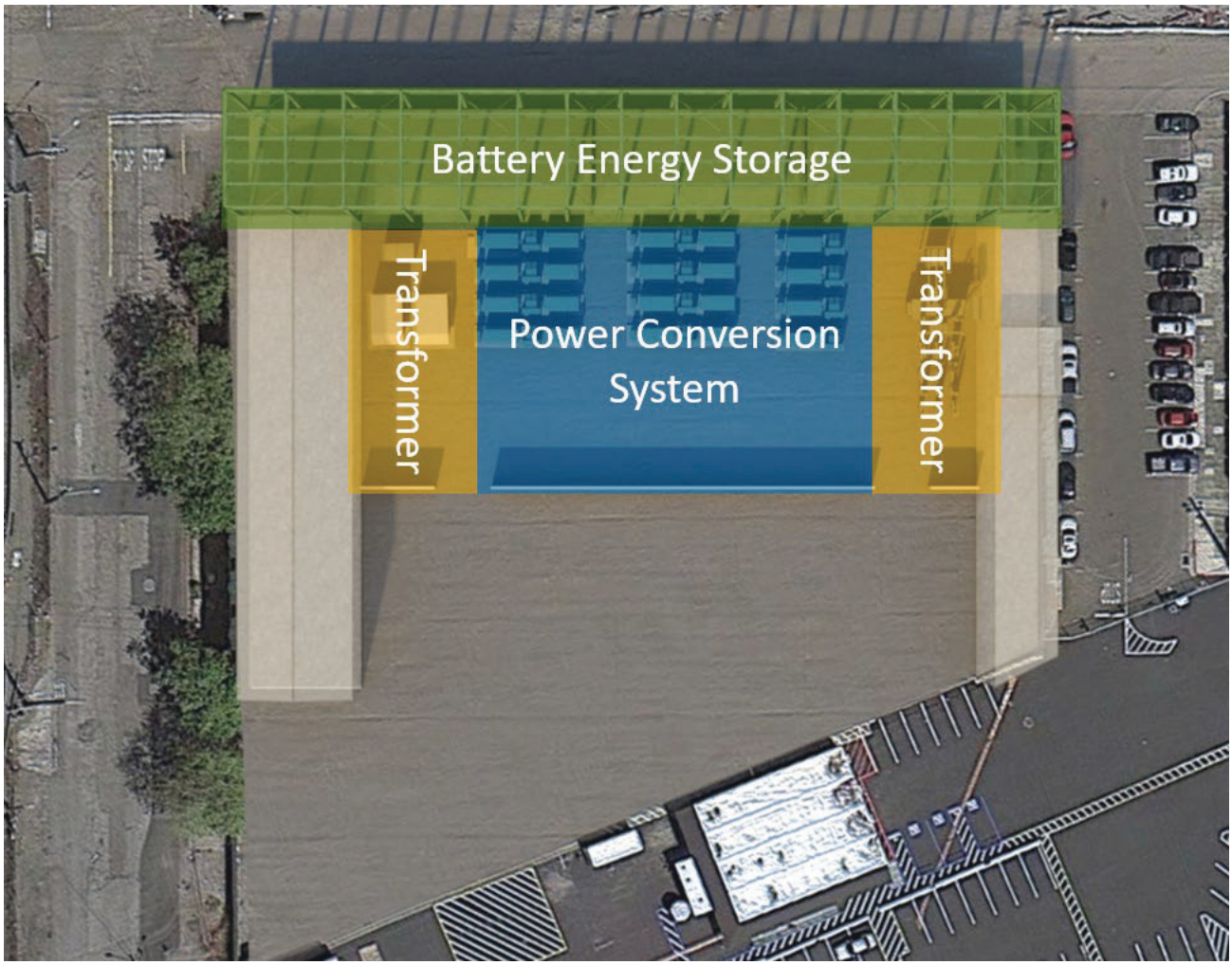
SOURCE: ESA, 2020

Oakland Waterfront Ballpark District Project

Figure 5-5
Existing North Wing and Smoke Stacks,
View from Northeast

ESA



SOURCE: Vistra

Oakland Waterfront Ballpark District Project

Figure 5-6
Proposed Battery Energy Storage System Layout Plan

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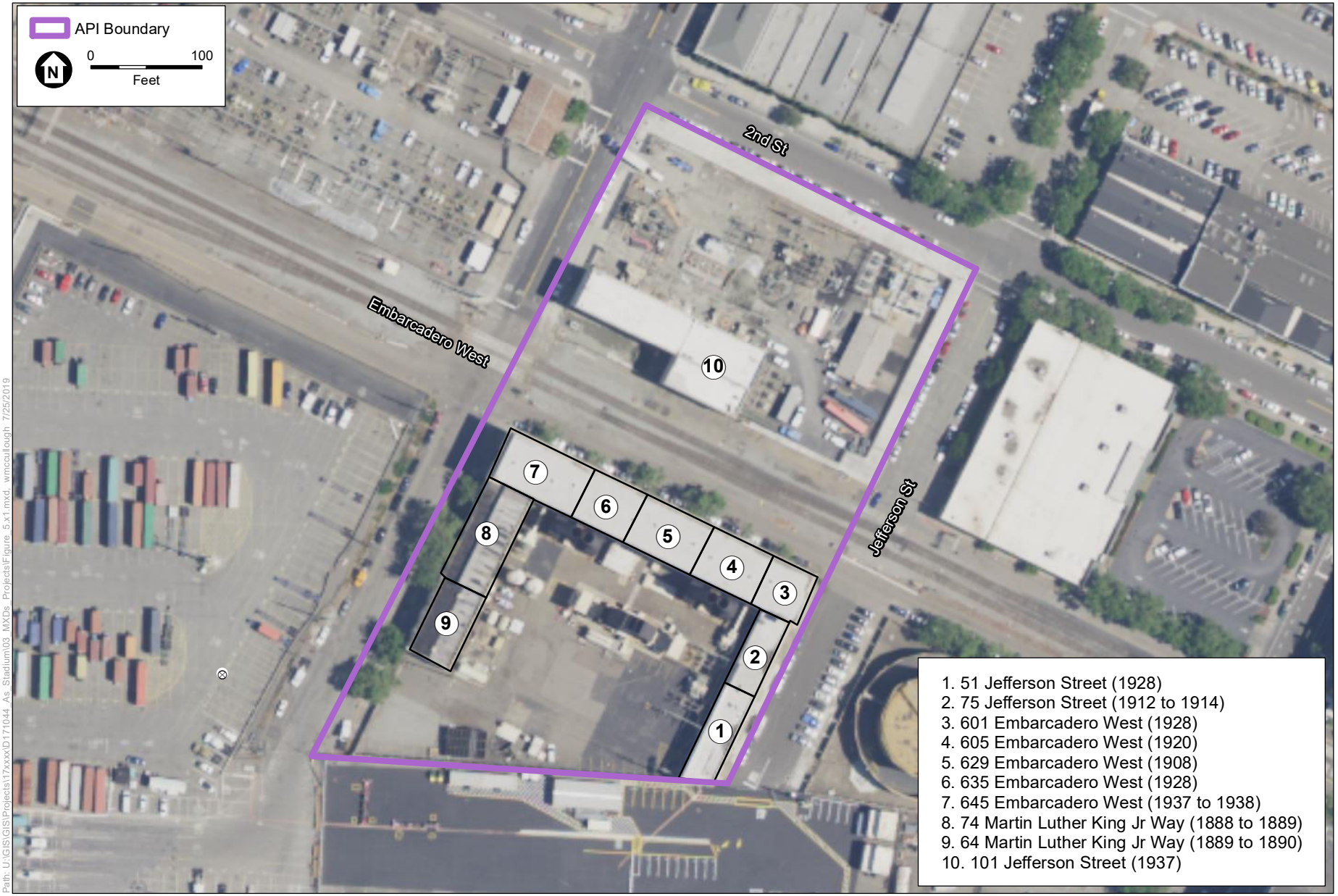

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SOURCE: ESRI, 2019

Oakland Waterfront Ballpark District Project

Figure 5-7

PG&E Station C API

ESA

New Power Generation Operation

The proposed battery storage would involve operation of a lithium-ion battery facility with 20 hours of energy storage, to power a system that would provide green energy through storage of excess energy. The batteries would be charged locally and would store energy until they are needed. The system would be connected directly to the Project load electrically behind the PG&E meter – that is, after electric deliveries to the Project are metered. The battery system would be charged using power imported through the PG&E connection and would be dispatched directly to the Project load through newly constructed electric lines. The new lines would be owned by the Project sponsor and may be located underground.

This Peaker Power Plant Variant could be implemented with the Project in Phase 1 or before the completion of Phase 1. The battery conversion and most of the interior building modifications for the proposed Project would be specifically for the purpose of converting the Peaker Power Plant to a battery storage facility as discussed below, and all work would be completed during the scheduled construction of the proposed Project. The impact analysis assumes that this variant would be constructed and begin operations in Phase 1, because that is the scenario in which the variant's impacts would be greatest, particularly with respect to air pollutant emissions during construction.

Proposed Building/Site Changes for the Conversion to Battery Storage

Minimal physical changes to the exterior of the existing building at 601 Embarcadero West would be required to accommodate the proposed battery conversion. Changes would also be made to the building's interior to implement the conversion to battery storage. As part of the conversion, the site would be disconnected from the adjacent fuel storage tank. The anticipated changes to the exterior of the facility would be the removal of the current jet turbines, including removal of the black smokestacks from the courtyard, and placement of the new power conversion system and transformers in the existing outdoor courtyard within the footprint of the existing power plant (see Figures 5-4 and 5-5). (The actual batteries would be placed inside the existing building.) Currently, only the tops of the black smokestacks and transformers are clearly visible above the slatted chain-link fence that exists on the site's perimeter, where no existing building wing exists. Newly installed transformers would connect the new battery storage facility through a series of breakers and underground electrical connections to the PG&E substations located across Embarcadero West (see Figure 5-6 for the conversion configuration).

Proposed Building/Site Changes

As shown in Figure 5-1, the existing building forms a U-shape around a courtyard that faces the ballpark site. The entrance to the ballpark, the pedestrian circulation, and the adjacent large public plazas opposite the existing buildings form one of the major gateways into the new ballpark and the adjoining development. As a result, a high volume of pedestrian foot-traffic is anticipated where the southern portions of the east and west wings currently exist. These are proposed for modification as described below.

The Peaker Power Plant Variant also proposes removal of the large fuel tank that would no longer be needed (see Figure 5-4) and would replace the tank with mixed-use development in a new building up to 275 feet tall. Removal of the tank is not required for the battery conversion and would only occur as part of the construction of the new mixed-use structure proposed as part of this variant (see *New Building and Uses* below).

West Wing Modifications

Two building sections form the west wing of the Peaker Power Plant, which faces MLK Jr. Way. When first constructed in 1888–1889, 74 MLK Jr. Way was a freestanding brick building. The building was expanded shortly thereafter, in 1889–1890, and the expanded section was given an address of 64 MLK Jr. Way (Grove Street). The combined brick building was later joined to other structures on the site to form the large building seen today. These brick sections are the two oldest portions of the building. (See Figure 5-7 for the building addresses and age information.) The west wing is in fair condition, except in areas adjacent to street trees where the coating has failed; there appears to be mildew, soil, and some plant growth within the brickwork; and water intrusion has affected the interior elements, causing some corrosion to the roof trusses. To accommodate a new public plaza and pedestrian circulation, this variant would reduce the length of the two-story west wing by removing four structural bays that extend for approximately 70 feet. Thus, this variant would fully remove the 1889–1890 section (64 MLK Jr. Way) and retain the 5½ bays of the oldest brick section (74 MLK Jr. Way).

The exterior appearance of the remaining building would be retained and the building would be rehabilitated in conformance with the *Secretary of the Interior's Standards for the Rehabilitation of Historic Buildings* (Secretary's Standards). Exterior masonry would be cleaned and recoated and the windows repaired or replaced in-kind. Some first-story windows may be replaced with doors to accommodate the new uses proposed by the variant. On the interior, the full-height volume would be maintained. The steel roof trusses would be refurbished and would remain visible; and the roof would be repaired, with the possible addition of skylights. The steel mezzanine structure would be retained as much as allowed by the new use, with the goal to maintain the overall industrial character of the interior of the Peaker Power Plant. The new end gable needed with the removal of the 64 MLK Jr. Way section would be constructed in a contemporary style that would be distinguishable from, but compatible with, the character of the historic structure. The new wall would provide openings into the Peaker Power Plant and opportunities for connections to possible outdoor seating for a café or retail use, as described further under *New Building and Uses* below.

East Wing Modifications

The building sections at 75 and 51 Jefferson Street form the east wing and were constructed in 1912–1914 and 1928, respectively. See Figure 5-7 for the building address and age information. The east wing is in relatively good condition, showing few signs of deterioration. The façades facing Embarcadero West (north) and Jefferson Street (east) are monumental elevations and are designed to appear as one-story buildings with oversized features that do not reflect the actual multi-story height of the building (see Figure 5-3). Under the Peaker Power Plant Variant, the building section identified as 75 Jefferson Street would remain in use as part of a new power

generation facility; however, the building section identified as 51 Jefferson Street (the southernmost portion of the east wing) would be removed to accommodate the new public plaza proposed to the south. The exterior appearance of the remaining building would be retained and rehabilitated in conformance with the Secretary's Standards. The transom windows would be repaired and refurbished; and similar to the west wing, a new end wall would be constructed to be distinguishable from, yet compatible with, the character of the remaining historic structure.

New Building and Uses

Mixed-Use Redevelopment on the Fuel Tank Site

With removal of the fuel tank, an approximately 32,000-square-foot site would be available for redevelopment, and the Project sponsor would construct a new building up to 100 feet tall. The mixed-use development on the fuel tank site could include commercial or residential development, or a mix of both of these, subject to sufficient cleanup and agency approvals, and would include active uses on the ground floor as well as off-street parking necessary to serve building tenants. In particular, the fuel tank site fronts the proposed Athletics' Way; therefore, street-fronting active uses would be encouraged or required (in accordance with new Project-specific zoning regulations proposed for the site, as discussed in Section 3.14.2, *New Waterfront Zoning District*, in Chapter 3).[5]

As discussed above, maximum building heights and a range of land uses would frame the maximum development that could occur across the Project site (see Table 3-1 in Chapter 3), including development and uses that would occur with the Peaker Power Plant Variant. In other words, the new development on the fuel tank site would be accommodated by redistributing uses and would not result in an increase in the total square footage of uses proposed as part of the Project.

West Wing and Courtyard

With conversion of the building to battery storage and the removal of portions of the east and west wings, the majority of the building and the area enclosed by its wings and replaced south wall would still be used as a power plant. However, as shown conceptually in Figure 5-3, the transformed and newly available spaces created from the reduced east and west wings and south of the power plant wall – fronting Athletics' Way, the ballpark, and the waterfront – would have indoor and outdoor amenities for public use, including retail and dining establishments, such as a restaurant or bar, informal outdoor seating, and landscaping areas.

Agencies and Approvals

The City and Port of Oakland would review the proposed variant for design review approval, including in particular the proposed Project modifications to a local historic resource.

The conversion of the Peaker Power Plant to battery storage would not constitute a change in land use. However, the retail, dining, and open space uses proposed immediately south and west of the power plant and the mixed-use development on the site of the jet fuel tank would constitute a

[5] Office uses could include a range of commercial uses, including but not limited to general administrative and professional office and life sciences/research. Retail uses could include retail, cultural, and/or civic uses.

change in a land use. Parts of the Peaker Power Plant Variant site are in the area where the Project proposes a City of Oakland General Plan (General Plan) amendment from the "General Industry and Transportation" land use classification to "Regional Commercial." The Peaker Power Plant Variant would include a General Plan amendment to change the land use designation of the portion of the variant site east of Jefferson Street (fuel storage tank) from the Estuary Policy Plan's Retail Dining Entertainment 1 (RD&E-1) land use designation to RD&E-2, which would permit residential use.

The site is currently zoned Industrial General (IG) pursuant to the Oakland Zoning Regulations. Although conversion of the plant would not require rezoning the site, the Peaker Power Plant Variant site is in the area where the Project proposes to rezone the Project site and establish a new Waterfront Planned Development Zoning District as authorized by the proposed General Plan amendment.

5.1.3 Study Area and Setting

The site of the Peaker Power Plant Variant is within the proposed Project site; therefore, the study area and setting applicable to this variant are the same as those for the proposed Project. Existing conditions on and around this variant site are the same as described for each environmental topic analyzed in Chapter 4 of this document.

5.1.4 Impacts of the Peaker Power Plant Variant

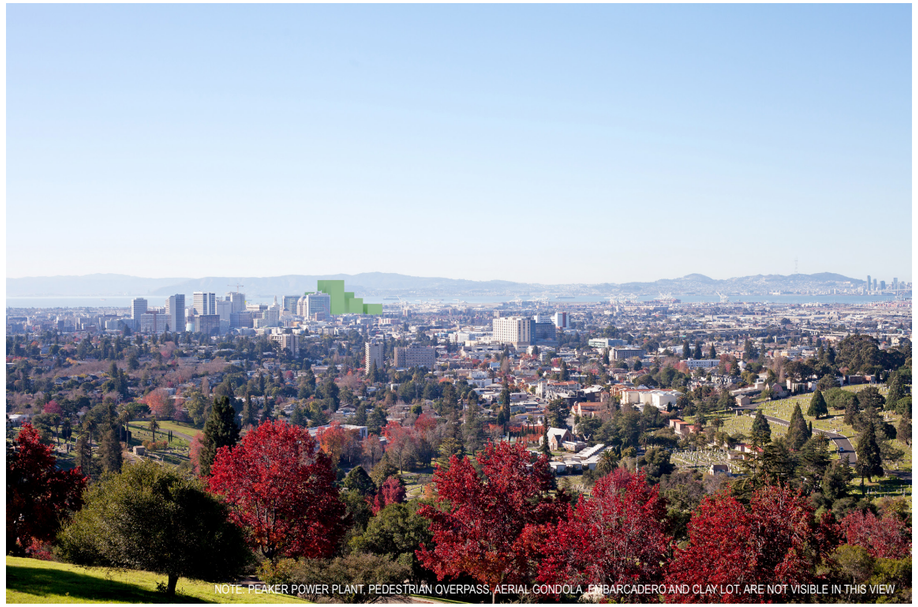
This section presents the impacts and mitigation measures of the Peaker Power Plant Variant, with emphasis on impacts and mitigation that differ from those identified for the proposed Project without this variant. Where impacts of the Project plus the variant would be the same as those without the variant, this section briefly explains why impacts would remain as described for the proposed Project in Chapter 4.

Aesthetics, Shadow and Wind

Developing the Peaker Power Plant Variant would result in the ***same aesthetics, shadow and wind impacts, improvement measures, and mitigation measures*** as the proposed Project.

Scenic Vista/Scenic Resource (non-CEQA)

As discussed in the *Description* above, the 275-foot building proposed under the Peaker Power Plant Variant would replace an existing approximately 45-foot-tall jet fuel tank. As shown in **Figure 5-8**, the new mixed-use building with this variant would be visually prominent when viewed from Viewpoint 1 (Water Street at Clay Street) near the east edge of the Project site. The building could obstruct views of some cranes at Howard Terminal from nearby points along Embarcadero West, but would not obstruct views of the two historic vessels docked near the Oakland Ferry Terminal, nor would it obstruct views or scenic vistas of San Francisco Bay, the downtown Oakland skyline, or the Oakland Hills from the previously selected viewpoints (shown in Figure 4.1-1 in Chapter 4).



VIEWPOINT 4 - FROM MOUNTAIN VIEW CEMETERY

VIEWPOINT 3 - FROM BAY BRIDGE

VIEWPOINT 2 - FROM MLK JR WAY

VIEWPOINT 1 - FROM WATER STREET

- PHASE 1
- FULL BUILDOUT
- CUMULATIVE
- PROJECT VARIANT

NOTE: The Project sponsor intends to retain and relocate the existing container cranes on site. However, as stated in the Project Description, retention of the cranes may not be feasible. If any of the cranes were not retained, one or more cranes would be absent from these views.

SOURCE: Environmental Vision, 2020

Oakland Waterfront Ballpark District Project

Figure 5-8
Visual Simulations – Variants from Project Viewpoints

ESA

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Visual Character/Visual Quality (non-CEQA)

As also introduced above in the *Description* of this variant, the Peaker Power Plant itself is part of the PG&E Station C API,[6] a historic resource for the purposes of CEQA (see Appendix CUL.1). Therefore, the complex of buildings is considered a historic resource, making it a visual resource for the purpose of this analysis (see the discussion of historic resources in Section 5.1.4, *Cultural and Tribal Cultural Resources*).

Because the Downtown Oakland Specific Plan (DOSP) explicitly provides for increased heights and densities immediately north of the Project site, and an analysis of aesthetic impacts under CEQA is no longer required for this Project, the cumulative visual impacts with anticipated DOSP developments are not considered a significant cumulative impact, and no mitigation measures are needed.

Further for visual character, the height of the proposed building on the storage tank portion of the variant site would not represent a meaningful difference in the context of the overall Project and would undergo design review before final Project approvals.

Light/Glare (Non-CEQA) and Shadow

The building constructed on the site of the storage tank would cast new shadow in the same direction and during the same times of year as under the proposed Project, as shown in **Figure 5-9**. Similar to the Project, the new shadow cast by the Peaker Power Plant Variant would not reach publicly accessible parks or open areas at any point in the year. In addition, historic resources that could receive shadow from the Peaker Power Plant Variant are not particularly light-sensitive or light-dependent. Additionally, the proposed Project would not impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors, and thus would not have a significant impact related to building solar facilities. Moreover, increased shadow on historic resources would not substantially impair the resource's historic significance such that it would no longer be eligible for listing on a national, State, or local register of historic places. Cumulative shadow with the Peaker Power Plant Variants is shown in **Figure 5-10**. The figure shows that, for the reasons discussed above, the new shadow cast by the Peaker Power Plant Variant, in combination with cumulative development, would not contribute to a significant shadow impact. Signage installed and lighting/glare resulting from the variant would adhere to the same various regulations and standards considered for the proposed Project.

Wind

The 275-foot-tall building constructed on the fuel storage tank site would have the potential to affect wind conditions. The wind assessment, showing wind impacts from the variants, is included in **Appendix AES**. As shown in appendix Figure 1D (proposed Project) compared to appendix Figure 1E (proposed Project with Variants), for all locations, the average wind speed that would exceed the wind hazard criterion increase from 32 to 33 miles per hour, and the total number of locations exceeding the wind hazard criterion would increase from 48/167 under the proposed Project to 53/167 under the proposed Project with the Peaker Power Plant Variant. The evaluation relies on no specific building designs developed at this time, and therefore remains

[6] APIs are City of Oakland zoning–designated historic resources for the purposes of CEQA.

conservative. Although wind conditions under the Peaker Power Plant Variant would be worse than under the proposed Project, mitigation requiring project-specific analysis would continue to apply. With the wind analysis and design changes required by the mitigation (Mitigation Measure AES-1), the wind impact would likely be comparable to that of the Project and would be considered Significant and Unavoidable, as with the Project. No new or changed impacts or mitigation measures would be required for aesthetics (light/glare, shadow, wind).

Air Quality

Construction and operation of the Peaker Power Plant Variant would result in ***slightly different emissions*** than the construction and operation of the Project. Additional construction activity associated with physical changes to the buildings would occur. The same mitigation measures would apply to the variant as to the Project.

Note that direct reductions in criteria pollutant emissions would occur because of the shutdown of existing fossil-fuel power generation, and a reduction in indirect emissions may occur as a result of the battery storage (at the regional power plants providing electricity to the City's grid). However, as discussed above in Section 5.1, the calculation of the amount of the criteria pollutant emissions reduction credit that would be allocated to the A's Project is based on future agreements and actions for the Peaker Power Plant site, and the final determination of the credit cannot be determined at this time. However, it was assumed that burning of jet fuel at the Peaker Power Plant site would terminate, and direct emissions of criteria pollutants associated with fuel combustion for electricity would no longer occur. The reference to this information does not commit the City to the actual amount of any credit under this variant ultimately assigned to the A's. With regard to the potential credit for avoiding indirect criteria pollutant emissions based on battery storage, several factors make this credit less certain. These factors, which are not known at this time, include but are not limited to the following:

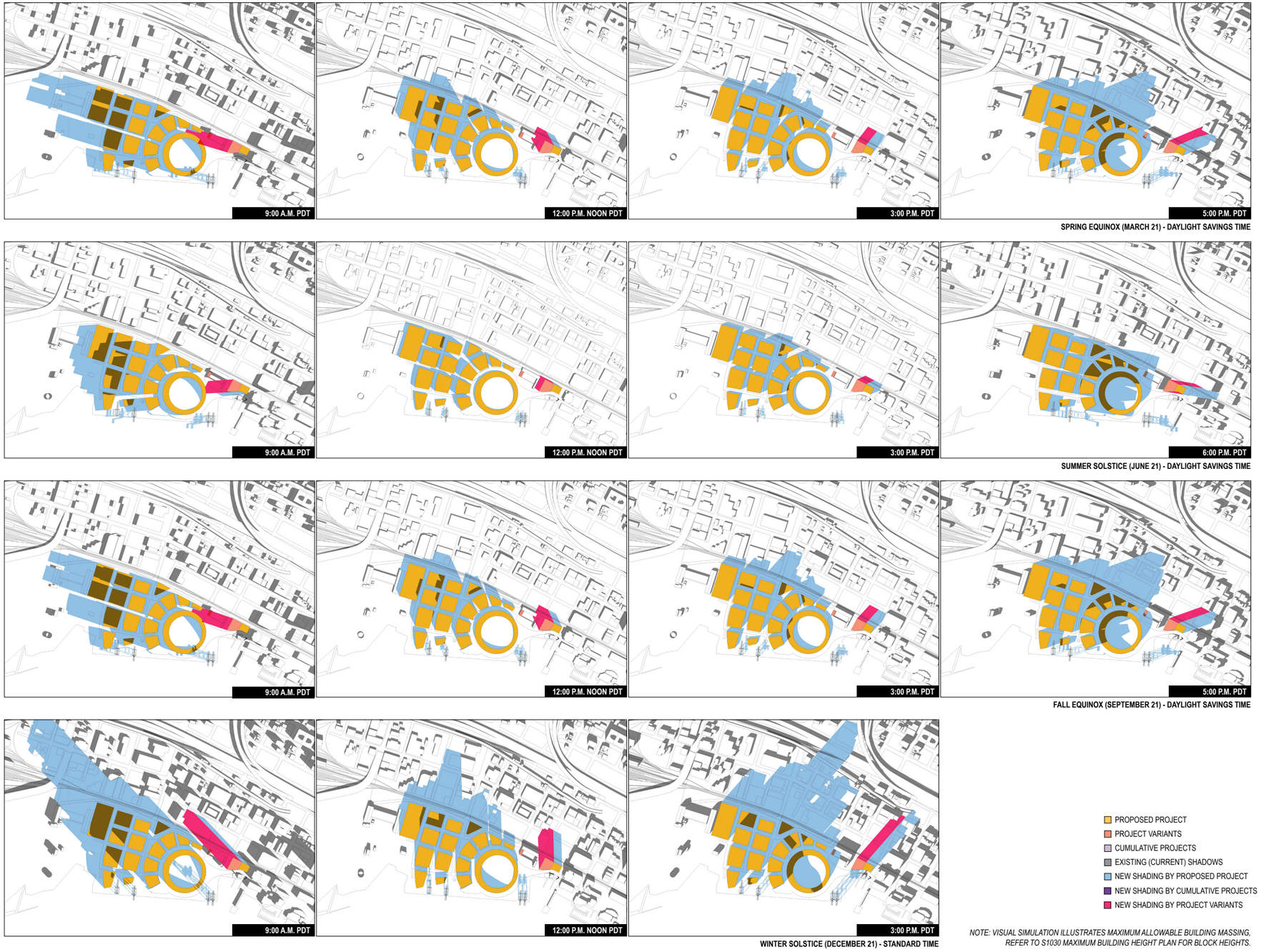
(1) The emissions of criteria pollutants from the source of the power being stored by the batteries and the source of the power being replaced by the batteries; and

(2) The extent to which the A's use the battery storage power for the Project to replace an energy source with higher criteria pollutant emissions (such as natural gas).

As such, the indirect emission reductions were not included in the analysis.

Construction Impacts

Construction emissions were estimated for activities to renovate the power plant building and convert the building to battery storage, and for construction of the new mixed-use building on the tank site. Construction associated with the Peaker Power Plant building renovation would occur from Year 3 to Year 4 and would involve additional off-road construction equipment activity and on-road construction worker and truck trips. Construction associated with the additional mixed-use building at the Peaker Power Plant tank site would occur in Year 2 and would involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other construction activities for ballpark and non-ballpark building construction would remain the same as under the Project. Details of the construction assumptions are presented in Appendix AIR.



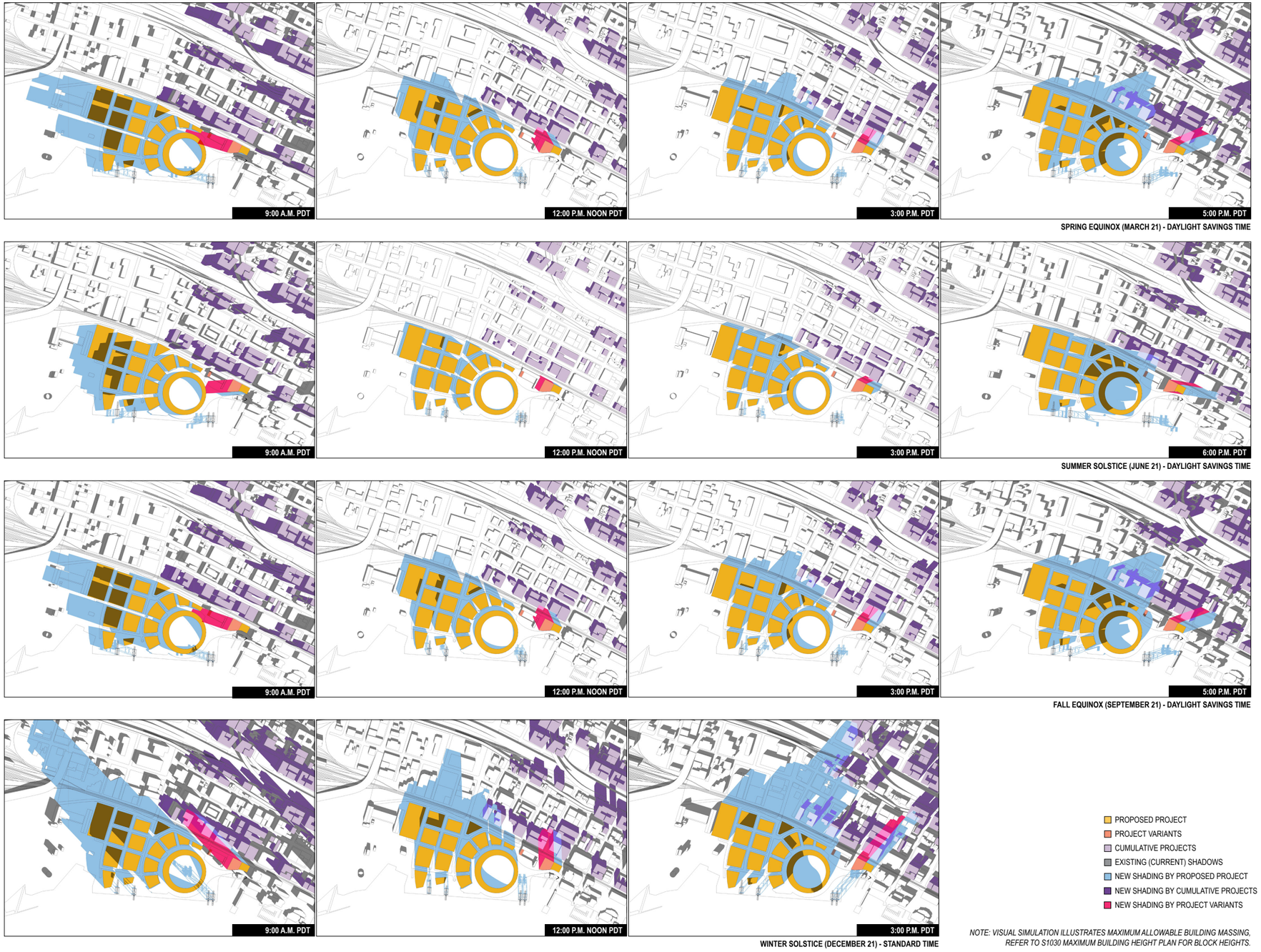
SFO\170XXXD\171044.00 - A's Ballpark District EIR\05 Graphics-GIS-Modeling\Illustrator

SOURCE: BIG, 2020

Oakland Waterfront Ballpark District Project

Figure 5-9
Shadow Diagrams – Existing and Project with the Peaker Power Plant Variant

ESA



SFO\170XXXD\171044.00 - A's Ballpark District EIR\05 Graphics-GIS-Modeling\Illustrator

SOURCE: BIG, 2020

Oakland Waterfront Ballpark District Project

Figure 5-10
Shadow Diagram – Existing, Project with the Peaker Power Plant Variant, and Cumulative

ESA

Because construction for the Peaker Power Plant Variant includes construction of the full Project plus additional construction associated with renovation and conversion of the power plant building, and mixed-use development on the tank site, unmitigated construction emissions of reactive organic gases (ROG), oxides of nitrogen (NO_X), and particulate matter that is 10 microns or less in diameter (PM_{10}) would exceed thresholds in multiple years, similar to the Project. As such, the same mitigation measures as required for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measures AIR-1a (Dust Controls), AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), and AIR-1d (Super-Compliant VOC Architectural Coatings during Construction).

Table 5-1 presents average daily mitigated construction-related emissions of criteria pollutants under the Peaker Power Plant Variant with implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls) and AIR-1d (Super-Compliant VOC Architectural Coatings during Construction). As shown in Table 5-1, the combined average daily emissions associated with the Peaker Power Plant Variant (which include the full Project) with implementation of Mitigation Measures AIR-1c and AIR-1d would exceed the City's significance threshold in Year 2 for NO_X, reaching a maximum of 81 pounds per day (lbs/day). This exceedance would be slightly greater than that of the Project, and the impact would *remain significant and unavoidable with mitigation*, as identified for the Project without this variant.

TABLE 5-1
AVERAGE DAILY MITIGATED CONSTRUCTION EMISSIONS BY YEAR PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT)

Year[a]	Average Daily Emissions (lbs/day)[b,c]			
	ROG	NO_X	PM_{10} (exhaust)[d]	$PM_{2.5}$ (exhaust)[d]
Significance Threshold	**54**	**54**	**82**	**54**
Year 1	1.7	14	0.5	0.5
Year 2	8.7	**81**	1.5	1.5
Year 3	28	39	0.7	0.7
Year 4	24	20	0.4	0.4
Year 5	3.5	42	0.6	0.5
Year 6	26	32	0.5	0.4
Year 7	45	36	0.6	0.5
Year 8	45	39	0.5	0.5

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter that is 10 microns or less in diameter; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter

a The technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the emissions estimates presented in this table are conservative because emissions are expected to decrease over time due to improvements in technology and regulatory requirements.

b **Bold values** = threshold exceedance

c Mitigation Measures modeled in this table include Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), modeled as Tier 4 engines on all off-road equipment (as available), and Mitigation Measure AIR-1d (Super-Compliant VOC Architectural Coatings during Construction), modeled as low–volatile organic compound (VOC) coatings with 10 grams VOC per liter for all interior coatings. This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing as well as other off-site transportation improvements, which are required as mitigation in Section 4.15, *Transportation and Circulation*.

d Only exhaust emissions of PM_{10} and $PM_{2.5}$ emissions are shown, because fugitive dust emissions are addressed through best management practices as required Mitigation Measure AIR-1a (Dust Controls).

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll, 2020.

Operational Impacts, and Combined Construction and Operational Impacts

Because all of the square footage of the Project would be preserved in the Peaker Power Plant Variant, the land uses, activities, attendance, and population data are identical to those of the Project. Additionally, mobile trips associated with hauling, vendor deliveries, and workers would remain the same. Therefore, operational emissions associated with these activities are expected to be the same as the Project's operational emissions, because the overall population and activities would be identical.

However, the Peaker Power Plant Variant is expected to result in significant reductions in operational emissions of criteria pollutants, and those emissions are therefore quantified. At present, the facility uses jet fuel combustion to generate electricity. Under the Peaker Power Plant Variant, jet fuel consumption at the site would cease, and criteria pollutant emissions associated with fuel combustion for electricity would no longer occur. The direct avoided emissions were calculated based on the Peaker Power Plant's average annual electricity generation and fuel consumption for 2010 to 2018. Emission reductions were calculated for three sources that would be removed: jet fuel combustion for power generation (gas turbines), fuel combustion for an emergency diesel generator, and solvent evaporation for wipe cleaning. Additionally, the Peaker Power Plant Variant's fuel tank parcel would be developed with a mixed-use building and an associated emergency generator. Detailed emissions calculations are included in Appendix AIR.

During full buildout operations, the Peaker Power Plant Variant would result in direct mitigated reductions in ROG of 2.4 lbs/day and 0.44 tons per year, reductions in NO_X of 44.3 lbs/day and 8.1 tons per year, and reductions in PM_{10} and particulate matter that is 2.5 microns or less in diameter ($PM_{2.5}$) of 3.9 lbs/day and 0.71 tons per year each. When compared to full buildout operations of the Project in Year 8, this represents a 1 percent reduction in ROG, a 22 percent reduction in NO_X, a 3 percent reduction in PM_{10}, and an 11 percent reduction in $PM_{2.5}$. Phase 1 operational emissions would be reduced by an even greater percentage, because the proportion of emissions reductions from the Peaker Power Plant Variant would be greater during Phase 1 partial operations; these reductions are 3 percent in ROG, 56percent in NO_X, 6 percent in PM_{10}, and 26 percent in $PM_{2.5}$. Note that these emissions reductions are based on multiple assumptions regarding the removal of the jet fuel turbines at the site, and the exact characteristics of the decommissioning are currently not known. These emissions reductions are estimates based on information known at the time of this EIR's preparation. The actual emissions reduction resulting from the Peaker Power Plant Variant would need to be reevaluated in the future once more detail is available.

Table 5-2 summarizes total new annual and average daily unmitigated emissions by year from Year 4 through Year 9 under the Peaker Power Plant Variant, and compares variant emissions with the City of Oakland's significance thresholds. Similar to the Project, operational emissions of ROG, NO_X, and PM_{10} at partial buildout would exceed the significance thresholds in Year 8, and operational emissions of ROG, NO_X, and PM_{10} at full buildout would exceed the significance thresholds in Year 9. As such, the same mitigation measures as for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measure AIR-2a (Use Low and Super-Compliant VOC Architectural Coatings in Maintaining Buildings through Covenants, Conditions, and Restrictions); AIR-2b (Promote Use of Green Consumer Products); AIR-2c

(Diesel Backup Generator Specifications); AIR-2d (Diesel Truck Emission Reduction); and AIR-2e (Criteria Pollutant Mitigation Plan), as well as Transportation Mitigation Measures TRANS-1a, TRANS-1b, TRANS-1c, TRANS-1d, TRANS-1e, TRANS-2a, TRANS-2b, TRANS-2c, TRANS-3a, and TRANS-3b.

TABLE 5-2
TOTAL UNMITIGATED ANNUAL AND AVERAGE DAILY OPERATIONAL EMISSIONS BY YEAR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT)

Year[a]	Significance Threshold	Average Daily Emissions (lbs/day)[b,c]				Total Annual Emissions (tons/year)[b,c]			
		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
		54	**54**	**82**	**54**	**10**	**10**	**15**	**10**
	A's-Related Existing Conditions (2018)[d]	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
Year 4	Phase 1 Operational Emissions[e,f]	41.7	-9.9	30.5	4.6	7.6	-1.8	5.6	0.8
	Net New Emissions[g]	*8.9*	*-28.8*	*9.9*	*-0.1*	*1.6*	*-5.3*	*1.8*	*0.0*
Year 5–Year 7[h]	Phase 1 Operational Emissions[e,f]	77.8	34.2	56.7	10.8	14.2	6.2	10.3	2.0
	Net New Emissions[g]	*45.0*	*15.2*	*36.0*	*6.1*	*8.2*	*2.8*	*6.6*	*1.1*
Year 8	Full Buildout Operational Emissions[e,f]	117.7	80.2	85.0	17.9	21.5	14.6	15.5	3.3
	Net New Emissions[g]	***84.9***	***61.2***	*64.3*	*13.2*	***15.5***	***11.2***	*11.7*	*2.4*
Year 9	Full Buildout Operational Emissions[f,i]	198.5	173.4	142.3	32.4	36.2	31.6	26.0	5.9
	Net New Emissions[g]	***165.7***	***154.4***	***121.6***	*27.7*	***30.2***	***28.2***	***22.2***	*5.0*
	Maximum Net New Operational Emissions	***165.7***	***154.4***	***121.6***	*27.7*	***30.2***	***28.2***	***22.2***	*5.0*

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter that is 10 microns or less in diameter; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter

a The technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the emissions estimates presented in this table are conservative because emissions are expected to decrease over time due to improvements in technology and regulatory requirements.

b **Bold values** = threshold exceedance for net new emissions

c Due to rounding, emissions from individual sectors may not add up to total.

d Emissions for A's-related existing conditions are presented in Table 4.2-8. These emissions only represent emissions associated with A's operations and ballgames that would be relocated to the new ballpark. Only emissions for A's-related existing conditions were subtracted from Project emissions to determine net new emissions associated with the Project.

e Operational emissions are scaled for partial years of operation in Year 4 and Year 8 based on the number of days of full operations (ballpark and ancillary) for those years compared to 365 total days per year (30 days for the Project and 305 days for the Peaker Power Plant Variant in Year 4 and 120 days for the Project in Year 8). For Year 4, ballpark emissions are not scaled because the ballpark would be operational at the start of Phase 1. Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days.

f Mobile-source emissions include the 20% trip reduction required by Assembly Bill 734 and implementation of on- and off-site transportation improvements and mitigation measures included in Section 4.15, *Transportation and Circulation*. For emissions without the 20% trip reduction, see Appendix AIR, *Air Quality Supporting Information*.

g Net new emissions represent Project and variant operational emissions *minus* existing A's-related emissions.

h Operational emissions are anticipated to be the same during Year 5–Year 7 when Phase 1 is operational and before full Project buildout occurs.

i Year 9 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCE: Appendix AIR, *Air Quality Supporting Information*; Ramboll, 2020

Table 5-3 presents new average daily and total annual combined mitigated construction and mitigated operational emissions under the Peaker Power Plant Variant during the years when construction and operations would overlap. This table presents overlapping construction emissions with Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and with Mitigation Measure AIR-1d (Super-Compliant VOC Architectural Coatings during Construction). As shown in Table 5-3, net new Project emissions would still remain above the significance thresholds despite implementation of Mitigation Measures AIR-2a, AIR-2b, AIR-2d, and AIR-2e. However, under the Peaker Power Plant Variant, emissions of NO_X would be dramatically reduced; emissions would exceed the significance thresholds only in Year 8 and Year 9, unlike the Project, when the NO_X thresholds would be exceeded from Year 5 through Year 9. Similar to the Project, net new emissions of ROG would exceed the significance thresholds in all years from Year 6 through Year 9; net new emissions of PM_{10} would exceed the significance thresholds in Year 9; and net new emissions of $PM_{2.5}$ would not exceed the significance thresholds in any year. These exceedances would be less than the exceedances under the Project, given the reduction in operational emissions; however, this impact would *remain significant and unavoidable with mitigation*, as identified for the Project without this variant.

Carbon Monoxide

The Peaker Power Plant Variant would not change mobile-source emissions compared to the Project because the land uses, activities, attendance, and population data would be the same as for the Project. Therefore, the impacts and analysis for the Peaker Power Plant Variant associated with carbon monoxide (CO) would be the same as those discussed above for the Project. As such, development under the Peaker Power Plant Variant would not be required to estimate localized CO concentrations, as it would not contribute to CO concentrations exceeding the California ambient air quality standard. The impact would *be less than significant and no mitigation measures are required*, same as identified for the proposed Project without this variant.

Toxic Air Contaminants

The Peaker Power Plant Variant would result in reduced toxic air contaminant (TAC) emissions associated with the shutdown of existing fossil fuel power generation. This would also result in reduced health risks at both the on-site and off-site maximally exposed individual receptor (MEIR).

Health risks associated with TAC emissions from construction activities for the conversion of the Peaker Power Plant and other construction activities with the Variant were modeled using the same methods as described for the Project in Section 4.2, *Air Quality*, with a few exceptions: No nighttime construction was modeled; construction area sources were input into AERMOD to represent the new construction areas; and the exposure assessment only included off-site receptors because construction would occur from Year 2 through Year 4 before any new on-site receptors are present. Additionally, point sources were used for the Variant generators. Generators were assumed to be on the roof for the mixed-use building on the Peaker Power Plant fuel tank parcel. All other source parameters are consistent with those used for the Project generators. Because the fuel tank parcel would be an additional on-site building, building downwash was remodeled for all Project generators to account for any potential downwash effects from the new parcel.

TABLE 5-3
TOTAL ANNUAL AND AVERAGE DAILY COMBINED MITIGATED CONSTRUCTION AND MITIGATED OPERATIONAL EMISSIONS BY YEAR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT)

Year[a]	Significance Threshold	Average Daily Emissions (lbs/day)[b,c]				Total Annual Emissions (tons/year)[b,c]			
		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
		54	54	82	54	10	10	15	10
	A's-Related Existing Conditions[d]	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
Year 4	Construction[e]	23.7	20.5	0.4	0.4	3.1	2.8	0.05	0.05
	Phase 1 Operations[f,g]	40.8	-13.1	30.4	4.5	7.4	-2.4	5.6	0.8
	Net New Emissions[h]	*31.6*	*-11.6*	*10.2*	*0.1*	*4.6*	*-3.1*	*1.8*	*0.0*
Year 5	Construction[e]	3.5	42.1	0.6	0.5	0.5	5.5	0.07	0.07
	Phase 1 Operations[f]	75.8	26.9	56.4	10.5	13.8	4.9	10.3	1.9
	Net New Emissions[h]	*46.5*	*50.1*	*36.4*	*6.4*	*8.3*	*6.9*	*6.6*	*1.1*
Year 6	Construction[e]	25.8	31.7	0.5	0.4	3.4	4.1	0.06	0.05
	Phase 1 Operations[f]	75.8	26.9	56.4	10.5	13.8	4.9	10.3	1.9
	Net New Emissions[h]	***68.8***	*39.6*	*36.2*	*6.2*	***11.2***	*5.6*	*6.6*	*1.1*
Year 7	Construction[e]	45.2	36.3	0.6	0.5	5.9	4.7	0.07	0.07
	Phase 1 Operations[f]	75.8	26.9	56.4	10.5	13.8	4.9	10.3	1.9
	Net New Emissions[h]	***88.2***	*44.2*	*36.4*	*6.3*	***13.7***	*6.2*	*6.6*	*1.1*
Year 8	Construction[e]	45.0	38.5	0.5	0.5	3.9	3.4	0.05	0.05
	Full Buildout Operations[f,g]	114.7	69.1	84.6	17.5	20.9	12.6	15.4	3.2
	Net New Emissions[h]	***126.8***	***88.6***	*64.5*	*13.3*	***18.8***	***12.5***	*11.7*	*2.4*
Year 9	Construction[e]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Full Buildout Operations[f,i]	193.4	154.5	141.6	31.7	35.3	28.2	25.8	5.8
	Net New Emissions[h]	***160.5***	***135.5***	***121.0***	*27.0*	***29.3***	***24.7***	***22.1***	*4.9*
	Maximum Net New Operational Emissions	***160.5***	***135.5***	***121.0***	*27.0*	***29.3***	***24.7***	***22.1***	*4.9*

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter that is 10 microns or less in diameter; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter

a The technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the emissions estimates presented in this table are conservative because emissions are expected to decrease over time due to improvements in technology and regulatory requirements.

b **Bold values** = threshold exceedance for net new emissions

c Due to rounding, emissions from individual sectors may not add up to total.

d Existing A's-related emissions are presented in Table 4.2-8.

e Average daily construction emissions represent total annual emissions divided by 260 workdays per year (with the exception of the ballpark construction emissions, which are divided by 312 workdays per year to account for weekend work). Emissions include implementation of Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), and AIR-1d (Super-Compliant VOC Architectural Coatings during Construction). This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing as well as other off-site transportation improvements, which are required as mitigation in Section 4.15, *Transportation and Circulation*.

f Average daily operational emissions represent total annual emissions divided by 365 days per year. Emissions include the 20% trip reduction required by Assembly Bill 734, implementation of on- and off-site transportation improvements and mitigation measures included in Section 4.15, *Transportation and Circulation*, Mitigation Measure AIR-2a (Use Low and Super-Compliant VOC Architectural Coatings in Maintaining Buildings through Covenants, Conditions, and Restrictions), and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications).

g Operational emissions are scaled for partial years of operation in Year 4 and Year 8 based on the number of days of full operations (ballpark and ancillary) for those years compared to 365 total days per year (30 days for the Project and 305 days for the Peaker Power Plant Variant in Year 4 and 120 days for the Project in Year 8). For Year 4, ballpark emissions are not scaled because the ballpark would be operational at the start of Phase 1. Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days.

h Net new emissions represent Project and Variant construction *plus* Project and Variant operational emissions *minus* existing A's-related emissions.

i Year 9 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll, 2020

For operational TACs, because existing operations at the Peaker Power Plant were modeled by the Bay Area Air Quality Management District (BAAQMD) in the West Oakland Community Action Plan (WOCAP) (under the name "Dynegy"), operational health risks were taken directly from data supplied by BAAQMD using the methods described in Section 4.2, *Air Quality*. Therefore, this analysis did not remodel TAC emissions, perform dispersion modeling, or calculate health risks from the Peaker Power Plant. See Section 4.2, *Air Quality*, Table 4.2-25 (for the existing off-site MEIR) and Table 4.2-27 (for the new on-site MEIR) for estimated health risks associated with TACs from the Peaker Power Plant.

Impacts on Existing Sensitive Receptors

Construction for the Peaker Power Plant Variant would include construction of the full Project, plus additional construction for modifications and conversion of the power plant building and development of a mixed-use building on the tank site, and construction TACs would drive health risks at the off-site MEIR. Therefore, unmitigated cancer risk and annual average $PM_{2.5}$ concentrations would exceed the health risk thresholds, similar to the Project. As such, the same mitigation measures required for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-3d (Truck-Related Risk Reduction Measures – Toxic Air Contaminants).

Table 5-4 shows the mitigated health risk assessment (HRA) results for existing off-site receptors for Scenario 1 exposure[7] from construction and operational activities for the Peaker Power Plant Variant, taking into account the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse and the implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls) and AIR-2c (Diesel Backup Generator Specifications). Similar to the Project, when accounting for mitigation measures, both cancer risk and annual average $PM_{2.5}$ concentrations associated with the Peaker Power Plant Variant would be reduced below the significance thresholds. Although exceedances would be slightly greater than with the Project because of the additional construction activity, this impact would remain *less than significant with mitigation*, the same as identified for the proposed Project without this variant.

[7] Scenario 1 exposure represents off-site receptors exposed to combined construction and operational TAC emissions. This includes Phase 1 construction, Phase 1 operations, Phase 2 construction, and full-buildout operations for a total 30-year exposure commencing on Year 1 and for 30 years thereafter.

TABLE 5-4
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION OF THE PEAKER POWER PLANT VARIANT AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Chronic Hazard Index[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**10.0**	**1.0**	**0.3**
Scenario 1: Construction Plus Operations			
Existing Howard Terminal[d]	-2.2	-8.1E-05	-6.4E-04
Peaker Power Plant Construction	0.057	–	–
Peaker Power Plant Operations	0.0036	5.0E-07	2.5E-06
Project Contribution	8.3	0.0039	0.19
Potential Truck Parking Relocation to the Roundhouse[e]	0.4	5.2E-05	4.1E-04
Total Mitigated Project + Peaker Power Plant	8.3	0.0039	0.19
Total Mitigated Net New Project w/ Roundhouse + Peaker Power Plant[f]	6.5	0.0039	0.19
MEIR Location (UTM – X)	563080	563180	563180
MEIR Location (UTM – Y)	4183660	4183920	4183920
Year of Exposure[g]	n/a	Year 8	Year 8

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; n/a = not applicable; UTM = Universal Transverse Mercator; – = no value reported; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance

b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also assumes that the 20% trip reduction requirement of Assembly Bill 734 is met and includes construction activities associated with implementation of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.

c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust. $PM_{2.5}$ concentrations at off-site receptors in Scenario 1 include contributions from multiple phases of Project construction and subsequent Project operations since Year 8 includes construction and operation.

d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the toxic air contaminant (TAC) emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.

e Health risks associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.

f Total mitigated net new Project w/ Roundhouse + Peaker Power Plant represents total Project + Peaker Power Plant health risks *minus* existing condition health risks from Howard Terminal truck activity *plus* potential health risks from relocating truck parking to the Roundhouse.

g For cancer risk, the exposure is total lifetime 30-year exposure; for non-cancer chronic HI and $PM_{2.5}$ concentrations, this represents the year when the maximum value occurs at the MEIR. Note that the technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the health risk estimates presented in this table are conservative because emissions and the associated risks are expected to decrease over time due to improvements in technology and regulatory requirements.

SOURCES: Appendix AIR, Air Quality Supporting Information.

Impacts on New Sensitive Receptors

Operational generator emissions of TACs by the Peaker Power Plant Variant would be greater than emissions by the Project because of the additional emergency generator associated with the

variant's operation, and operational generator TACs would drive health risks at the new on-site MEIR (relative to construction). In addition, the HRA does not consider the reduced TAC emissions associated with decommissioning of the jet fuel turbines at the Peaker Power Plant site. Therefore, unmitigated cancer risk and annual average $PM_{2.5}$ concentrations would exceed the health risk thresholds, similar to the Project. In addition, because construction for the Peaker Power Plant Variant would be the same as for the Project, plus additional construction for building renovation and conversion, unmitigated cancer risk and annual average $PM_{2.5}$ concentrations would exceed the health risk thresholds, similar to the Project. As such, the same mitigation measures as for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measures AIR-1b (Criteria Air Pollutant Controls); AIR-1c (Diesel Particulate Matter Controls); AIR-2c (Diesel Backup Generator Specifications); AIR-3a (Truck-Related Risk Reduction Measures – Toxic Air Contaminants); and AIR-4a (Install MERV16 Filtration Systems).

Table 5-5 shows the mitigated HRA results for new on-site receptors for Scenario 2 exposure[8] from construction and operational activities for the Peaker Power Plant Variant, taking into account the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse and the implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-4a (Install MERV16 Filtration Systems). Similar to the Project, Mitigation Measure AIR-4a was assumed to reduce particulate pollution, including diesel particulate matter and $PM_{2.5}$, by approximately 76 percent; this would substantially reduce cancer risk, the chronic hazard index (HI), and $PM_{2.5}$ concentrations at on-site MEIR locations. Similar to the Project, when accounting for mitigation measures, both the cancer risk and annual average $PM_{2.5}$ concentrations associated with the Peaker Power Plant Variant would be reduced below the significance thresholds.

Therefore, similar to the Project, when accounting for mitigation measures, both cancer risk and annual average $PM_{2.5}$ concentrations associated with the Peaker Power Plant Variant would be reduced below the significance thresholds. These health risk values are slightly greater than those of the Project because of the increased operational TAC emissions from the new emergency generator. However, these increased health risks do not consider reduced TAC emissions and associated health risks resulting from the closure of the existing jet fuel power plant; therefore, the slight increase presented above is likely lower, and there could even be a reduction in health risks as compared to the Project. See Section 4.2, *Air Quality*, Table 4.2-15 for estimated health risks associated with TACs from the Project at the existing off-site MEIR. Overall, this impact would be greater than that of the Project but would *remain less than significant with mitigation*, the same as identified for the Project without this variant.

[8] Scenario 2 exposure represents new on-site receptors present in Phase 1 areas exposed to combined construction and operational TAC emissions. This includes Phase 1 operations, Phase 2 construction, and full-buildout operations for a total 30-year exposure occurring from 2023 through 2053.

TABLE 5-5
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION OF THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR

Scenario/Emissions Source/Location/Year	Excess Lifetime Cancer Risk (per million)[a,b]	Chronic Hazard Index[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**10.0**	**1.0**	**0.3**
Scenario 2: Construction Plus Operations			
Peaker Power Plant Construction[d]	–	–	–
Peaker Power Plant Operations	3.1	2.3E-07	1.1E-06
Project Contribution	1.7	0.0021	0.024
Potential Truck Parking Relocation to the Roundhouse[e]	0.01	2.8E-05	2.2E-04
Total Mitigated Project + Peaker Power Plant	4.78	0.0021	0.024
Total Mitigated Project w/ Roundhouse + Peaker Power Plant[f]	4.80	0.0021	0.024
MEIR Location (UTM – X)	563420	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640
Year of Maximum Exposure[g]	n/a	Year 8	Year 8

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; n/a = not applicable; UTM = Universal Transverse Mercator; – = no value reported; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance
b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR-4a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction requirement of Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a (Dust Controls). For operations, $PM_{2.5}$ concentrations include exhaust, tire wear, brake wear, and road dust. $PM_{2.5}$ concentrations at on-site receptors in Scenario 2 include contributions from multiple phases of Project construction and subsequent Project operations since Year 8 includes construction and operation.
d Values for Peaker Power Plant construction are not shown because construction activities would occur from Year 2 through Year 4, before any new on-site receptors are present at the Project site.
e Health risk associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
f Total mitigated net new Project w/ Roundhouse + Peaker Power Plant represents total Project + Peaker Power Plant health risks *plus* potential health risks from relocating truck parking to the Roundhouse.
g For cancer risk, the exposure is total excess lifetime 30-year exposure; for non-cancer chronic hazard index and $PM_{2.5}$ concentrations, this represents the year when the maximum value occurs at the MEIR. Note that the technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the health risk estimates presented in this table are conservative because emissions and the associated risks are expected to decrease over time due to improvements in technology and regulatory requirements.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020.

Odors

The Peaker Power Plant Variant would not change odor sources compared to the Project, because the land uses, activities, attendance, and population data would be generally the same as for the Project. In addition, the Peaker Power Plant Variant would site the same number of residential users in the same locations as the Project, with the exception of new residential users located in the mixed-use

building on the Peaker Power Plant fuel tank parcel; and all new residential development under the Peaker Power Plant Variant would occur well within the recommended odor buffer of numerous existing sources. Therefore, the impacts and analysis for the Peaker Power Plant Variant associated with odors would be the *same as for the Project without this variant – less than significant*.

Cumulative Regional Criteria Pollutant Emissions

As discussed above, construction and operational emissions associated with the Peaker Power Plant Variant would be similar to those associated with the Project because the variant would include the full Project, although emissions would be lower because of the additional construction activity and reduced operational emissions from the shutdown of the jet-fueled power generation. As such, criteria pollutant emissions for the Peaker Power Plant Variant would be similar to those of the Project and the *same mitigation measures would be required*. As is the case for the Project without this variant, the Peaker Power Plant Variant's emissions of criteria air pollutants would be cumulatively considerable (because the variant would include the full Project), and this cumulative impact would be *significant and unavoidable with mitigation*. No new or changed impacts or mitigation measures would be required.

Cumulative Regional Health Risks

As discussed above, health risks associated with the Peaker Power Plant Variant would be very similar to those associated with the Project because the variant would include the full Project, though emissions would be slightly different because of the additional construction activity, increased generator emissions, and reduced operational emissions associated with the power plant decommissioning. As discussed in Section 4.2, *Air Quality*, background risk values for the Peaker Power Plant Variant were determined using two independent methods:

(1) The standard BAAQMD CEQA Guidelines approach using the 1,000-foot radius and risk values from BAAQMD's online screening tools; and

(2) Specific health risks for all major TAC sources in West Oakland included in BAAQMD's health risk modeling for the WOCAP. The tables below present the results of both methods.

Impacts on Existing Off-site Sensitive Receptors

Table 5-6 summarizes the HRA results for the existing off-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks, using the standard BAAQMD approach. **Table 5-7** summarizes the HRA results for the existing off-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks, using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average $PM_{2.5}$ concentrations, with the contribution from the Peaker Power Plant Variant, would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). As such, the same mitigation measures for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant

Mitigation Plan), AIR-3 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-4a (Install MERV16 Filtration Systems), AIR-4b (Exposure to Air Pollution – Toxic Air Contaminants), AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan) as well as Transportation Mitigation Measures TRANS-1a, TRANS-1b, TRANS-1c, TRANS-1d, TRANS-1e, TRANS-2a, TRANS-2b, TRANS-2c, TRANS-3a, and TRANS-3b.

TABLE 5-6
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE STANDARD BAAQMD APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Non-Cancer Chronic Hazard Index (unitless)[a]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**10**	**0.8**
Project Contributions – Mitigated			
Existing Howard Terminal[d]	-2.2	-8.1E-05	-6.4E-04
Peaker Power Plant Construction[e]	0.06	–	–
Peaker Power Plant Operations	0.004	5.0E-07	2.5E-06
Project Contribution	8.3	0.0039	0.19
Potential Truck Parking Relocation to Roundhouse[f]	0.4	5.2E-05	4.1E-04
Total Mitigated Project + Peaker Power Plant	8.3	0.0039	0.19
Total Mitigated Net New Project w/Roundhouse + Peaker Power Plant[g]	6.5	0.0039	0.19
MEIR Location (UTM – X)	563080	563180	563180
MEIR Location (UTM – Y)	4183660	4183920	4183920
Cumulative Contributions			
Existing Stationary Sources[h]	0.93	0.0023	0.076
Roadways[i]	0	–	0.11
Highways[j]	19	–	0.56
Major Streets[j,k]	4.1	–	0.060
Railways[j]	67	–	0.017
Total Cumulative	*91*	*0.0023*	*0.82*
Project Plus Cumulative			
Mitigated Net New Project + Peaker Power Plant	6.5	0.0039	0.19
Cumulative Contributions	91	0.0023	**0.8**
Cumulative Total	*97*	*0.0062*	***1.0***

NOTES:

BAAQMD = Bay Area Air Quality Management District; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; – = no risk was calculated or data was missing; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance

b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction requirement of Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.

c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.

d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the toxic air contaminant (TAC) emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.

TABLE 5-6 (CONT.)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE STANDARD BAAQMD APPROACH

e Construction of the Peaker Power Plant Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.
f Health effects of potential relocation of truck parking from the Howard Terminal to the represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
g Total mitigated net new Project w/ Roundhouse + Peaker Power Plant represents total mitigated Project + Peaker Power Plant health risks *minus* health risks from existing Howard Terminal truck activity *plus* potential health risks from relocating truck parking to the Roundhouse.
h Existing stationary sources includes all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
i Roadways include nearby roads between 10,000 and 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the off-site cancer or on-site cancer and $PM_{2.5}$ MEIRs.
j Includes nearby major streets, highways, and railways. Cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. BAAQMD's raster screening tools do not estimate chronic hazards because the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
k Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

TABLE 5-7
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**0.8**
Project Contributions – Mitigated		
Existing Howard Terminal[d]	-2.2	-6.4E-04
Peaker Power Plant Construction[e]	0.06	–
Peaker Power Plant Operations	0.004	2.5E-06
Project Contribution	8.3	0.19
Potential Truck Parking Relocation to the Roundhouse[f]	0.38	4.1E-04
Total Mitigated Project + Peaker Power Plant	8.3	0.19
Total Mitigated Net New Project w/ Roundhouse + Peaker Power Plant[g]	6.5	0.19
MEIR Location (UTM – X)	563080	563180
MEIR Location (UTM – Y)	4183660	4183920
Cumulative Contributions – Year 5		
Highway[h]	4.0	0.38
Other[i]	14	0.012
Permitted[j]	2.2	0.15
Dynegy[k]	0.010	8.2E-04
Schnitzer[l]	26	0.16
Port[m]	128	0.20
Rail[n]	148	0.055
Street[o]	4.0	2.0
Total Cumulative	*326*	*3.0*

TABLE 5-7 (CONT.)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Project Plus Cumulative		
Mitigated Project + Peaker Power Plant Total	6.5	0.19
Cumulative Contributions	**326**	**3.0**
Cumulative Total	**332**	**3.1**

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; WOCAP = West Oakland Community Action Plan; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance
b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction required by Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.
d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the toxic air contaminant (TAC) emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.
e Construction of the Peaker Power Plant Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.
f Health effects of potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
g Total mitigated net new Project w/ Roundhouse + Peaker Power Plant represents total mitigated Project + Peaker Power Plant health risks *minus* health risks from existing Howard Terminal activity *plus* potential health risks from relocating truck parking to the Roundhouse.
h Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.
i Other includes ferries and truck-related businesses.
j Permitted includes all Bay Area Air Quality Management District (BAAQMD)–permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.
k Dynegy includes TAC emissions from the BAAQMD-permitted existing Dynegy jet-fueled power plant currently operating on the Peaker Power Plant Variant site.
l Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels, and trucks.
m Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the Burlington Northern Santa Fe railyard, and trucks.
n Rail includes the Union Pacific railyard and both freight and passenger locomotives operating on the various rail lines in the area.
o Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

As presented in Table 5-7, the total cumulative mitigated cancer risk for the existing off-site MEIR would be 332.2 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented above in Table 5-7, the total mitigated annual average $PM_{2.5}$ concentrations for the existing off-site MEIR would be 3.14 $\mu g/m^3$, which would exceed the cumulative significance threshold of 0.8 $\mu g/m^3$. Non-cancer chronic risk would not exceed the thresholds for the existing off-site MEIRs, as presented in Table 5-6. Therefore, the same as the Project without this variant, the Peaker Power Plant Variant's cumulative cancer risk and $PM_{2.5}$ concentration impact at existing off-site receptors would be cumulatively considerable. These exceedances would be slightly greater than those of the Project; this impact would *remain*

significant and unavoidable with mitigation, the same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

Impacts on New Sensitive Receptors

Table 5-8 summarizes the HRA results for the new on-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks using the standard BAAQMD approach. **Table 5-9** summarizes the HRA results for the new on-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average $PM_{2.5}$ concentrations with the contribution from the Peaker Power Plant Variant would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). As such, the same mitigation measures for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant Mitigation Plan), AIR-3 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-4a (Install MERV16 Filtration Systems), AIR-4b (Exposure to Air Pollution – Toxic Air Contaminants), and AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan), as well as Transportation Mitigation Measures TRANS-1a, TRANS-1b, TRANS-1c, TRANS-1d, TRANS-1e, TRANS-2a, TRANS-2b, TRANS-2c, TRANS-3a, and TRANS-3b.

TABLE 5-8
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE STANDARD BAAQMD APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Non-Cancer Chronic Hazard Index (unitless)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**10.0**	**0.8**
Project Contributions – Mitigated			
Peaker Power Plant Construction[d]	–	–	–
Peaker Power Plant Operations	3.1	2.3E-07	1.1E-06
Project Contribution	1.7	0.0021	0.024
Potential Truck Parking Relocation to Roundhouse[e]	0.01	2.8E-05	2.2E-04
Total Mitigated Project + Peaker Power Plant	4.78	0.0021	0.024
Total Mitigated Project w/Roundhouse + Peaker Power Plant[f]	4.80	0.0021	0.024
MEIR Location (UTM – X)	563420	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640

TABLE 5-8 (CONT.)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE STANDARD BAAQMD APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Non-Cancer Chronic Hazard Index (unitless)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Cumulative Contributions			
Existing Stationary Sources[g]	0.90	0.0055	0.60
Roadways[h]	0	–	0
Highways[i]	4.0	–	0.27
Major Streets[j,k]	4.4	–	0.029
Railways[i]	89.8	–	0.082
Cumulative Total	*99*	*0.0055*	*0.99*
Project Plus Cumulative			
Mitigated Project + Peaker Power Plant Total	4.8	0.0021	0.02
Cumulative Contributions	99	0.0055	**1.0**
Cumulative Total	**104**	0.0076	**1.0**

NOTES:

BAAQMD = Bay Area Air Quality Management District; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; – = no risk was calculated or data was missing; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance

b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR 5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.

c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.

d Construction of the Peaker Power Plant Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.

e Health effects of potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.

f Total mitigated Project w/ Roundhouse + Peaker Power Plant represents total mitigated Project + Peaker Power Plant health *plus* potential health risks from relocating truck parking to the Roundhouse.

g Existing stationary sources includes all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.

h Roadways include nearby roads between 10,000 and 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the on-site cancer or on-site cancer and $PM_{2.5}$ MEIRs.

i Includes nearby major streets, highways, and railways. Cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards because the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.

j Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

TABLE 5-9
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**0.8**
Project Contributions – Mitigated		
Peaker Power Plant Construction[d]	–	–
Peaker Power Plant Operations	3.1	1.13E-06
Project Contribution	1.7	0.024
Potential Truck Parking Relocation to Roundhouse[e]	0.01	2.18E-04
Total Mitigated Project	4.78	0.024
Total Mitigated Project w/ Roundhouse + Peaker Power Plant[f]	4.80	0.024
MEIR Location (UTM – X)	563420	563020
MEIR Location (UTM – Y)	4183440	4183640
Cumulative Contributions – Year 5		
Highway[g]	4.0	0.19
Other[h]	22	0.020
Permitted[i]	3.0	0.14
Dynegy[j]	0.0663	3.8E-04
Schnitzer[k]	20	0.36
Port[l]	123	0.24
Rail[m]	90	0.14
Street[n]	4.4	1.3
Cumulative Total	*267*	*2.4*
Project Plus Cumulative		
Mitigated Project + Peaker Power Plant Total	4.8	0.02
Cumulative Contributions	**267**	**2.4**
Cumulative Total	**272**	**2.4**

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; WOCAP = West Oakland Community Action Plan; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance
b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR 5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.
d Construction of the Peaker Power Plant Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.
e Health effects of potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
f Total mitigated Project w/ Roundhouse + Peaker Power Plant represents total mitigated Project + Peaker Power Plant health *plus* potential health risks from relocating truck parking to the Roundhouse.
g Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.
h Other includes ferries and truck-related businesses.
i Permitted includes all Bay Area Air Quality Management District (BAAQMD)–permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.

TABLE 5-9 (CONT.)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE PEAKER POWER PLANT VARIANT USING THE WOCAP APPROACH

j Dynegy includes toxic air contaminant (TAC) emissions from the BAAQMD-permitted existing Dynegy jet-fueled power plant currently operating on the Peaker Power Plant Variant site.
k Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels and trucks.
l Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the Burlington Northern Santa Fe railyard, and trucks.
m Rail includes the Union Pacific railyard and both freight and passenger locomotives operating on the various rail lines in the area.
n Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

As presented in Table 5-9, the total cumulative mitigated cancer risk for the new on-site MEIR would be 272 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented in Table 5-9, the total mitigated annual average $PM_{2.5}$ concentrations for the new on-site MEIR would be 2.4 $\mu g/m^3$, which would exceed the cumulative significance threshold of 0.8 $\mu g/m^3$. Non-cancer chronic risk would not exceed the thresholds for the new on-site MEIRs, as presented in Table 5-8. Therefore, the same as the Project without this variant, the Peaker Power Plant Variant's cumulative cancer risk and $PM_{2.5}$ concentration impact at new on-site receptors would be cumulatively considerable. The cancer risk exceedances would be slightly less than with the Project; this is because the cancer MEIR for the Peaker Power Plant Variant is at a different location from the cancer MEIR for the Project (the Peaker Power Plant Variant's cancer MEIR is located at Block 18 and the Project's cancer MEIR is located at Block 6), and the background cancer risk values would be lower at the Peaker Power Plant Variant's cancer MEIR than at the Project's cancer MEIR (see Table 5-5 above and Table 4.2-15 for the Project MEIR values). However, this impact would *remain significant and unavoidable with mitigation*, the same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

Biological Resources

The Peaker Power Plant Variant would result in the *same biological resources impacts and mitigation measures* as identified for the proposed Project. The modifications proposed to the east and west wings of the historic 601 Embarcadero West building (a contributor to the PG&E Station C API), demolition of the fuel storage tank, and subsequent construction of new buildings would occur near existing street trees and buildings that have been vacant or infrequently used. Therefore, the variant may affect protected nesting birds or special-status or protected bats, or protected trees that exist adjacent to the variant site, the same as described for the proposed Project. Mitigation measures identified in Section 4.3 would reduce this impact to less than significant. No new or changed impacts or mitigation measures would be required.

Cultural and Tribal Cultural Resources

Developing the Peaker Power Plant Variant would result in ***new impacts and mitigation measures*** for historic resources not identified for the proposed Project. Each is discussed in detail below.

Historical Resources

As introduced in the *Description* above, the Peaker Power Plant Variant includes a portion of the PG&E Station C API and is wholly contained within the proposed Project boundaries, as shown in **Figure 4.4-1, Historic Resources** (in Chapter 4), and in Figure 5-3, Peaker Power Plant Site Plan. The L-shaped architectural resources study area for this variant is bounded by 2nd Street to the north, a pedestrian-only section of Water Street to the south, the half-block containing the fuel storage drum at Clay Street and Embarcadero West to the east, and MLK Jr. Way to the west. The study area encompasses 2.5 city blocks that contain the PG&E Station C API (consisting of two buildings – 601 Embarcadero West and 101 Jefferson Street) and one structure (fuel storage tank).

The building at 601 Embarcadero West, including all wings and additions, has been determined individually eligible for listing on the National Register and the California Register of Historical Resources (California Register). It is also a contributing element to the PG&E Station C API. As such, it is considered a historical resource for the purposes of CEQA. The parcel containing the fuel storage tank is outside of the PG&E Station C API and is not considered a historical resource for the purposes of CEQA.

The modifications to 601 Embarcadero West proposed under the Peaker Power Plant Variant would directly affect a historic resource through demolition of portions of the building. Additionally, although removal of the fuel storage tank would have no impact on historic resources, construction of a new building on the site of the fuel storage tank immediately adjacent to 601 Embarcadero West could potentially result in indirect impacts on a historical resource depending on the design, massing, intended uses, or other factors that could alter the setting immediately adjacent to the PG&E Station C API (see Figure 5-7).

Therefore, the following ***new impacts on a historic resource*** are identified specific to the Peaker Power Plant Variant:

Impact CUL-8: The proposed Project, with the Peaker Power Plant Variant, would directly impact a historical resource through removal of portions of the east and west wings of the building at 601 Embarcadero West. (Criterion 1) (*Significant and Unavoidable with Mitigation*)

Removal of portions of the east and west wings would alter the existing design of 601 Embarcadero West. The building is recognized as a contributor to the PG&E Station C API and has been given an Oakland Cultural Historic Survey rating of A1+ for its architecture and its association with the industrial history of Oakland (see Appendix CUL-1). Character-defining features of the PG&E Station C API include:

- Monumental scale of the buildings
- Visibility of buildings from outside the immediate site
- Quoined piers
- Round-headed windows
- Classical cornices
- Open and industrial setting

The primary façade of 601 Embarcadero West is the north façade, facing and parallel to both the railroad tracks and Embarcadero West. It is the tallest and longest façade, and its architectural detailing establishes the overall design of the API. The east and west building wings are secondary façades, each facing a city street and visible from the public right-of-way. The west wing was constructed before the Embarcadero West elevation, and does not follow the design scheme later established for the API. It is smaller in elevation, constructed in brick, and has different and smaller architectural bays. The east wing was constructed before (75 Jefferson Street) and concurrent with (51 Jefferson Street) the primary façade. As a consequence, the 51 Jefferson Street portion is more consistent with the primary façade in its design. Both sections are shorter and employ architectural detailing that is smaller in scale than that on the primary, northerly façade.

This variant would remove portions of the building (51 Jefferson Street, constructed in 1928, and 64 MLK Jr. Way, constructed ca. 1889). The sections slated for demolition are the southernmost portions of the two wings. These wings are secondary façades, fronting industrial lots that once contained related functions of PG&E Station C, and form part of its characteristic U-shaped configuration. Loss of these portions would still retain this overall geometry but would shorten the wings and reduce the footprint of the building.

Under the Peaker Power Plant Variant, the building and the API would retain most of those characteristics identified as significant to their historical importance, including the industrial setting and views through the API (see the list of character-defining features above). The primary Embarcadero West elevation would remain unchanged, as would the appearance of the building from the railroad corridor within the API. Those architectural elements commonly associated with the API, and documented in the historical record, would also remain unchanged. No historical associations to important architectural or engineering professionals would be lost.

However, while all other character-defining features would remain intact, the footprint of the building would be altered and the monumental size of the building would be diminished. Alterations that demolish or materially alter in an adverse manner those physical characteristics of a resource that convey its historical significance would materially impair the significance of the historic resource (CEQA Section 15064.5(2)), resulting in a significant impact. Demolition of portions of both the east and west wings would result in a loss of historic fabric and would constitute just such a significant impact. CEQA provides provisions to potentially mitigate impacts on historic resources to less than significant if they follow the Secretary's Standards (CEQA Section 15064.5(3)); in this case, however, incorporating the Secretary's Standards would not mitigate the loss of the building sections located at 601 Embarcadero West. Therefore, the Peaker Power Plant Variant would result in a *significant and unavoidable impact* on the historic resource.

Although the loss of portions of the wings cannot be mitigated to a less-than-significant level, the following mitigation measures would lessen the impacts of new construction to the greatest extent possible.

Mitigation Measure CUL-6a: Peaker Power Plant – HABS Documentation (Level II).

Prior to demolition of portions of the building sections located at 601 Embarcadero West, the entire building shall be recorded to the standards required by the Historic American Buildings Survey – Level II. Copies of the documentation shall be deposited locally in the Oakland History Room at the Oakland Public Library and other locations as determined by the City of Oakland.

Mitigation Measure CUL-6b: Peaker Power Plant – Secretary of the Interior's Standards Compliance Analysis.

Prior to demolition, architectural plans for the new end walls on the shortened east and west wings and other modifications to the building shall be reviewed by a professional meeting the Secretary of the Interior's Professional Qualification for Architectural History and/or Historic Architecture to ensure compliance with the Secretary of the Interior's Standards for Rehabilitation. The professional's findings and recommendations shall be subject to review and approval by the City. The findings of this review shall be documented in a Standards Compliance Report.

Significance after Mitigation: Significant and Unavoidable.

Impact CUL-9: The proposed Project, with the Peaker Power Plant Variant, would not impact a historical resource through introduction of new development that could obstruct views into the resource, a character-defining feature of the PG&E Station C API. (Criterion 1) (*Less than Significant*)

As noted above, the PG&E Station C API has two character-defining features that could be affected by development at the location of the fuel storage tank: the visibility of the buildings from outside the immediate site and the open and industrial setting. The eastern boundary of the API runs parallel with Jefferson Street and the western boundary runs parallel with MLK Jr. Way. The Union Pacific Railroad (UPRR) tracks and Embarcadero West bisect the API. When standing along the tracks on either Jefferson Street or MLK Jr. Way, the views through the site are framed by the two contributing buildings to the API: 601 Embarcadero West to the south and 101 Jefferson Street to the north.

The Peaker Power Plant Variant includes redevelopment on the fuel drum site, located on the west side of Jefferson Street, immediately outside the API. This site would be developed with a mixed-use building wholly contained on the fuel drum site. No aspect of the development would extend into the public right-of-way or into the API, or otherwise connect to the contributors to the API. Therefore, the new development would not obstruct views from immediately outside the API from either Jefferson Street or MLK Jr. Way. The open and industrial setting would remain intact, as no proposed modifications within the API are proposed under the Peaker Power Plant Variant. As a result, impacts on the PG&E Station C API views and setting would be less than significant.

Significance after Mitigation: None required.

The following cumulative impact on the character-defining setting of a historic resource is also identified specific to this variant:

Impact CUL-3.CU: The Project, in combination with the Peaker Power Plant Variant, would contribute to a citywide cumulative impact on cultural and historic resources identified in the Downtown Oakland Specific Plan EIR through the loss of the historic wings of the Peaker Power Plant. (*Significant and Unavoidable with Mitigation*)

The Draft Downtown Oakland Specific Plan EIR (City of Oakland, 2019:363) identifies a significant and unavoidable citywide cumulative impact with regard to cultural resources.

> **Cumulative Impact CULT-1:** Implementation of the Specific Plan and its associated development, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development would contribute to a significant and unavoidable adverse cumulative impact to cultural and historical resources.

The findings in the DOSP Draft EIR are connected primarily to demolition or alteration of historic resources. These include individual resources as well as the potential for incompatible infill development in Areas of Secondary Importance (ASIs) and APIs (City of Oakland, 2019:353–359, 362–363). The proposed Project, with the Peaker Power Plant Variant, includes partial demolition of an eligible historic resource (the Peaker Power Plant). This loss of historic fabric would contribute to the significant and unavoidable cumulative, citywide impact identified in the DOSP Draft EIR. Even with implementation of Mitigation Measures CUL-6a and CUL-6b, this impact cannot be reduced to less than significant. The same mitigation measures would reduce, but not entirely avoid, this impact.

> **Mitigation Measure CUL-6a (Peaker Power Plant – HABS Documentation [Level II]).** (See Impact CUL-8)
>
> **Mitigation Measure CUL-6b (Peaker Power Plant – Secretary of the Interior's Standards Compliance Analysis).** (See Impact CUL-8)
>
> **Significance after Mitigation:** Significant and Unavoidable.

Archaeological Resources, Human Remains, and Tribal Cultural Resources

The Peaker Power Plant Variant would result in the **same *archaeological resources, human remains, and tribal cultural resources impacts and mitigation measures*** as identified for the proposed Project without this variant. Although excavation and construction would occur on other portions of the Project site, the proposed building modifications, demolition of the existing fuel storage tank, and construction of a new building would involve construction and excavation activities on the variant site similar to the activities previously analyzed for the proposed Project. Also, the existing environmental setting, particularly as it relates to subsurface conditions and likelihood of discovery during construction, is the same as described in Chapter 4 for the proposed Project. The mitigation measures described in Section 4.4 to address archaeological and

tribal cultural resources and human remains would reduce cultural resources impacts to less than significant. No new or changed impacts would be required for these topics.

Energy

Relative to the proposed Project without the Peaker Power Plant Variant, this variant—which includes the full buildout of the Project—would result in ***similar energy impacts during construction, even though there would be minor additional energy use and different energy impacts during operation*** because of the conversion of the Peaker Power Plant.

Construction Energy Use

Construction-related energy use was estimated for activities that would be associated with building renovation and conversion of the jet fuel turbines to a battery storage facility. Construction would occur from Year 2 to Year 4 and would involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other construction activities associated with ballpark and non-ballpark building construction would remain the same as under the Project.

Construction energy use for the Peaker Power Plant Variant was calculated using the same methodology as for the Project. The construction equipment list for the Peaker Power Plant Variant was provided by the Project sponsor. Diesel and electricity usage from off-road equipment and on-road construction vehicles are shown in **Table 5-10**. No additional water was assumed to be used during construction of the Peak Power Plant Variant. Details of the construction assumptions are presented in **Appendix ENE**.

As shown in Table 5-10, construction of the Peaker Power Plant Variant would result in minor additional amounts of electricity, diesel, and gasoline consumption relative to the mitigated Project. The Peaker Power Plant Variant's overall construction energy use requirements combined with the Project's requirements would not be substantial relative to the total sales of transportation fuels in Alameda County. In addition, implementing Mitigation Measure AIR-1b (Criteria Air Pollutant Controls) would help avoid the wasteful or inefficient use of energy during construction by requiring that equipment be well maintained, and would require that idling of commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower be limited to a maximum of 2 minutes in accordance with Title 13, Sections 2485 and 2449 of the California Code of Regulations.

Implementing Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) would avoid inefficient use of energy by requiring newer, more efficient off-road construction equipment; Mitigation Measure AIR-2d (Diesel Truck Emission Reduction) would reduce diesel fuel use in trucks by reducing truck idling and requiring electric hook-ups for loading docks; and Mitigation Measure AIR-2e (Criteria Pollutant Mitigation Plan) would incorporate a wide variety of emissions reduction measures into the Project design before the start of construction, which would further reduce energy use associated with operations (although the specific measures to be implemented are currently not known). Therefore, construction of the Peaker Power Plant Variant would not result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or conflict with adopted energy conservation plans or violate energy standards. The impacts would be less than significant.

TABLE 5-10
PEAKER POWER PLANT VARIANT CONSTRUCTION ENERGY RESOURCE USE

Energy Use Type	Unit of Measure	Mitigated Project Construction Usage[a]	Peaker Power Plant Construction[b]	Combined Project and Peaker Power Plant Variant
Electricity				
Water Consumption	kWh/Project	815,619	0	815,619
Off-Road Equipment[b]	kWh/Project	3,019,591	2,882	3,022,473
Total Electricity Use	**kWh/Project**	**3,835,210**	**2,882**	**3,838,092**
Annual Average Electricity Consumption[c]	**kWh/year**	**547,887**	**412**	**548,299**
Diesel				
On-Road Vehicles	gallons/Project	777,648	6,819	784,467
Off-Road Equipment	gallons/Project	1,845,763	14,260	1,860,023
Total Diesel Use	**gallons/Project**	**2,623,410**	**21,079**	**2,644,490**
Annual Average Diesel Use[c]	**gallons/year**	**374,773**	**3,011**	**377,784**
Gasoline				
On-Road Vehicles	gallons/Project	869,915	10,170	880,085
Total Gasoline Use	**gallons/Project**	**869,915**	**10,170**	**880,085**
Annual Average Gasoline Use[c]	**gallons/year**	**124,274**	**1,453**	**125,726**

NOTES:

kWh = kilowatt-hours

a See Section 4.5, *Energy*, Table 4.5-3.
b See *Energy Technical Report*, Tables 20 through 23.
c Annual averages are estimated by dividing the total use values by the expected 7-year duration of construction.

SOURCE: Ramboll, 2020. (Detail provided in Appendix ENE to this Draft EIR.)

Operational Energy Use

The Peaker Power Plant Variant would result in avoided jet fuel energy consumption when the current Peaker Power Plant would be decommissioned and the burning of jet fuel as energy would cease. The existing Peaker Power Plant consumes an average of 868,528 gallons per year of jet fuel to generate an average of 8,187 MWh per year of electricity. In addition, the existing Peaker Power Plant may be converted to a battery energy storage system, as discussed in Section 5.1 above. The battery storage facilities would charge themselves from the existing electrical grid during periods of the day when overall energy consumption is low, and then would supply the stored electricity when the daily demand is at its peak. It is estimated that the battery storage facility would supply up to 45,068 MWh per year of electricity during peak use periods (see Appendix AIR, Table 108), which would result in an annual reduction in jet fuel consumption of 868,528 gallons.

Operation of the Peaker Power Plant Variant would result in a beneficial impact associated with a reduction in the use of jet fuel, while resulting in a net reduction in available peak-use electricity of only 234 MWh per year. However, as discussed in Section 5.1 above, although the exact

changes in jet fuel combustion and electricity supply are currently not known, and the final energy changes would need to be reevaluated in the future once more detail is available, the direct jet fuel reductions were assumed in the analysis. In any case, there would be no potential for the Peaker Power Plant Variant to result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or to conflict with an adopted energy conservation plan or violate energy standards.

Geology, Soils, and Paleontological Resources

The Peaker Power Plant Variant would result in the ***same geology, soils, and paleontological resources impacts*** identified for the proposed Project without this variant. The proposed building modifications, demolition of the existing fuel storage tank, and construction of new buildings would involve construction and excavation activities on the portion of the Project site where the Peaker Power Plant and associated fuel tank are located. The existing environmental setting, particularly for subsurface conditions and the likelihood of discovery of paleontological resources during construction, is the same as described in Chapter 4 for the proposed Project. No new or changed impacts would occur for these topics.

Greenhouse Gas Emissions

The Peaker Power Plant Variant (which includes the Project and the Peaker Power Plant) would result in additional construction GHG emissions compared to the Project, because of the additional construction activity for physical changes to the power plant buildings. Shutting down existing fossil fuel power generation would result in reduced emissions by discontinuing on-site fossil fuel combustion for power generation, improving grid reliability, and providing a source of stored renewable electricity that would reduce the need for Peaker Power Plant operation using fossil fuels. However, because this variant includes the full-buildout Project, this variant would result in ***similar GHG emissions impacts and mitigation measures*** to those identified for the proposed Project.

Note that direct reductions in GHG emissions would occur because of the shutdown of existing fossil fuel power generation, and a reduction in indirect emissions may occur as a result of the battery storage. As discussed in Section 5.1 above, the exact direct GHG emissions reductions are currently not known, and the final direct emissions reduction credit would need to be reevaluated in the future once more detail is available; therefore, these direct emissions reductions were not assumed in the analysis. However, the potential credit for avoidance of indirect emissions cannot accurately be determined at this time, given uncertainties about the GHG emissions from the source of the power being stored by the batteries, and the extent to which the A's would use the battery storage power for the Project to replace an energy source with higher GHG emissions.

Construction Emissions of Greenhouse Gases

Construction GHG emissions were estimated for activities associated with renovation of the power plant building and conversion from jet fuel turbines to battery storage. Construction would occur from Year 2 to Year 4 and would involve additional off-road construction equipment activity and on-road construction worker, vendor, and truck trips. All other construction activities

for ballpark and non-ballpark building construction would remain the same as under the Project. Details of the construction assumptions are presented in Appendix AIR.

Construction for the Peaker Power Plant Variant would emit approximately 298 metric tons of carbon dioxide equivalent ($MTCO_2e$) over the period from Year 2 to Year 4, as shown in Table 102 of the *Air Quality Technical Report* (see Appendix AIR). The additional construction emissions relative to the Project would amount to approximately 10 $MTCO_2e$ per year when amortized over the 30-year life of the Project, resulting in total amortized construction emissions for the Peaker Power Plant Variant of approximately 1,094 $MTCO_2e$ per year. This value represents mitigated construction emissions, accounting for construction activity for implementation of the pedestrian and bicycle overcrossing and off-site construction for transportation improvements required as mitigation in Section 4.15, *Transportation and Circulation*.

Operational Emissions of Greenhouse Gases

Because the Peaker Power Plant Variant would not increase the overall square footage of the Project, the land uses, activities, attendance, and population data would be generally the same as for the Project. Additionally, mobile-source trips for hauling, vendor deliveries, and worker commutes would generally remain the same. Because the overall population and Project activities would be identical, operational emissions associated with these activities are expected to be the same as the Project's operational emissions.

A reduction in direct emissions would result from the cessation of fossil fuel combustion at the plant. The direct avoided emissions were calculated based on the Peaker Power Plant's average annual electricity generation and fuel consumption for 2010 to 2018, and the difference between the GHG intensity of the Peaker Power Plant (2010–2018 average) and the GHG intensity of the energy mix that would replace it. As described in the *Air Quality Technical Report*, conversations with the California Air Resources Board and information from Vistra Energy (the Peaker Power Plant operator) indicate that one-third of the energy supplied to the battery energy storage system is guaranteed to be from zero-carbon sources, with the remaining two-thirds from the grid. As shown in Table 107 of the *Air Quality Technical Report,* the average avoided direct emissions from the power plant conversion are estimated to be 7,783 $MTCO_2e$ per year. However, these emissions reductions are based on numerous assumptions regarding the removal of the jet fuel turbines at the site, and the exact characteristics of the decommissioning are currently not known. These emissions reductions are estimates based on information known at the time of this EIR's preparation. The actual emissions reduction resulting from the Peaker Power Plant Variant would need to be reevaluated in the future once more detail is available.

Additionally, the Peaker Power Plant Variant may result in avoided indirect GHG emissions that would not occur across the grid, because the battery energy storage system would help maintain grid reliability, promote the transition to more renewably sourced electricity, and eliminate the need for additional Peaker Power Plant operation using fossil fuels. The *Air Quality Technical Report* (see Appendix AIR) provides an estimate of avoided indirect emissions, based on the assumption that the battery storage system would store electricity from renewable power sources

such as solar and wind power generation during off-peak periods, and assuming the average renewable curtailment rates from the CAISO in the period from May 2014 through August 2019. The 90 MW battery energy storage system was assumed to be fully charged to its maximum capacity of 360 MWh per day using solar and wind power that would have otherwise been curtailed during peak curtailment months, and during times when there are proportionally lower charge rates. This is a conservative estimate, as it is based on historical curtailment. As California increases its solar and wind generation capacity, the battery energy storage system could potentially be fully charged using renewable sources all year, even in the historically low-curtailment months. As shown in Table 108 of the *Air Quality Technical Report,* the average avoided indirect emissions from the power plant conversion are estimated to be 9,129 $MTCO_2e$ per year.

However, as discussed above in Section 5.1, the calculation of the amount of the indirect GHG emissions reduction credit that would be allocated to the A's Project is based on future agreements and actions for to the Peaker Power Plant site and cannot be determined at this time. In addition, several factors make this credit less certain. These factors, which are not known at this time, include but are not limited to the following:

(1) The indirect GHG emissions from the source of the power being stored by the batteries; and

(2) The extent to which the A's use the battery storage power to replace an energy source for the Project that has higher criteria pollutant emissions.

As such, these indirect GHG emission reductions are presented for informational purposes only and are not attributed to the Peaker Power Plant Variant.

Greenhouse Gas Emissions Impact

Table 5-11 presents total annual GHG emissions (amortized construction plus operations) under the Peaker Power Plant Variant (which includes the Project plus Peaker Power Plant) at full buildout. As shown, net new emissions for the variant would be approximately 45,187 $MTCO_2e$ per year without mitigation, approximately 7,770 $MTCO_2e$ per year less than under the Project at full buildout. Thus, compared to the Project, the Peaker Power Plant Variant would have a smaller mitigation obligation to meet the "no net additional" emissions threshold under **Impact GHG-1**. With respect to **Impact GHG-2**, the Peaker Power Plant Variant would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Rather, the variant would support the State's goal to transition to more renewably sourced electricity, and would eliminate the combustion of fossil fuels to generate electricity, both of which are general goals of the 2017 Scoping Plan Update. Thus, with implementation of **Mitigation Measure GHG-1**, the GHG emissions impact of the Peaker Power Plant Variant would *remain less than significant with mitigation*, as identified for the Project without this variant.

TABLE 5-11
ESTIMATED GREENHOUSE GAS EMISSIONS FOR PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) AT FULL BUILDOUT

Source[a]	$MTCO_2e$ per Year
Ballpark emissions[b]	10,384
Project non-ballpark emissions[b]	48,068
Peaker Power Plant Variant construction emissions (amortized over 30 years)[c]	**1,094**
Peaker Power Plant Generator emissions (mitigated)[d]	**3.5**
Peaker Power Plant Variant avoided direct emissions[e]	**-7,783**
Total variant emissions (unmitigated)	51,767
A's-related existing conditions emissions[f]	-6,580
Net new variant emissions (unmitigated)	**45,187**

NOTES:
a The technical analysis assumes full project Buildout operations begin as early as Year 8, which is sooner than now anticipated. This is a conservative assumption with respect to GHG emissions analysis because emission factors for electricity and on-road vehicles are expected to decrease over time due to the RPS and State regulations for vehicle efficiency, respectively.
b From Section 4.7, *Greenhouse Gas Emissions*, Table 4.7-6.
c Mitigated construction emissions, from Section 4.7, *Greenhouse Gas Emissions*, Table 4.7-5, adjusted for additional emissions from the Peaker Power Plant Variant, as shown in Table 102 of the *Air Quality Technical Report*.
d From *Air Quality Technical Report*, Table 104.
e From *Air Quality Technical Report*, Table 109.
f From Section 4.7, *Greenhouse Gas Emissions*, Table 4.7-4.

ABBREVIATIONS: GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalents

SOURCE: ESA and Ramboll (Appendix AIR)

Hazards and Hazardous Materials

The Peaker Power Plant Variant would result in ***similar hazards and hazardous materials impacts*** to those identified for the proposed Project, except that removing the jet fuel storage tank from part of the variant site and redeveloping that property with mixed-use development would present a potentially significant impact that could be mitigated to a less-than-significant level, as discussed below.

This variant would involve the same land uses (specifically residential, commercial, and open space) and construction and excavation activities previously considered in the analysis of the proposed Project. The variant would demolish portions of the existing wings of the power plant, which are likely to contain hazardous materials such as lead and asbestos, and would also demolish the existing fuel storage tank. These activities would not otherwise occur with the proposed Project and were therefore not previously considered.

As discussed in detail in Chapter 4, the Project site, including the site of this variant, is subject to existing land use covenants (LUCs), with their associated plans enforced by the California Department of Toxic and Substances Control (DTSC). The Project sponsor is proposing to modify and consolidate existing LUCs and update related plans. The changes to the variant site and the potential to encounter hazardous materials in buildings, soil gas, soil, and groundwater would be subject to the requirements of the revised LUC and associated plans and would require approval by DTSC. Because the consolidated LUC and related plans are not available at this time, an

impact similar to Impact HAZ-2, as modified below as Impact HAZ-4, would address removal of the fuel tank component of this variant. **New Mitigation Measure HAZ-2** is identified, in addition to Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-1d previously identified for the proposed Project, which would continue to apply. These new and previously identified mitigation measures are applicable to development of the whole Project site, ensuring appropriate oversight by DTSC and completion of all actions necessary to protect human health and the environment.

Impact HAZ-4: The proposed Project, with the Peaker Power Plant Variant, would have the potential to encounter hazardous materials, which could create a significant hazard to the public or the environment. (Criterion 5) (*Less than Significant with Mitigation*)

> **Mitigation Measure HAZ-2: Peaker Power Plant Fuel Tank Decommissioning and Training/Oversight.**
>
> Prior to demolition or removal of the fuel tank, the Project sponsor shall have the fuel tank parcel decommissioned, subject to the oversight and inspection of the Oakland Fire Department. The decommissioning activity shall be performed by qualified personnel trained and certified in environmental health and safety procedures pursuant to Occupational Safety and Health Administration training requirements in Code of Federal Regulations Title 29, Section 1910.120, Hazardous Waste Operations and Emergency Response, including appropriate training for enclosed space activities. The Project sponsor shall ensure that full-time observation under a site management plan occurs during actual removal of the tank to determine whether evidence of subsurface impact is present.
>
> **Mitigation Measure HAZ-1a: Preparation and Approval of Consolidated RAW, LUCs, and Associated Plans.** (See Section 4.8, *Hazards and Hazardous Materials*)
>
> **Mitigation Measure HAZ-b: Compliance with Approved RAW, LUCs, and Associated Plans.** (See Section 4.8, *Hazards and Hazardous Materials*)
>
> **Mitigation Measure HAZ-1c: Health and Safety Plan.** (See Section 4.8, *Hazards and Hazardous Materials*)
>
> **Mitigation Measure HAZ-1d: Hazardous Building Materials.** (See Section 4.8, *Hazards and Hazardous Materials*)
>
> **Significance after Mitigation:** Less than Significant.

With implementation of these mitigation measures, no significant hazardous materials impact would occur with this variant. No other new or changed impacts or mitigation measures would be required.

Hydrology and Water Quality

The Peaker Power Plant Variant would result in the ***same hydrology and water quality impacts*** as identified for the proposed Project without this variant because the hydrologic setting of this variant site is largely the same as described generally for the broader Project site. The development program with this variant would be the same as with the proposed Project, along with the range of land uses, construction activities, and infrastructure improvements considered.

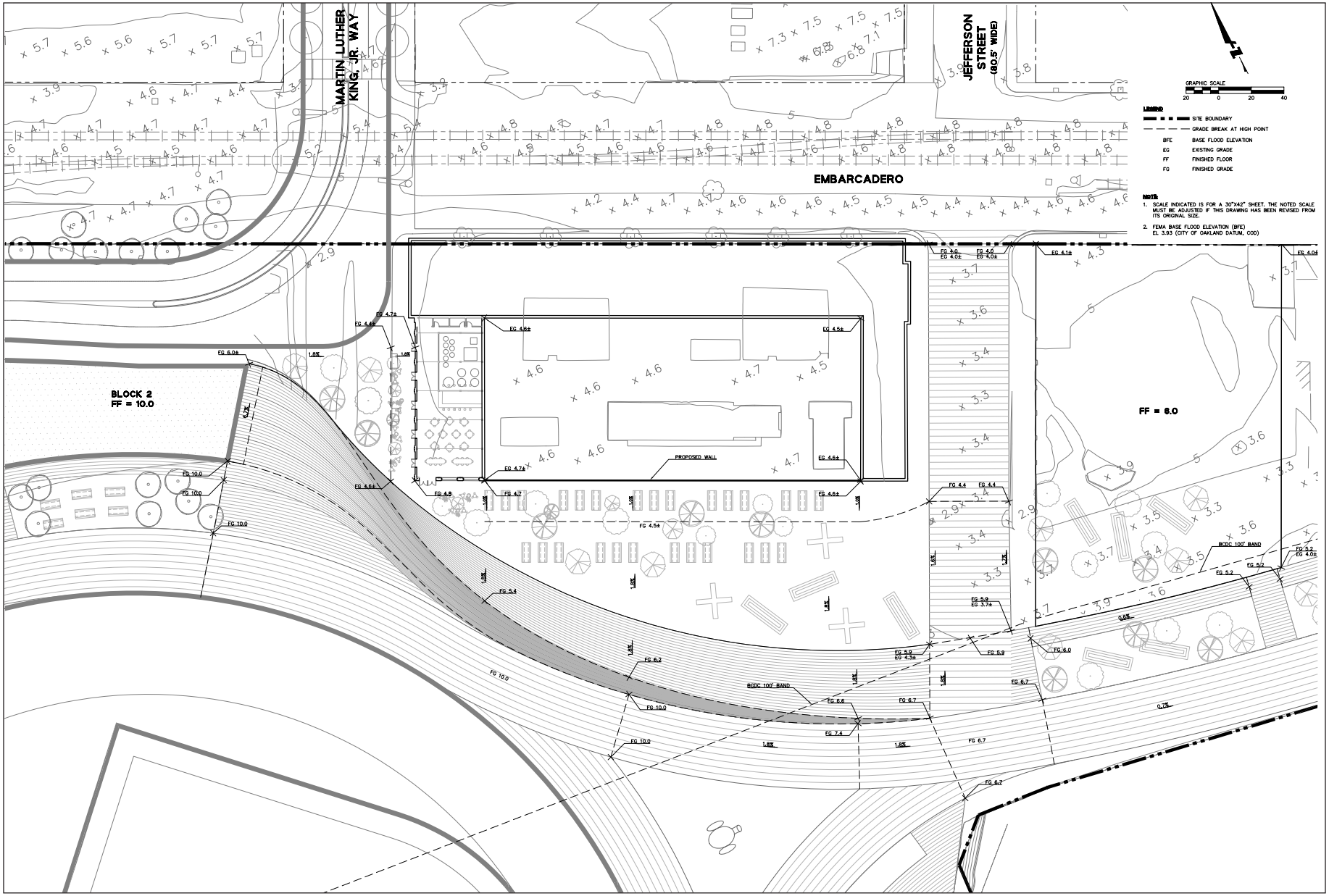
As a result, stormwater runoff would be handled similarly and there would be no new or changed impacts for these topics. Mitigation Measures HYD-1a, HYD-1b, HAZ-1a, HAZ-1b, and HAZ-1c would continue to apply and are applicable to development of the whole Project site.

With regard to the topic of flooding, similar to the Project site, the Peaker Power Plant Variant site is located partially within the Special Flood Hazard Area Flood Zone AE (elevation 10 feet, North American Vertical Datum of 1988) as shown on the most recent Federal Emergency Management Agency Flood Insurance Rate Map, with a base flood elevation (BFE) of approximately 3.9 feet Oakland datum (Moffat & Nichol, 2019). **Figure 5-11** shows that the building on the Peaker Power Plant Variant site would have a finished floor elevation of at least 6.0 feet, which would be higher than the BFE of approximately 3.9 feet. **Mitigation Measure HYD-2** (Structures in a Flood Zone) identified for the Project would also apply to the variant site and would require that the Project's final grading plans for development within the Special Flood Hazard Area show finished site grades and floor elevations above the BFE. With implementation of Mitigation Measure HYD-2, the Project with the Peaker Power Plant Variant would not place structures within flood hazard area that would impede or redirect flood flows, exposing people or structures to a significant risk of loss, injury, or death involving flooding, and impacts would be less than significant, the same as identified for the Project.

With regard to flooding and sea level rise, along the northern edge of the site, including at the Peaker Power Plant Variant site, grades would conform to existing roadway elevations of approximately 4.5 feet Oakland datum and would be above the BFE. The proposed mixed-use building on the Peaker Power Plant Variant site would have a finished floor elevation of at least 6.0 feet, which is also above the BFE; however, adaptations would be necessary to keep up with rising sea levels in the future. Future actions, such as elevating the wharf edge, or creating landscape berms, steps, or amphitheaters above the BFE with sea level rise behind the wharf, could be taken to adapt it to the increased risk of inundation, which could reduce the risk of flooding from sea level rise across the site (Moffat & Nichol, 2019).

Strategies have been developed to adapt the Project site to increased risk of inundation, and the Project would be required to meet conditions related to sea-level rise pursuant to Assembly Bill (AB) 1191 required by Mitigation Measure HYD-3 (Sea Level Rise Final Adaptive Management and Contingency Plan), including adaptive management and contingency plans. For this reason, the proposed Project with the Peaker Power Plant Variant would continue to have a less-than-significant effect related to exposure of people or structures to a substantial risk of loss, injury, or death due to sea level rise–related flooding.

Therefore, the variant would result in the same impacts related to hydrology and water quality as the proposed Project. No new or changed impacts would occur and no new mitigation measures would be required.



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SOURCE: BKF Engineers

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Figure 5-11
Conceptual Grading - Peaker Power Plant Variant

ESA

Land Use, Plans, and Policies

The proposed Project with the Peaker Power Plant Variant would result in the ***same land use, plans, and policies impacts*** as identified for the proposed Project without this variant because the variant would redistribute rather than increase the amount and types of development proposed. Also, the proposed conversion of the Peaker Power Plant to battery storage would not fundamentally change its land use, which would remain in the Utility and Vehicular Civic Activity land use classification pursuant to the Oakland Zoning Regulations (Section 17.10.230). However, the proposed retail, dining, and open space uses proposed immediately south and west of the power plant would represent a change in the land use classification and use. These proposed uses would not conflict with the battery storage, given the physical separation of the uses (because a new wall would exist on the south end of the power plant), combined with various mitigation measures referenced below. The mixed-use development envisioned for the site of the fuel storage tank could include new residential and mixed uses including retail/dining and open spaces. These uses would be compatible with the other new ballpark district uses of the proposed Project. From a broader perspective, these uses would be introduced into an existing industrial area. Nonetheless, several mitigation measures addressing potential land use conflicts are identified for the proposed Project (see Impact LUP-2 in Section 4.10, *Land Use, Plans, and Policies*), which would continue to apply to this variant.

Like the proposed Project, the variant site is within the San Francisco Bay Conservation and Development Commission (BCDC) Seaport Plan's designated Port Priority Use Area. This variant, like the Project, would also modify and reuse a property that is an asset of the public trust and therefore would potentially conflict with the Public Trust Doctrine. Like the proposed Project, the Project with the Peaker Power Plant Variant could not proceed without approvals from the California State Lands Commission and BCDC pursuant to AB 1191 (see Impacts LUP-3 and LUP-4 in Section 4.10, *Land Use, Plans, and Policies*).

Also, parts of the Peaker Power Plant Variant site are in the area where the Project proposes a General Plan amendment from the "General Industry and Transportation" land use classification to "Regional Commercial." Like the Project, the variant would include a General Plan amendment to change the land use designation of the portion of the variant site east of Jefferson Street (fuel storage tank) from the Estuary Policy Plan's Retail Dining Entertainment 1 (RD&E-1) land use designation to RD&E-2, which would permit residential use. This change would not put the variant in conflict with the overall goals and policies of the Estuary Policy Plan, such as those encouraging new uses that complement the industrial, warehousing, and maritime support area transition uses that would remain. These policies are detailed in the regulatory setting in Section 4.10 of Chapter 4, and are discussed in Impact LUP-7, which states that development of the Project would not fundamentally conflict with City of Oakland Estuary Policy Plan. With implementation of the aforementioned Impact LUP-2 and mitigation measures addressing land use compatibility, these impacts would not be significant. The same mitigation measures would apply to the Peaker Power Plant Variant.

Noise

The Peaker Power Plant Variant would result in ***similar noise impacts and the same mitigation measures*** as identified for the proposed Project.

Construction

With the Peaker Power Plant Variant, additional construction activities would result in more construction-related noise in the vicinity, potentially exacerbating impacts already identified as significant and unavoidable with the proposed Project: Impact NOI-1, temporary or periodic increases in noise from construction; Impact NOI-2, groundborne vibration during construction; and Impact NOI-1.CU, contribution to cumulative temporary or periodic increases in noise levels due to construction.

Operations

From an operational standpoint, the battery storage facility, while including transformers on the east and west sides, would be anticipated to generate lower noise levels than generated by existing peak plant turbine operations. Although this could be a localized beneficial impact of the variant, existing noise from the adjacent UPRR tracks and associated operations would likely render this beneficial impact negligible.

With modifications of the power plant wings and construction at the fuel storage tank site, the proposed Project with the Peaker Power Plant Variant would redistribute, but not change or increase, development and uses proposed as part of the Project. As a result, travel patterns into and out of the site could differ somewhat from travel patterns with the Project, but the overall vehicle miles traveled (VMT), travel forecast, modes of travel, and trip distribution outside the immediate area would be the same. Minor changes to roadway volumes resulting from this variant would not be expected to change the roadside noise-level predictions estimated for the proposed Project, and significant and unavoidable impacts related to traffic would be unchanged (Impact NOI-2.CU, contribution to increased noise due to Project-related traffic; and Impact NOI-3, increased noise due to Project-related traffic and concert events at the ballpark). Therefore, operational noise impacts of the Peaker Power Plant Variant would be similar to those of the proposed Project (Impact NOI-2.CU, contribution to increased noise due to Project-related traffic; and Impact NOI-3, increased noise due to Project-related traffic and concert events at the ballpark).

Population and Housing, Public Services, and Recreation

The Peaker Power Plant Variant site is within the proposed Project site and shares its setting. As a result, this variant would result in the ***same impacts and mitigation measures for population and housing, public services, and recreation*** as those identified for the proposed Project without this variant. These topics are addressed together here because they similarly relate to the anticipated population and development intensity of the Project. As discussed above in the *Description* for this variant, maximum building heights and a range of land uses would frame the maximum development that could occur across the Project (see Table 3-1 in Chapter 3), including development and uses specific to the variant. In other words, this variant would result in the same

development program and land uses as the proposed Project without this variant; uses, including residential uses, would be redistributed, not increased. Therefore, the variant would result in the same inducement of growth, levels of demand for public services, and number of users and frequency of use of nearby recreational facilities. No new or changed impacts would occur and no new mitigation measures would be required.

Transportation and Circulation

The Peaker Power Plant Variant would result in the ***same transportation and circulation impacts and mitigation measures*** as identified for the proposed Project. Access to the Peaker Power Plant Variant site would be provided along Embarcadero West or through development block #18 as an easement, or through the combination of the blocks. With modifications of the power plant wings and construction at the fuel storage tank site, the proposed Project with the Peaker Power Plant Variant would redistribute, but not change or increase, development and uses proposed as part of the Project. As a result, travel patterns to and from the site could differ somewhat from travel patterns with the Project, but the overall VMT, travel forecast, modes of travel, and trip distribution outside the immediate area would be the same. For this reason, the Peaker Power Plant Variant would result in the same transportation impacts and mitigation measures as identified for the proposed Project without this variant (as described in Section 4.15). No new or changed impacts would occur and no new mitigation measures would be required.

Utilities and Service Systems

The Peaker Power Plant Variant would result in the ***same utility and service system impacts and mitigation measures*** as identified for the proposed Project site without this variant. The utilities setting of this variant, which would be located on the Project site, is largely the same as described generally for the broader Project site, except that some new/updated underground connections to off-site power facilities would be constructed. The development program with this variant would be the same as with the proposed Project, along with the range of land uses, construction activities, and infrastructure improvements considered. As a result, stormwater runoff would be handled similarly, and water and wastewater demands and solid waste generation would be the same as with the proposed Project. For these reasons, there would be no new or changed impacts and no additional mitigation measures would be required.

Summary

Development of the Project combined with the Peaker Power Plant Variant would result in new or different impacts related to historical resources (Impacts CUL-8, CUL-9, and CUL-3.CU), and hazards and hazardous materials (Impact HAZ-4):

- *Impact CUL-8,* related to the demolition of portions of both the east and west wings of the Peaker Power Plant building and the resulting loss of historic fabric. Although the loss of portions of the wings cannot be mitigated to a less-than-significant level, new Mitigation Measures CUL-6a (Peaker Power Plant – HABS Documentation [Level II]) and CUL-6b (Peaker Power Plant – Secretary of the Interior's Standards Compliance Analysis) would

lessen the impacts of new construction to the greatest extent possible. However, the impact would remain significant and unavoidable.

- *Impact CUL-9,* related to impacts on the PG&E Station C API views and setting. This impact would be less than significant, and no new mitigation would be required.
- *Impact CUL-3.CU,* related to the loss of historic fabric from the Peaker Power Plant modifications and its contribution to the significant and unavoidable cumulative, citywide impact identified in the DOSP DEIR. The new impact would be significant and unavoidable after implementation of new Mitigation Measures CUL-6a and CUL-6b (see Impact CUL-8 above).
- *Impact HAZ-4,* related to removal of the fuel tank on the variant site. This impact would be less than significant after implementation of new Mitigation Measure HAZ-2 (Peaker Power Plant Fuel Tank Decommissioning and Training/Oversight) and previously identified Project Mitigation Measures HAZ-1a through HAZ-1d.

There would be no new or changed impacts and no additional mitigation measures would be required for the remaining topics discussed above.

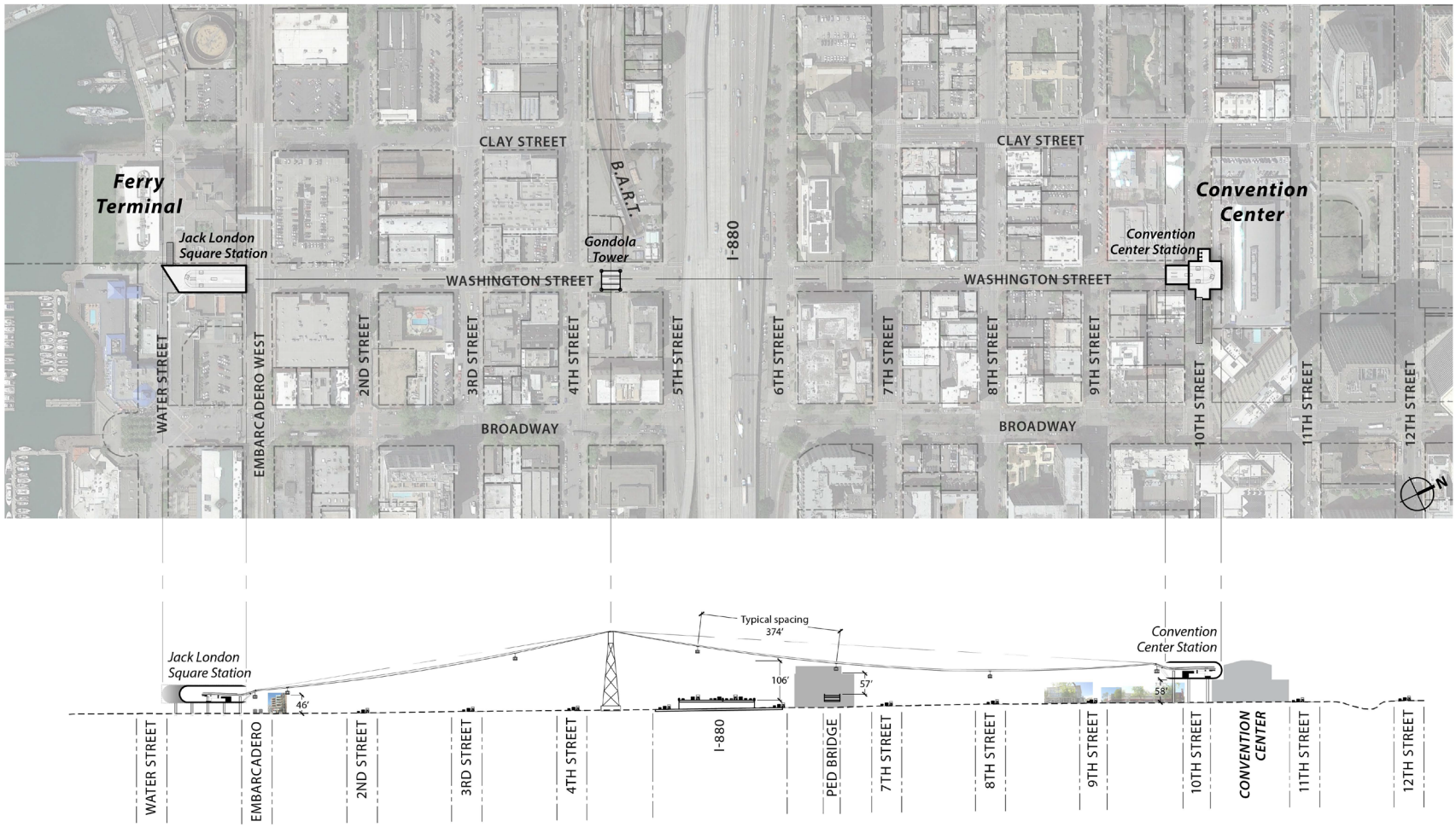
5.2 Aerial Gondola Variant

5.2.1 Description

The Aerial Gondola Variant includes the proposed Project as well as a new aerial gondola above and along Washington Street, extending from 10th Street in downtown Oakland to Jack London Square (location 2 in Figure 5-1). The gondola would be a transit option for people going to the Project site on a daily basis and for events. The gondola would transport people from downtown Oakland near the 12th Street Bay Area Rapid Transit (BART) Station and Oakland Convention Center to Jack London Square at the foot of Washington Street, from which pedestrians would then walk (or bike) to the ballpark and adjacent mixed-use development on the Project site. The gondola is proposed to cross over the skyway between the courthouse and police building at Washington and 6th Streets, over the Nimitz Freeway/Interstate 880 (I-880), and over the UPRR railroad tracks.

Construction and operation of the gondola may or may not be included by the Project sponsor as part of the proposed Project. This uncertainty derives from the proposed location of the gondola within (and above) the public right of way, as well as the need for properties to accommodate the tower and stations. Approvals from various entities would also be required, including the City, the Port, and Caltrans.

Figure 5-12 details the proposed gondola route and the gondola's major elements: the gondola tower and aerial ropeline, the Jack London Square Station, and the Convention Center Station. Each is described below.



SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-12
Gondola Ropeline Plan and Profile

ESA

Gondola Tower and Aerial Ropeline

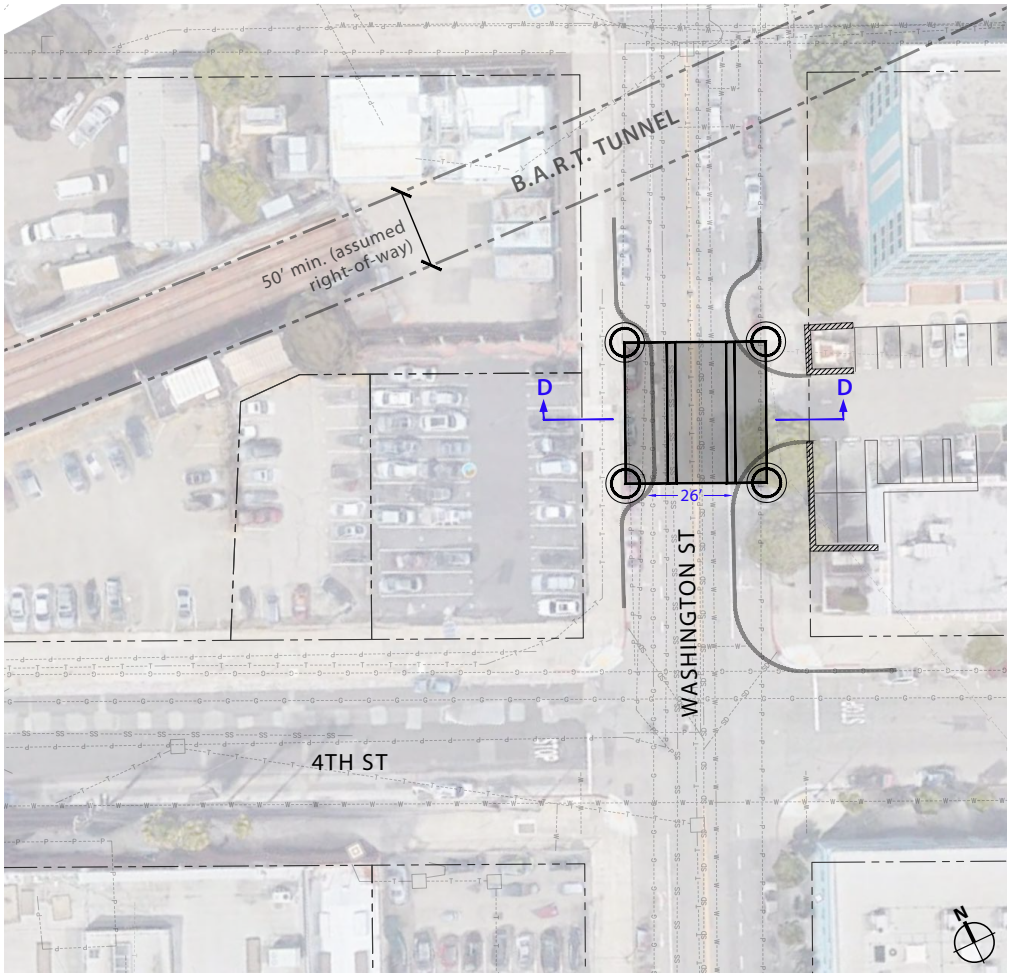
The gondola would travel overhead on a ropeline that would be centered on a single mid-span tower at 4th and Washington Streets, approximately one block south of I-880 (see Figure 5-13). The tower would be approximately 230 feet tall, supporting the gondola system with asymmetrical span lengths of 1,530 feet (0.28 miles) to the Convention Center Station to the north and 960 feet (0.2 miles) to the Jack London Square Station to the south.

Figure 5-13 provides a close-in plan of the tower location and its surrounding uses. The tower location was selected to allow for a ropeline profile with the necessary clearances along the route and a gondola elevation in the area of the Hall of Justice (6th and Washington Streets) high enough to prevent gondola passengers from peering into the 6th floor windows. Additionally, the tower location between 4th and 5th Streets was selected to avoid conflicts with the below-grade BART tunnel and to avoid blocking commercial driveways that serve the parking lot east of Washington Street (both shown in Figure 5-13). The four tower foundations, anticipated to be approximately 6 feet in diameter, would extend above grade and would be approximately centered on the existing curb line in curb bump-outs. The above-grade foundations would reduce existing sidewalk widths by approximately 3 feet on each side of the street.

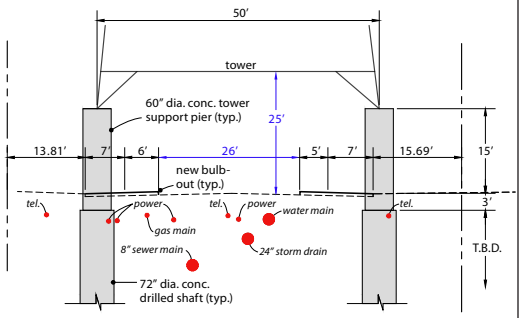
As illustrated in Figure 5-12, the gondola's cabin clearance would range from approximately 106 feet to 150 feet as it traverses I-880. The closest distance from the bottom of the cabin to the ground would be 30 feet (at the exit from the Jack London Square Station). The closest distance from the bottom of the cabin to an existing structure would be roughly 55 feet (the distance from the skybridge between the courthouse and police building near 6th and 7th Streets). The conceptual ropeline profile was designed to allow for a minimum vertical clearance above I-880 of 90 feet. This clearance far exceeds any minimums required. Preliminary conversations with representatives from the California Department of Transportation indicated that an Encroachment Permit and Airspace Lease would be required to cross over I-880.

The gondola cabin would maintain a vertical clearance of approximately 28 feet across the UPRR tracks along Embarcadero West, which exceeds the minimum vertical clearance of 23 feet, 6 inches required by the Burlington Northern Santa Fe Railroad and 23 feet, 4 inches required by UPRR.

CONCEPTUAL SITE PLAN



SECTION D-D



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SOURCE: SCJ Alliance Consulting Services

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Figure 5-13
Gondola Tower Plan and Section

ESA

Jack London Square Station

The proposed Jack London Square Station would be located at the south end of the gondola system. **Figure 5-14a** and **Figure 5-14b** show the conceptual design of the station, which would be centered on Washington Street and extend along the block of Washington Street between Embarcadero West and Water Street.

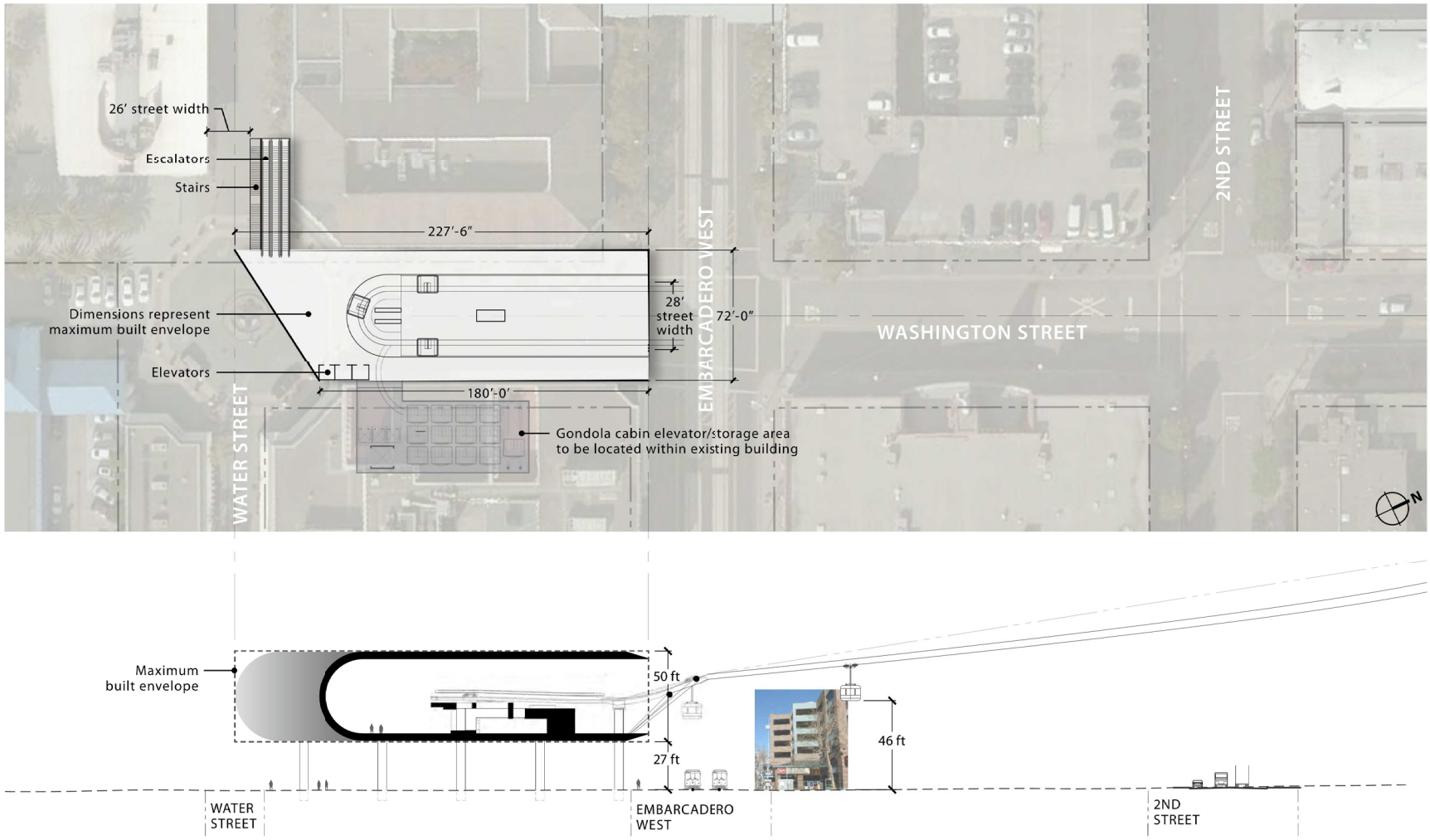
The gondola boarding platform at the Jack London Square Station would be approximately 28 feet above the ground, and the overall station structure would be approximately 70 feet tall. A bank of three parallel, reversible escalators would run from the southwest corner of the station west into Water Street and toward the Project site (see Figures 5-14a and 5-14b). A set of stairs would parallel the escalators. The station would also have a bank of three elevators situated at the southeast corner of the station, traveling between street level and the gondola boarding platform level. The height of the structure would be similar to that of surrounding existing buildings.

With this variant, vehicular traffic other than emergency service vehicles may no longer have access to Washington Street between Embarcadero West and Water Street, especially during ballpark events. The diagonal escalator bank would extend into Water Street, where it is anticipated that traffic flow would be more limited than under existing conditions.

Convention Center Station

The proposed Convention Center Station would be located at the north end of the gondola system, adjacent to the Oakland Convention Center, on 10th Street between Broadway and Clay Street. This station would be located on the northern boundary of the Old Oakland API. This district runs from 10th Street to 7th Street and contains up to one city block on either side of Washington Street. **Figure 5-15a** through **Figure 5-15c** show a conceptual design of the station, which would be centered on Washington Street and generally in the T-intersection with 10th Street, projecting south along Washington Street. The gondola boarding platform at this station would be approximately 58 feet above the ground, and the overall station structure could be nearly 100 feet tall.

A second design option is being considered that addresses different approaches for how the proposed station would relate to the existing Convention Center. **Figure 5-16** shows the section design option. Each option is described below.



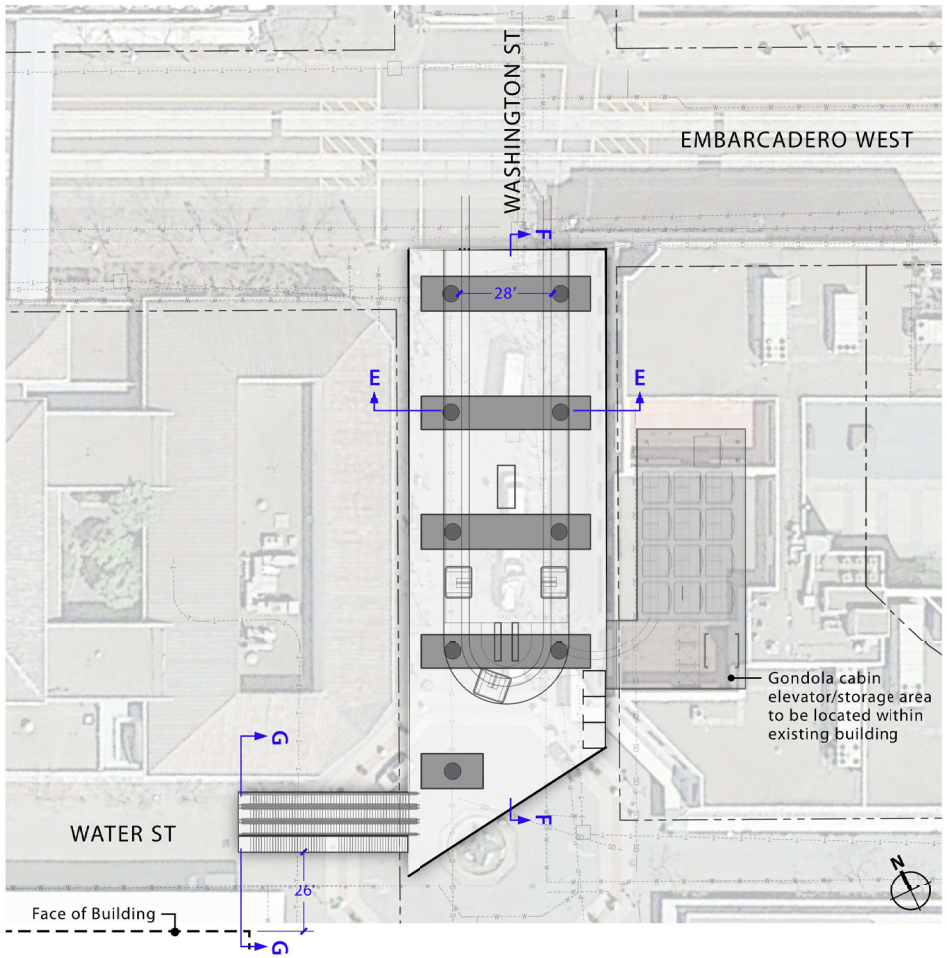
SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-14a
Jack London Square Station Layout

ESA

CONCEPTUAL SITE PLAN



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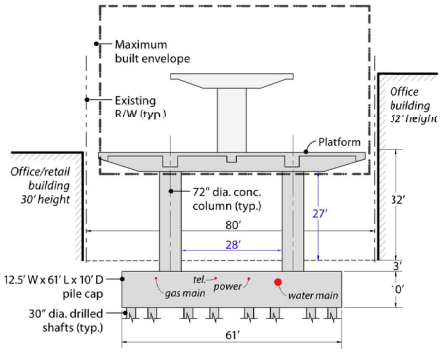

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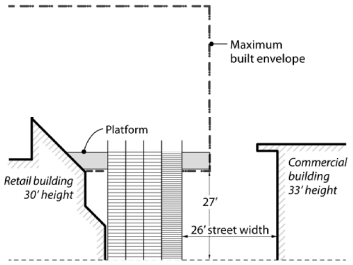

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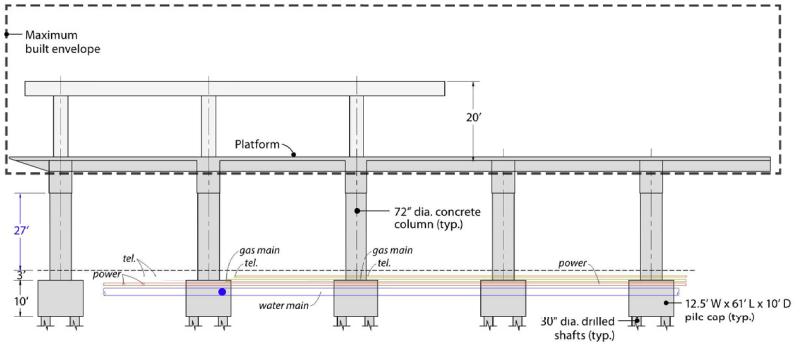
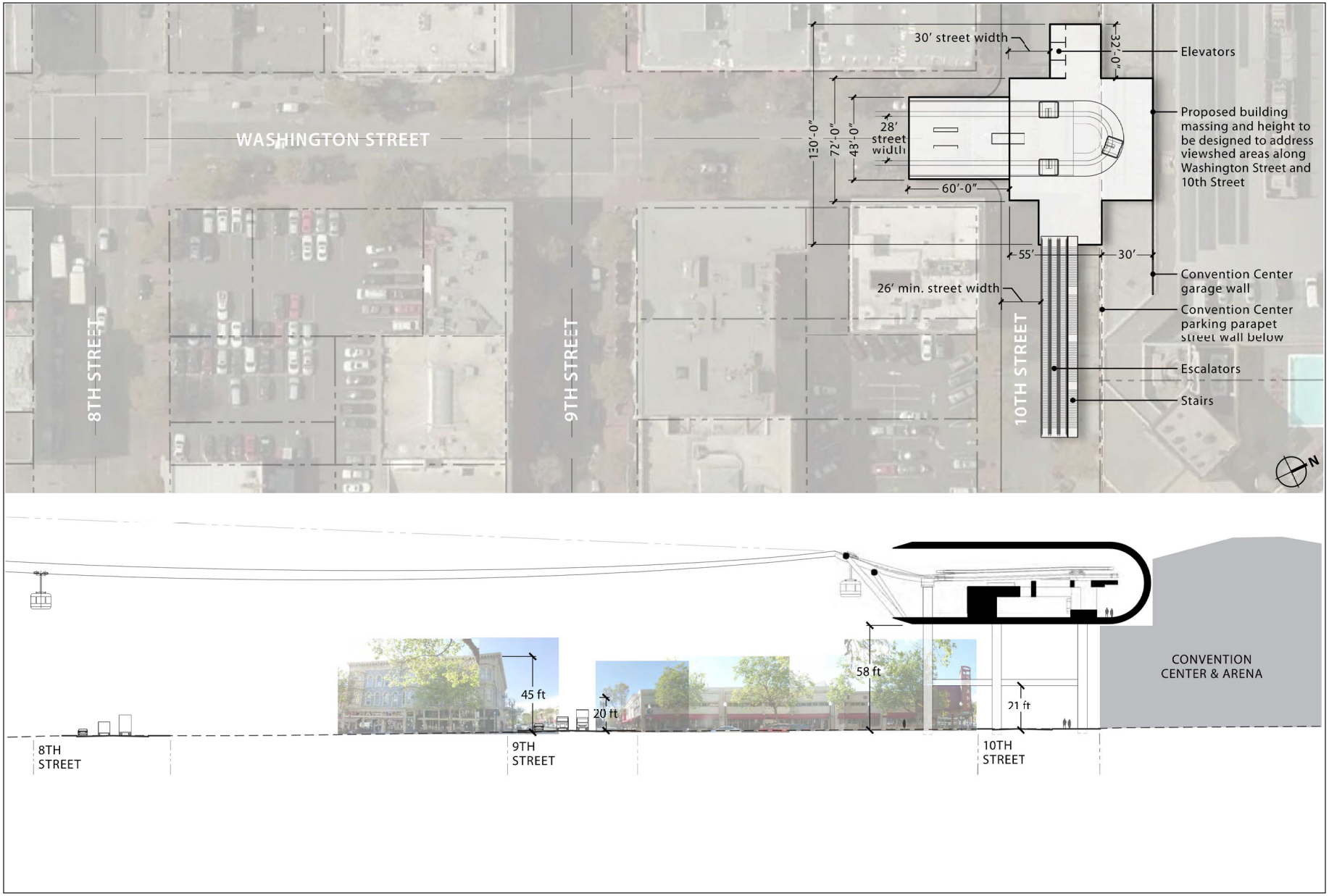


SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-14b
Jack London Square Station Sections

ESA



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SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-15a
Convention Center Station Layout (Option 1)

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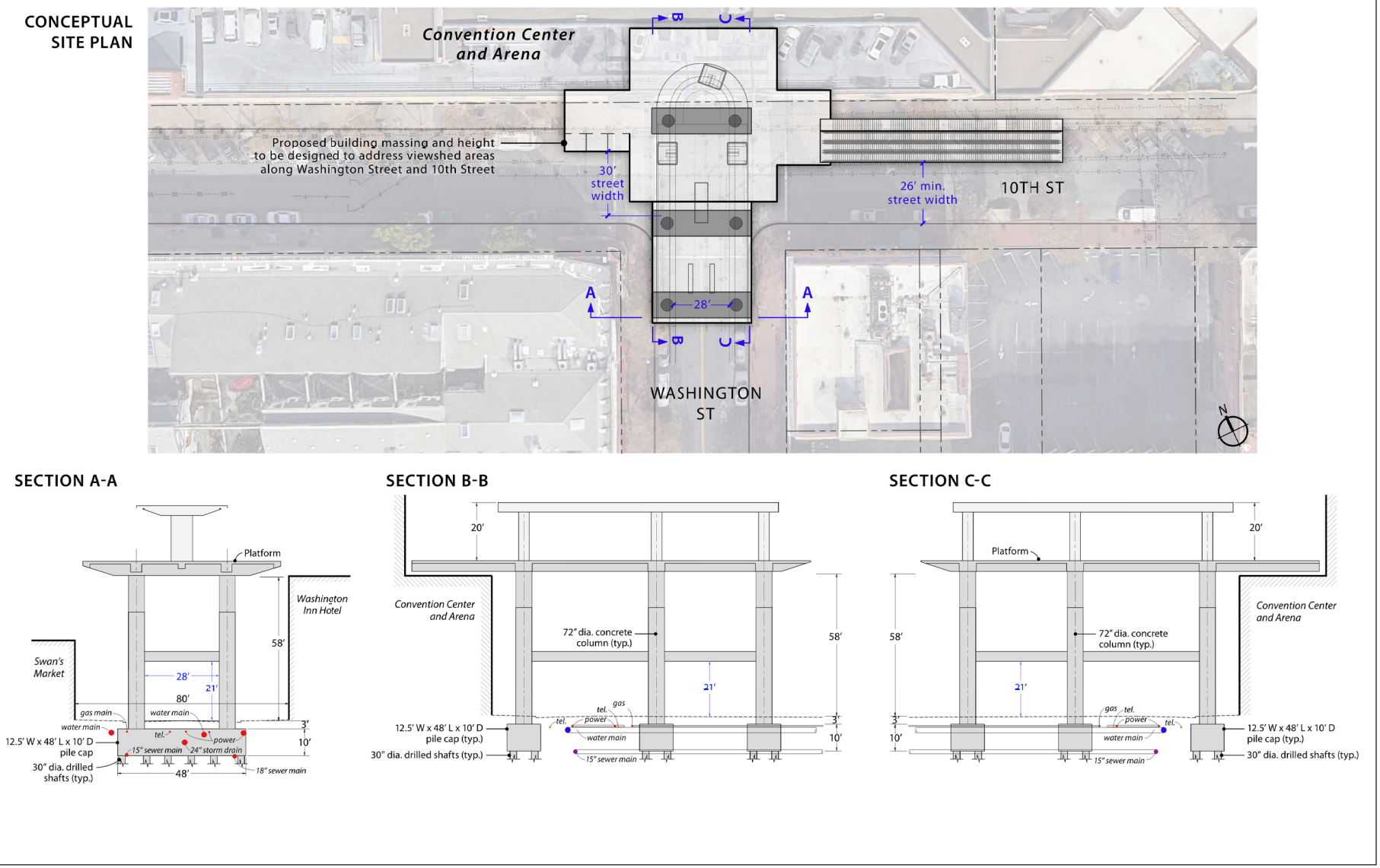

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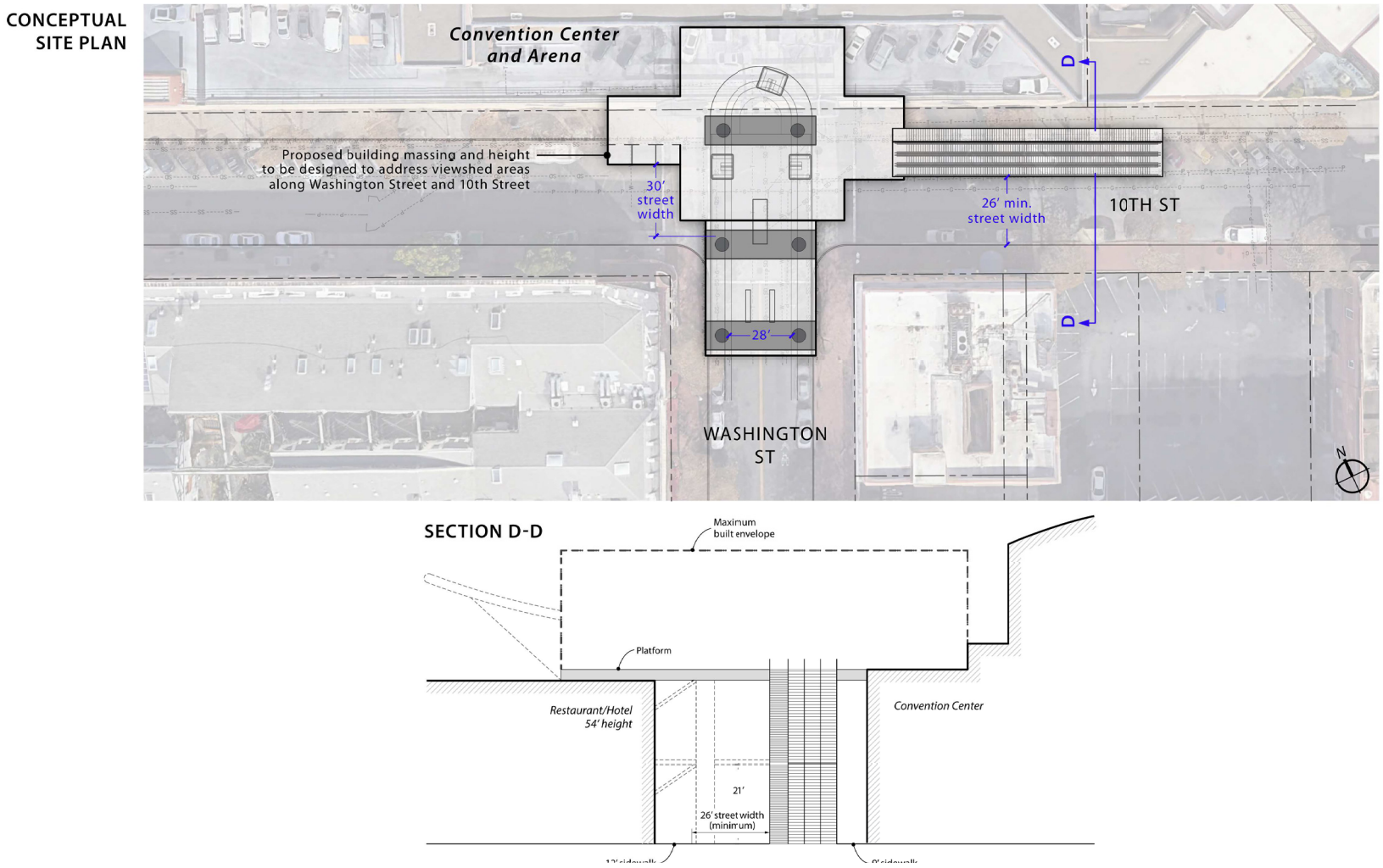
SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-15b
Convention Center Station Sections (Option 1)

ESA



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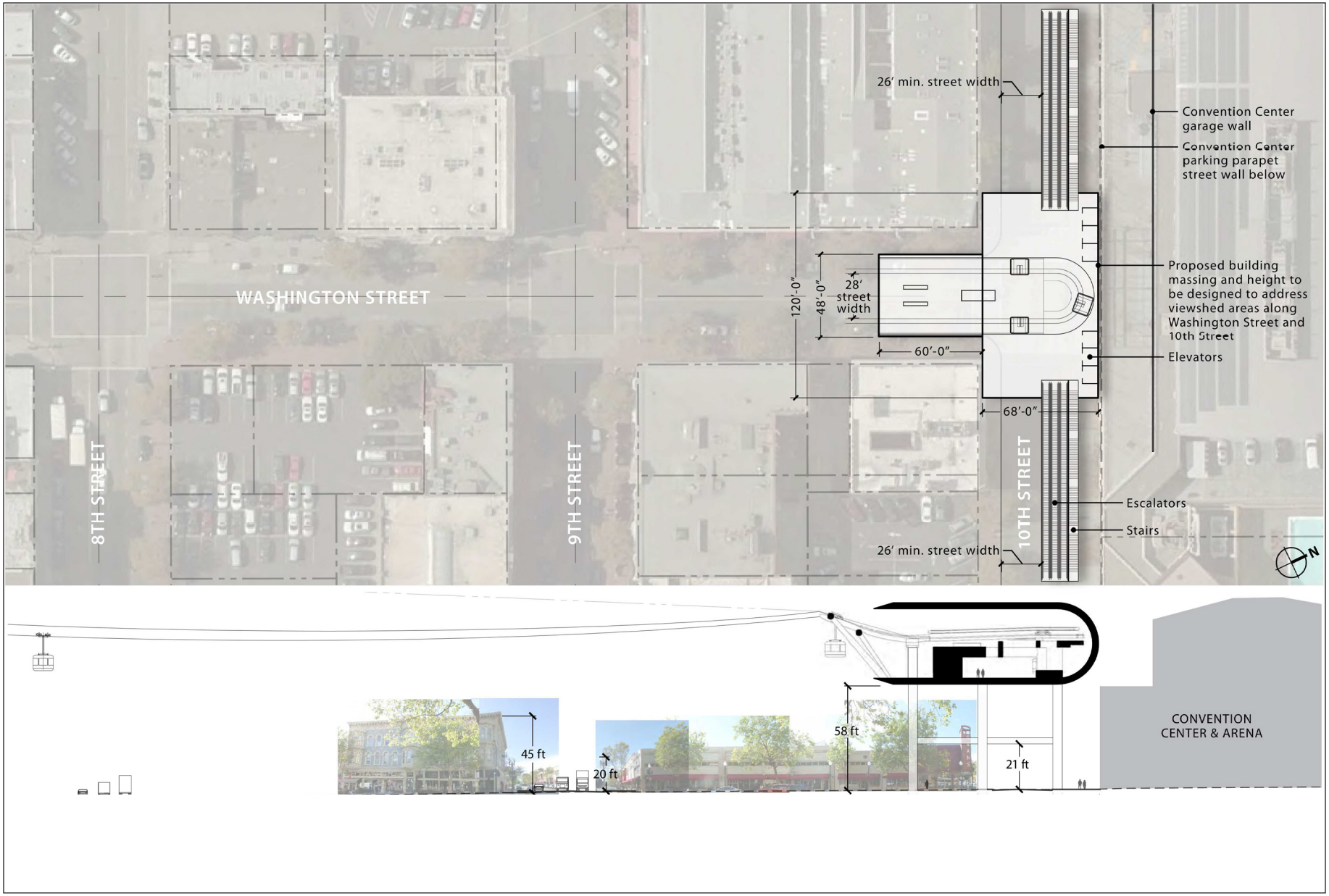
SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-15c
Convention Center Station Sections (Option 1)

ESA



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SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-16
Convention Center Station Layout (Option 2)

ESA

Option 1 – Cantilever over Convention Center Parking Area

Figures 5-15a through 5-15c show the cantilever design option, in which the gondola station would be constructed adjacent to and overlapping the Convention Center's rooftop parking. From the edge of the building, the station would extend onto Washington Street approximately 60 feet south of 10th Street. The station building would be arranged to allow gondola passengers to move from the gondola boarding station to the parking deck, but the structures would be independent structurally, with a walkway spanning between the structures.

Similar to the Jack London Square Station, the conceptual layout for Option 1 of the Convention Center Station includes a double bank of three parallel, reversible escalators that would serve the platform. This layout includes a midpoint landing between a lower and upper bank of escalators. A set of stairs would parallel the escalators. Both the escalators and the stairs would extend eastward, parallel to the Convention Center face, toward the 12th Street City Center BART Station at Broadway. The escalators and stairs would connect to a landing at the southeast corner of the gondola station, and the final design would include a walkway between the station and the upper parking level of the Convention Center. The station would have a bank of three elevators situated at the west end of the station, traveling between street level and the gondola boarding platform level.

The 10th Street roadway would be modified between Washington Street and Broadway to limit traffic flow to a single lane in each direction, allowing for the station structure at ground level and to maintain access to the adjacent properties.

Option 2 – Station Entirely over 10th Street

Figure 5-16 shows the non-cantilevered design option, in which the gondola station would be entirely over 10th and Washington Streets, with no connection to the existing Convention Center building. This option would be designed to avoid the Convention Center and the existing nearby commercial building (Swan's Market, at the southwest corner of Washington and 10th Streets) and hotel/ commercial building (Washington Inn, at the southeast corner of Washington and 10th Streets). To achieve this, the proposed station footprint would be extended horizontally in both directions along and above 10th Street. The station would extend onto Washington Street approximately 60 feet south of 10th Street after the length of the sidewalk– a greater distance than under Option 1. Option 2 would include two sets of three escalators running both east and west parallel to the Convention Center (rather than only one bank running east, as in Option 1). The layout includes midpoint landings between lower and upper banks of escalators. The station would have two banks of three elevators, along the north face of the station and near the tops of each escalator bank. The elevators would travel from street level to the gondola boarding platform level.

The 10th Street roadway would be modified between Broadway and Clay Street to limit traffic flow to a single lane in each direction, allowing for the station structure at ground level and to maintain access to the adjacent properties and on-street parking.

Pedestrian Movement and Operations

Gondola

The gondola would be designed to transport a maximum of up to 6,000 passengers per hour per direction. The system would include 20 total cabins, each of which could transport up to 30 passengers. The cabins would travel at approximately 11 miles per hour and would be spaced approximately 375 feet apart. Hours of gondola operation, the cost for a ride, and personnel needed to operate the system have not been defined.

Emergency egress stairways are expected to be required in each station at the farthest point from the primary stairs in accordance with Code requirements. For the two Convention Center options (Figures 5-15a and 5-16), the rooftop parking deck may be used for emergency egress. The final locations of emergency egress stairways would be determined in the architectural design of the stations.

Station Vertical Circulation

Banks of three elevators (two sets of three at the Convention Center Station under Option 2) would be situated at each gondola station, traveling between street level and the station's boarding platform level. The three elevators would be grouped for efficiency in passenger flow. Providing three elevators would ensure that at least two elevators would be available, should one elevator be down for maintenance. The throughput of the elevators would likely be fairly low, given their inherent use by less-mobile people and people with strollers. The elevators in both stations would be Machine-Room-Less (MRL) type or traction-type elevators. Both types of elevators would be well suited for high-demand locations because they have a higher reliability and travel speed, but MRL elevators require less space than traction elevators, especially above the elevator hoistway. While MRL elevators are preferred, there is a proposed code change that may make installing MRL elevators difficult in the future. Thus, both traction and MRL elevator options are proposed given the uncertainty in the code change with regard to the timeline for Project completion.

Banks of three escalators at each gondola station (two sets of three at the Convention Center Station under Option 2) would provide access to each station's boarding platform to and from street level. The three escalators would be augmented by a parallel flight of stairs. Providing three escalators would ensure that at least two escalators would be available, should one escalator be down for maintenance. Under event conditions, two escalators would travel in the direction of the primary flow of people, with the third escalator reserved for the few people who desire to travel in the reverse direction. The stairs would likely be used by people traveling in the dominant travel direction. The escalators would be reversed after an event to match the primary flow direction. Under non-event conditions, two escalators would likely travel in the up direction and the third escalator would travel in the down direction.

Emergency egress stairways would likely be required in each station at the farthest point from the primary stairs. For the two Convention Center options, the rooftop parking deck may be used for

emergency egress. The final locations of emergency egress stairways would be determined in the architectural design of the stations.

Consideration must be given to an automated and/or manual system for stopping the escalators and elevators from delivering people to the gondola loading platforms if the gondola slows or stops. This system would prevent the accumulation of people on the platform level should this occur. There may be an opportunity to connect the control systems of the vertical circulation equipment to the gondola control system for automated management of the flow of people.

Street-Level Pedestrian Circulation and Queuing

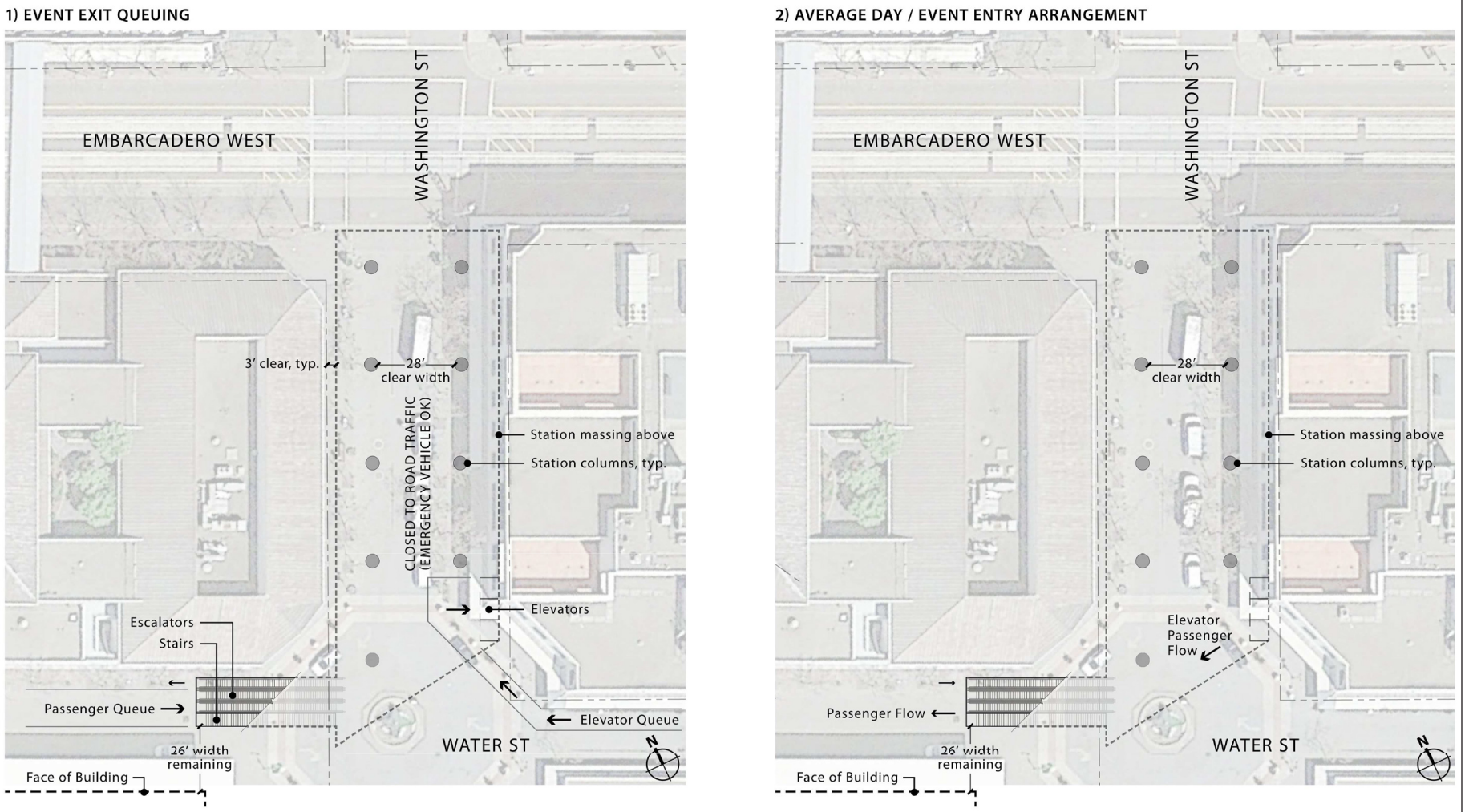
As shown in **Figures 5-17, 5-18,** and **5-19**, the passenger queuing and flow at ground level would vary depending on whether it is an event day or an average day. On average days, passengers approaching the gondola stations would use sidewalks and crosswalks to access the station area. It is anticipated that passengers without a pass would buy tickets from vending machines at ground level in the vicinity of the stations. After purchasing their tickets, passengers would access the escalators, elevators, and stairs at ground level. No queuing lines are expected at ground level on average days because the capacity of the escalators, elevators, and stairs would be sufficient to transport passengers to the boarding level without significant delay. Passengers exiting the stations would use the same methods upon exiting the system.

Because of the large number of people who would access the gondola system on event days, temporary queuing barriers would be placed at ground level on Water Street for the Jack London Square Station and on 10th Street for the Convention Center Station. These queue lines would organize and direct passengers to the escalators, elevators, and stairs. It is anticipated that these areas would be closed to roadway traffic during events. Passengers exiting the gondola system would be allowed to flow onto Water Street at the Jack London Square Station and onto 10th Street at the Convention Center Station, where they would travel on the streets to the ballpark or on sidewalks to the BART station.

Foundation Piles and Construction

Construction of the aerial gondola stations and tower structures would involve numerous pile structures. Each gondola station structure would be supported by 36–64 drilled concrete piles approximately 30 inches in diameter. Each station structure would have piles grouped below the superstructure columns and cast-in-place concrete pile caps would connect the drilled piles to the above-grade concrete columns. The pile caps would reside just below grade and would be interconnected by below-grade concrete beams.

Construction sequencing would likely start with the relocation of the utilities in the station areas. This work would likely use backhoe excavators. Following the utility work, drilled concrete piles would likely be installed around the perimeter of the foundation excavations to form a soldier-pile wall that would support the sides of the excavation during foundation construction. Once the shoring is in place, backhoe excavators would likely be used to excavate the existing pavement and soil down to the depth of the pile caps. The required drilled concrete piles would be installed at the base of this excavation and the pile caps would then be formed and poured.



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SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-17
Jack London Square Station Ground Plan

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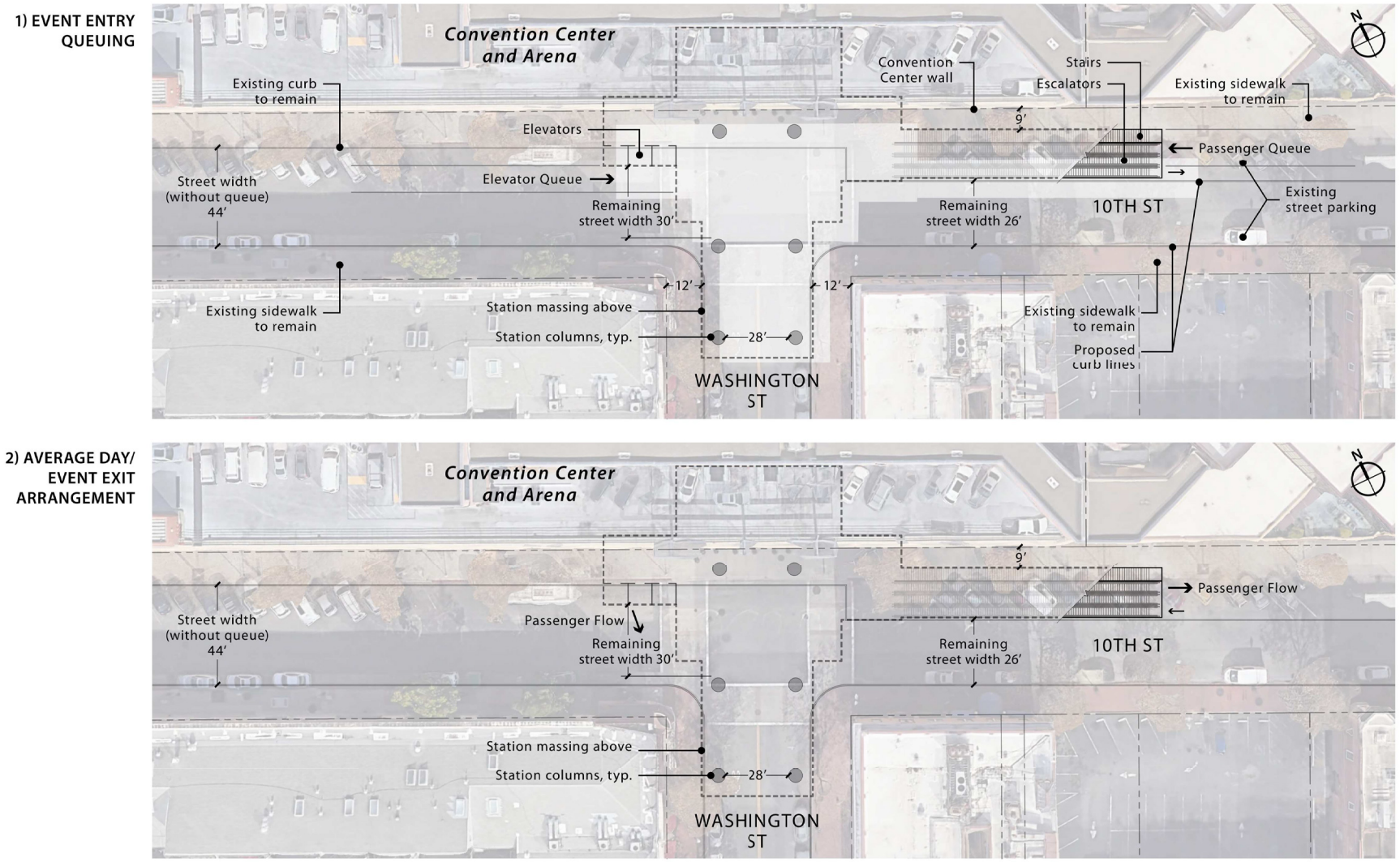

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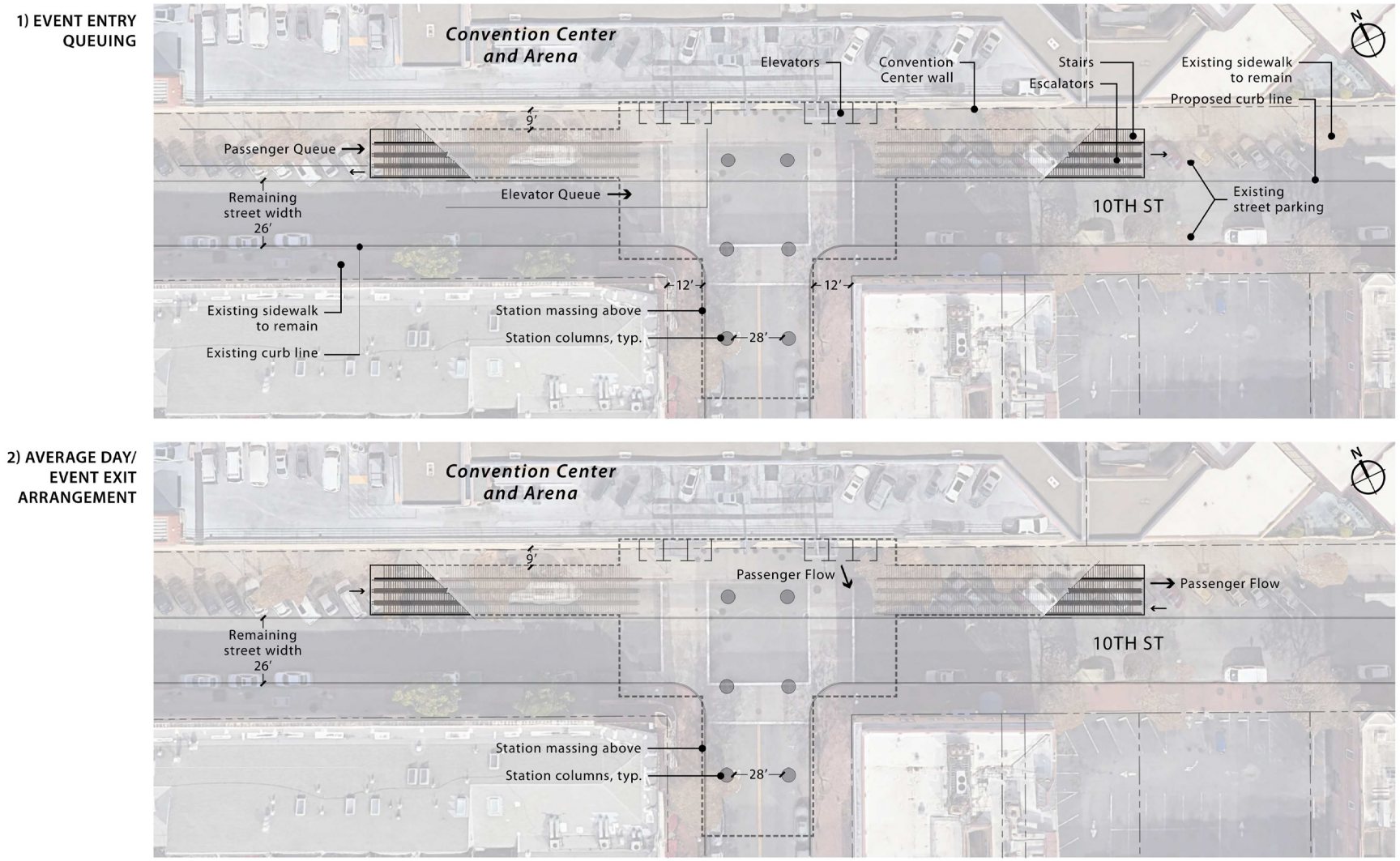
SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-18
Convention Center Station Ground Plan (Option 1)

ESA



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SOURCE: SCJ Alliance Consulting Services

Oakland Waterfront Ballpark District Project

Figure 5-19
Convention Center Station Ground Plan (Option 2)

ESA

Once the foundations are complete, the excavation would be backfilled and compacted and the pavement would be replaced. It is anticipated that the drilled piles would be installed with a crane-mounted drill rig with a rotating auger bit. The concrete would likely be installed with a pump truck. It is anticipated that the work would take a series of weeks to complete, with some road closures required in the vicinity of the work.

The tower foundations would consist of large-diameter drilled concrete piles constructed within the sidewalk area on both sides of the street. The four piles, approximately 72 inches in diameter, would likely be drilled with a crane-mounted drill rig with a rotating auger bit. Other than utility relocations, no additional excavation is anticipated for construction of the tower foundations. The concrete would likely be installed with a pump truck. It is anticipated that the work would take a series of weeks to complete, with some road closures required in the vicinity of the work.

5.2.2 Study Area and Setting

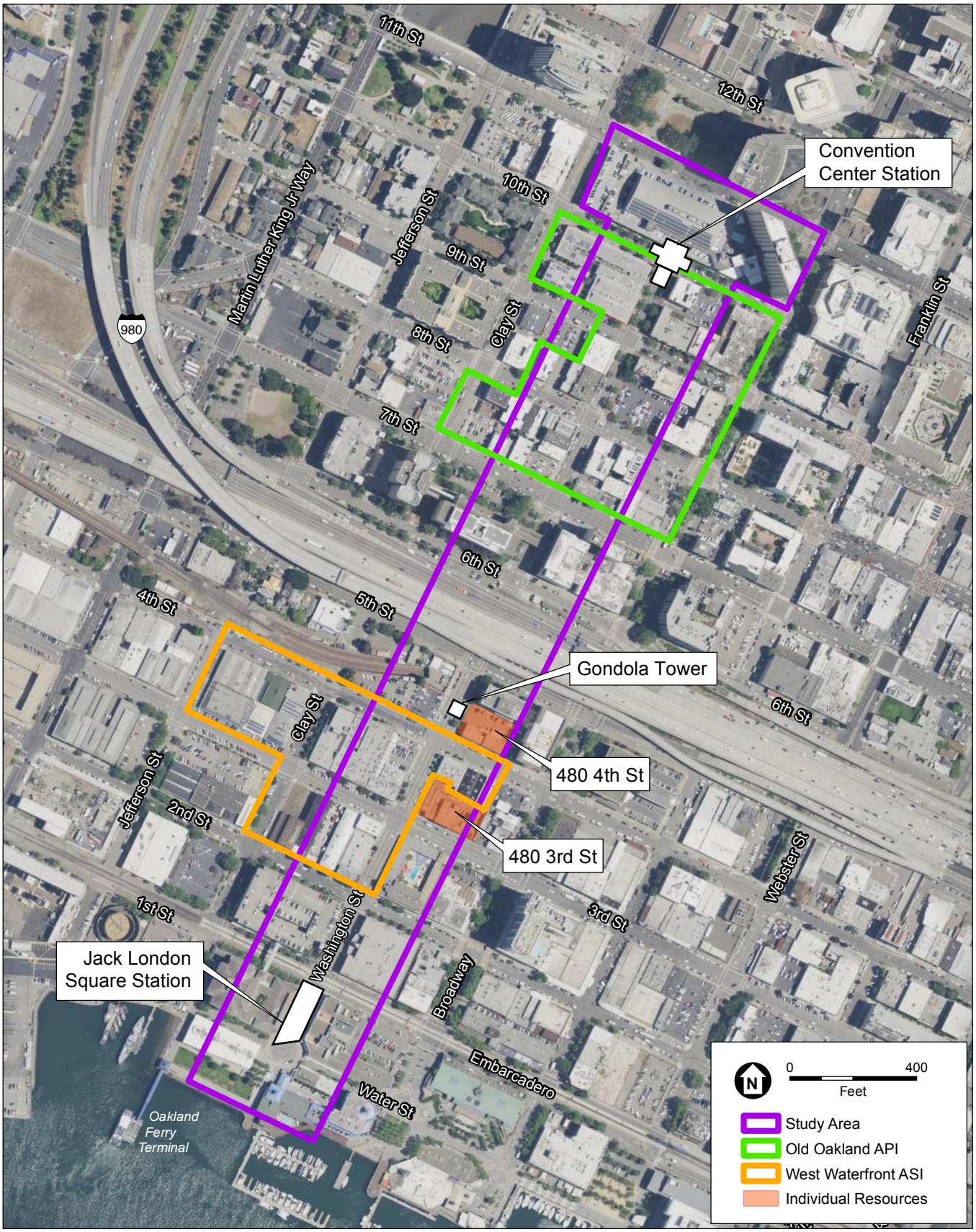
The Aerial Gondola Variant is outside the proposed Project site. The southern gondola station would be at the foot of Washington Street, approximately two blocks west of the Project site boundary; and the northern station, the Convention Center Station, would be 10 blocks north of Embarcadero West, the northern boundary of the Project site. Therefore, the study area for this variant is extended to include this 10-block corridor along Washington Street, as shown in **Figure 5-20**.

Variant Approach to Analysis

Generally, the analysis of certain environmental topics relies on setting and Project information that is more location-specific than the analysis for other topics. This variant is not located on the Project site and would involve multiple off-site properties; in addition, neither the City, the Port, nor the Project sponsor control all properties within the Aerial Gondola Variant corridor. Therefore, the analysis of certain conditions is based on generalized conditions identified in available documented sources, rather than site-specific studies. The impact determinations and mitigation measures reflect the specificity of information available for consideration in this Draft EIR.

Site-specific information not fully available for the gondola corridor pertains to soil, utilities, and other subsurface conditions. However, the conceptual design of the gondola considered underground built infrastructure and associated geology on and adjacent to the site to determine the amount and scale of utility relocations, street renovations, and foundation areas to support the stations and towers, as well as the conceptual locations of gondola infrastructure (SCJ Alliance, 2019).

If this variant is implemented with the proposed Project, all required and necessary site-specific information about site conditions and Project design and operations would be obtained and considered. As is typical for all the analysis in this Project-level EIR, to the extent that final variant design and/or site information substantially differs from what is considered herein, appropriate additional environmental analysis would be conducted as required under CEQA.



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SOURCE: ESRI, 2019

Oakland Waterfront Ballpark District Project

Figure 5-20

Gondola Variant Study Area

ESA

Historical Resources Setting

This subsection describes the study area and setting for the Aerial Gondola Variant, focusing on historic resources near or surrounding the location of this variant. Notable new context considered with this variant is the Old Oakland API, with numerous historic architectural resources and I-880, for example. The relevant characteristics of the expanded scope implications of the expanded study area are discussed under each environmental topic below, because it varies by topic.

The Aerial Gondola Variant is in a location that contains numerous historic architectural resources. As a result, for this variant, the study area used for the proposed Project analyzed in Chapter 4 was expanded to include a half-block radius east and west of Washington Street between the Oakland-Alameda Estuary (Estuary) and 10th Street. This area encompasses one-half of each of 20 city blocks (see Figure 5-20). The following identified historic resources, listed here from north to south, are present in this study area:[9]

- Old Oakland API (17 contributing buildings in the study area)
- 480 4th Street (former County Morgue)
- West Waterfront ASI (9 contributing buildings in the study area)
- 480 3rd Street (Western Pacific Railroad Depot) (individual resource and contributor to the Lower Broadway ASI)

See Appendix CUL-1 for more information regarding the historic resources included in the Aerial Gondola Variant study area.

From the Convention Center Station to I-880, the gondola would travel over the middle of the Old Oakland API. From I-880 to the Jack London Square Station, the gondola would pass two individual historic resources – 480 4th Street (the former County Morgue) and 480 3rd Street (the Western Pacific Railroad Depot) – and through the West Waterfront ASI. The northern gondola station is located at the northern boundary of the Old Oakland API and would extend up to one-half block into the API along Washington Street. The central tower would be located adjacent to 480 4th Street. No historic resources are present adjacent to the southern gondola station.

Old Oakland Area of Primary Importance

The Old Oakland API, also shown in Figure 5-20, includes nearly six city blocks fronting Washington Street from 7th Street to 10th Street. First designated in 1983, the district contains 30 contributing buildings built between 1864 and the early 1920s. All of the contributing buildings have been rehabilitated since their initial recordation in the 1970s, and many have been rehabilitated since 2000. These buildings range from one to four stories in height and are a mix of commercial and retail types historically and currently used for hotel, restaurants, and retail businesses. The study area for the Aerial Gondola Variant encompasses all of the API buildings

[9] Areas of Secondary Importance (ASI) are areas of local historical interest that are not automatically considered historical resources for the purposes of CEQA. However, the City of Oakland has chosen, out of an abundance of caution, to treat the West Waterfront ASI and the Lower Broadway ASI as historical resources for the purposes of this EIR's CEQA analysis. Only those contributors within the boundaries of the variant study area are listed above.

facing Washington Street, as well as four buildings located on cross streets and within a half-block of Washington Street (see Figure 5-20).

Contributing Buildings and Character

Within the API, three buildings are individually listed on the National Register and 10 are City of Oakland Landmarks. The Old Oakland API is also recognized as a National Register District designated through a resource survey, and the entire district is zoned S-7.[10] The 17 contributing buildings that fall within the Aerial Gondola Variant study area are as follows (also see Figure 4.4-1):

- 518–524 7th Street
- 489 8th Street
- 509–513 8th Street
- 512 8th Street (Landmark)
- 483 9th Street (Landmark)
- 538 9th Street (individually listed on the National Register)
- 493 10th Street
- 717–719 Washington Street
- 718–726 Washington Street (Landmark)
- 725 Washington Street (individually listed on the National Register, Landmark)
- 727–735 Washington Street (Landmark)
- 736 Washington Street
- 801 Washington Street (individually listed on the National Register, Landmark)
- 809–815 Washington Street (Landmark)
- 826 Washington Street (Landmark)
- 827 Washington Street (Landmark)
- 902 Washington Street (Landmark)

The Old Oakland API is architecturally and historically significant as an intact, late-19th-century commercial district that once served as Oakland's primary commercial center. The district reflects the wealth and commerce that came to Oakland after it became the western terminus for the Transcontinental Railroad in 1869. "The Old Oakland district is the surviving downtown commercial center of the 1870s and 1880s, with additions made in the early decades of the 20th century when the commercial heart had moved farther north but auxiliary commercial functions still attracted investment money" (OCHS, 1984).

[10] The S-7 zoning designation is a Preservation Combining Zone. It is a zoning overlay that is "intended to preserve and enhance the cultural, educational, aesthetic, environmental, and economic value of structures, other physical facilities, sites, and areas of special importance due to historical association, basic architectural merit, the embodiment of a style or special type of construction, or other special character, interest, or value and is typically appropriate to selected older locations in the City" (Oakland Planning Code Section 17.84.010).

The district is characterized by:

- Rectangular-plan commercial block buildings ranging from one to four stories in height;
- Street frontages with direct access to commercial spaces;
- Predominance of Italianate-style architectural details including heavy, bracketed cornices; paneled friezes; bay windows; elaborate door and window trims; and strong horizontal design elements;
- Two-story, cast iron and plate glass commercial fronts; and
- Brick and wood-frame construction.

The district is pedestrian focused, with narrow (two-lane) city streets. An open, below-grade promenade stretches along the 9th Street façade of the Nicholl Block (902 Washington Street) and street trees line Washington Street between 8th and 10th Streets. The scale of the district is smaller than that of the adjacent Downtown Oakland Historic District and is more characteristic of late-19th-century small-city downtown design than the larger, more open development to the north and east.

Aerial Gondola Variant Elements within the Old Oakland Area of Primary Importance

The Aerial Gondola Variant would run down Washington Street, through the central corridor of the Old Oakland API. At the intersection of 10th and Washington Streets, a new station would be built over the roadway. Both design options consist of a platform elevated 58 feet above Washington Street, supported on piers near the street curb, as discussed in the *Description* above.

Under Option 1, the Convention Center Station design would sit over and level to the top floor of the Convention Center parking structure. The bulk of the station would be located over the northern half of 10th Street, including the sidewalk bordering the Convention Center. The platform would sit 58 feet above the street and would extend approximately 115 feet from the Convention Center façade down Washington Street along the centerline of the road. With this option, there would be approximately 20 feet of clearance between the east and west edges of the platform and the façades of adjacent buildings along Washington Street, and a minimum 20 feet of clearance between the platform and the façades of adjacent buildings along 10th Street (see Figures 5-15a and 5-15b).

Under Option 2, the Convention Center Station design would be independent of the Convention Center itself. The bulk of this design would be located over the full width of 10th Street, including the flanking sidewalks. The platform would sit 58 feet above the street and would extend approximately 128 feet from the Convention Center façade down Washington Street along the centerline of the road. With this option, there would be approximately 20 feet of clearance between the east and west edges of the platform and the façades of adjacent buildings along Washington Street, and less than 5 feet clearance between the platform and the façades of adjacent buildings along 10th Street (see Figure 5-16).

After exiting the station, gondola cabins would travel above Washington Street, through the API, with a ropeline height of 80–106 feet so that the bottom of the gondola would travel at

approximately 60–90 feet above the street. The central tower would be located outside of the Old Oakland API and is discussed further below.

Alameda County Health Services Campus

The block bounded by 4th and 5th Streets between Washington Street and Broadway has been owned by the County since at least 1875, when the fourth Alameda County Courthouse opened its doors in this location. Currently, this block is occupied by three County-owned buildings: the former Alameda County Courthouse Annex/Morgue (1928), the Alameda County Health Services Building (1960), and the Alameda County Welfare Building (1961). Of these, one building – the former County morgue at 480 4th Street – has been previously surveyed and was given an Oakland Cultural Historic Survey rating of C3. Although this rating does not qualify the former County morgue building as a CEQA resource, further analysis by Environmental Science Associates found the building potentially eligible for listing on the California Register. (See Appendix CUL-1 for an evaluation of the Alameda County Health Services Campus buildings.) The City of Oakland has conservatively chosen to consider the property as a historic resource for the purposes of the CEQA analysis in this EIR.

The central tower of the gondola would be located on Washington Street, facing the western elevation of 480 4th Street, and would consist of four piers centered approximately at the current street curb. At their base, the piers would be 72 inches in diameter, tapering as they reach their ultimate height 230 feet overhead. Gondola cars would reach their maximum height at the Alameda County Health Services Campus, maintaining a ground clearance of more than 150 feet.

West Waterfront Area of Secondary Importance

The West Waterfront ASI is a visually distinctive early-20th-century industrial district of approximately 21 buildings on 19 assessor's parcels, on all or portions of four blocks between 2nd and 4th Streets and Jefferson Street and Broadway. The West Waterfront ASI is approximately centered at 3rd Street between Washington and Clay Streets. The study area for the Aerial Gondola Variant encompasses all West Waterfront ASI buildings facing Washington Street, and two buildings that are located on cross streets within one-half block of Washington Street (see Figure 4.4-1).

Areas of Secondary Importance (ASI) are districts of local interest. As a conservative measure, this EIR assumes the West Waterfront ASI to be a historical resource under CEQA for the purposes of analyzing potential impacts of the Aerial Gondola Variant. Buildings within the West Waterfront ASI are generally one and two stories in height, rectangular in plan with shaped parapets and truss roofs, and have vehicular entries and/or loading bays. Exteriors are constructed primarily of stucco, brick, or concrete masonry, with metal sash windows. The area is low-scale industrial and commercial with various transportation elements at the edges (railroads, BART, and freeway). The West Waterfront ASI was originally identified in 1985 and reconfirmed in 1996. (See Appendix CUL-1 for more information regarding the West Waterfront ASI.)

The following nine contributing buildings to the West Waterfront ASI fall within the Aerial Gondola Variant study area (see Figure 5-20):

- 522 2nd Street
- 520 3rd Street
- 475 4th Street
- 315 Washington Street
- 301 Washington Street
- 380 Washington Street
- 221 Washington Street (Parker Electric MFG/Bay City Iron Works machine shop)
- 215 Washington Street (Freschi Box Company Warehouse)
- 201 Washington Street/508 2nd Street (Fat Lady Restaurant)

Significant Features of the West Waterfront Area of Secondary Importance

The West Waterfront ASI is noteworthy primarily for its concentration of early-20th-century industrial buildings and its proximity to the transportation infrastructure that gave rise to this industrial district. No one architectural style dominates, yet all buildings in the ASI are unified by the following character-defining features:

- Low scale ranging from one to three stories
- Prominence of vehicle entry doors and/or loading bays
- Metal windows, both original and replacements
- Stepped parapets
- Arched roofs with skylights for interior daylighting
- Zero street setbacks
- Simplicity of design and decoration, largely utilitarian in appearance
- Brick, concrete, or stucco finishes

The West Waterfront ASI historically had the Western Pacific railroad tracks running along 3rd Street, with the Western Pacific Railroad Depot located on 3rd Street, just outside of the ASI boundaries. Currently there are railroad tracks along Embarcadero West (south), BART tracks underground near 5th Street (north), and the I-880 freeway (north) within a one-block radius.

Description of Aerial Gondola Variant Elements within the West Waterfront Area of Secondary Importance

The Aerial Gondola Variant would run down Washington Street, with the ropeline passing through a portion of the West Waterfront ASI. None of the variant elements (stations or tower) would be located at ground level within the ASI. The central tower would be located approximately one-quarter block north of the West Waterfront ASI boundary along 4th Street, and the Jack London Square Station would be located at the foot of Washington Street, one block

south. Through the ASI, the ropeline would run at a height of approximately 100 feet at 4th Street down to a height of approximately 70 feet at 2nd Street. The bottom of the gondola cabins would run at a height of approximately 80 feet at 4th Street to 50 feet at 2nd Street. The tallest ASI contributing building in the study area for the Aerial Gondola Variant is the Parker Electric MFG building at 221 Washington Street (at 3rd Street). This structure stands approximately 40 feet tall, well below both the ropeline and the bottom of the gondola cabins at this location.

Western Pacific Railroad Depot (480 3rd Street) – City Landmark

The Aerial Gondola Variant would run above the western (secondary) façade of the Western Pacific Railroad Depot, along Washington Street. The depot building was constructed in 1909. This is a one-story, irregular E-plan concrete building. The building's spine and primary façade face 3rd Street, with one wing of the building facing Washington Street. The Western Pacific Railroad Depot building was the first City landmark, designated on July 9, 1974. It has an Oakland Cultural Heritage Survey rating of A2+, one of the highest possible architectural ratings. The building is significant for its association with railroad transportation in the region, and as a symbol of the City regaining control of the waterfront after nearly a half-century of legal disputes with the Southern Pacific Railroad. The arrival of the first train to the depot on August 22, 1910, is seen as the stimulating event for 20th-century industrial development of the Estuary area.

As well as being a designated City of Oakland Landmark (an individual resource), 480 3rd Street is a contributor to the Lower Broadway ASI. 480 3rd Street is the only parcel in the Lower Broadway ASI that also falls within the Aerial Gondola Variant Study Area because it is the only parcel in the ASI that fronts Washington Street. The other ASI contributors face Broadway and would not have direct views of the ropeline or passing gondola cabins. They all have at least one intervening building or structure that blocks or filters views toward Washington Street. Therefore, 480 3rd Street is considered as an individual resource (City Landmark) for the purposes of this CEQA analysis and impacts on the Lower Broadway ASI are not discussed further.

The Western Pacific Railroad Depot includes the following character-defining features:

- Elevations with varying setbacks
- Open arcade along 3rd Street
- Ticket booth
- Arched, multi-light windows at the east end of the 3rd Street façade and the south end of the southeast elevation
- Reinforced concrete construction
- Prominent entablature consisting of a denticulated sheet metal cornice and blank frieze panels
- Molded parapet at the roofline

See Appendix CUL-1 for more information regarding this resource.

No elements of the Aerial Gondola Variant would be located immediately adjacent to the Western Pacific Railroad Depot at ground level. The ropeline and gondola cabins would pass overhead along Washington Street at heights of approximately 90 and 70 feet, respectively.

5.2.3 Impacts of the Aerial Gondola Variant

This section presents the impacts and mitigation measures of the Aerial Gondola Variant, with a focus on impacts and mitigation that differ from those identified for the proposed Project without this variant. Where impacts of the Project plus the variant would be the same as those without the variant, this section briefly explains why impacts would remain as described for the proposed Project in Chapter 4.

Aesthetics, Shadow and Wind

Developing the Aerial Gondola Variant would result in ***similar aesthetics, shadow and wind impacts, improvement measures, and mitigation measures*** as the proposed Project.

Scenic Vistas/Resources (Non-CEQA)

From the perspectives depicted in Figure 5-8, minor long-range views of the Oakland Hills are available in the background, and mid-range views of the Oakland City Hall building and other downtown high-rise buildings are available; however, no panoramic views of the downtown Oakland skyline or San Francisco Bay are available. It should be noted that the visual simulations in this analysis do not include architectural details that would be designed farther along in the development process; thus, these simulations represent a worst-case scenario. As described in the Oakland General Plan, views of the downtown Oakland skyline, Oakland Hills, and the bay are scenic views and scenic resources that should be protected.

The viewpoint of **Figure 5-21** is from the perspective of a pedestrian located approximately 20 feet south of the intersection of Washington and Water Streets. Development of the Jack London Square gondola station would block views of some of the taller buildings downtown, and would largely obstruct views of Oakland City Hall, but portions of the Oakland Hills and a small portion of the City Hall building would still be available. Moreover, views similar to those currently available from this viewpoint would remain available from locations just a few feet away.

As shown in **Figure 5-22**, no long-range views of scenic resources are available in this view from the south side of the Convention Center, although the historic buildings of Old Oakland line both sides of Washington Street. The Convention Center Station would obstruct views of the Oakland Convention Center; however, the station would not degrade short-range views of the historic Old Oakland district, given the station's relatively limited protrusion into the public right-of-way compared to the overall scale of the district.

From the view depicted in Figure 5-21, the existing view corridor along Washington Street would be substantially changed by development of the Jack London Square Station, which would occupy most of the skyline when looking toward downtown. While the view would be substantially different with this variant, the existing view is not considered particularly scenic because it does not afford a substantially unique, rare, or unobstructed view of a scenic resource. In addition, the gondola would provide panoramic views of the downtown Oakland skyline, the Oakland Hills, San Francisco Bay, and San Francisco from up to approximately 200 feet above ground. Views of these scenic resources would be available to the public while traveling on the

gondola. Therefore, this variant, in combination with the proposed Project, would not have a substantial adverse effect on a scenic vista or substantially damage scenic resources. This variant would result in a *similar less-than-significant impact* related to scenic vistas and scenic resources, should the proposed Project be subject to a review of aesthetics under CEQA. No new or changed impacts or mitigation measures would be required for aesthetics.

Visual Character/Visual Quality (Non-CEQA)

The existing visual character of the area between Water Street and the Oakland Convention Center along Washington Street generally consists of low- to mid-rise commercial buildings with stucco and masonry façades. The Convention Center is adjacent to Old Oakland, which conveys a historical feeling that is noticeable to pedestrians and motorists traveling on Washington Street between 7th and 10th Streets. Because this corridor traverses the area between the waterfront and downtown Oakland and is bifurcated by I-880, it generally lacks a high degree of visual definition or coherence beyond that of a mid-rise, commercial-oriented district, except for the areas within the Old Oakland district. To the extent that this variant would affect the historical significance of the Old Oakland district, this impact is discussed under *Cultural and Tribal Cultural Resources* below. This section analyzes whether the Aerial Gondola Variant would substantially degrade the visual character or quality of the site and its surroundings.

Development of the gondola would change the area's character by adding a new vertical and horizontal feature overhead, contrasting with the low- to mid-rise commercial character of the area. The gondola stations would become prominent features of the visual landscape at both ends of the gondola alignment. The gondola could be noticeable to pedestrians between Embarcadero West and 9th Street (eight city blocks) because the gondolas would be suspended 100–200 feet overhead and would move at approximately 11 miles per hour, increasing their visibility. However, the visual changes associated with the gondola would be caused primarily by the stations at both ends of the alignment, near the Jack London Square Station and the Convention Center Station, and the tower at 4th and Washington Streets.

Because the gondola stations are within public rights-of-way, a Major Encroachment Permit would be required from the City. The gondola stations would be subject to review by the Landmarks Preservation Advisory Board, before City Council action on a Major Encroachment Permit. Additionally, given the sensitivity of the Convention Center Station within the context of the Old Oakland API, design review is recommended before the City Council acts on the Major Encroachment Permit for the Project with the Aerial Gondola Variant. As discussed in Section 5.2.4 below, Mitigation Measure CUL-7 (Convention Center Station Contextual Design Review) would require that the Convention Center gondola station be subject to the City's design review procedures to ensure that a sensitive and responsive contextual design is developed for the Convention Center Station within the Old Oakland API. During this time, the Project design could be refined to ensure that it follows the City's applicable design review criteria, including those specific to the historic design context, where applicable. Based on preliminary plans, it is anticipated that there would be no major conflicts between the proposed design of the Project and the design review criteria.

EXISTING

PROPOSED OPTION 2 - STATION WITHIN PUBLIC ROW

CUMULATIVE DEVELOPMENT WITH PROPOSED OPTION 1 - STATION CANTILEVERED OFF OF CONVENTION CENTER

- PHASE 1
- FULL BUILDOUT
- CUMULATIVE
- PROJECT VARIANT

NOTE: VISUAL SIMULATION ILLUSTRATES MAXIMUM ALLOWABLE BUILDING MASSING, REFER TO S1030 MAXIMUM BUILDING HEIGHT PLAN FOR BLOCK HEIGHTS.

SOURCE: Environmental Vision, 2020

Oakland Waterfront Ballpark District Project

Figure 5-21
Visual Simulation of the Jack London Square Gondola Station

EXISTING

PROPOSED OPTION 1 - STATION CANTILEVERED OFF OF CONVENTION CENTER

PROPOSED OPTION 2 - STATION WITHIN PUBLIC ROW

CUMULATIVE DEVELOPMENT WITH PROPOSED OPTION 1 - STATION CANTILEVERED OFF OF CONVENTION CENTER

- PHASE 1
- FULL BUILDOUT
- CUMULATIVE
- PROJECT VARIANT

NOTE: VISUAL SIMULATION ILLUSTRATES MAXIMUM ALLOWABLE BUILDING MASSING, REFER TO S1030 MAXIMUM BUILDING HEIGHT PLAN FOR BLOCK HEIGHTS.

SOURCE: Environmental Vision, 2020

Oakland Waterfront Ballpark District Project

Figure 5-22
Visual Simulation of the Convention Center Gondola Station

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Therefore, the ***overall impact of this variant related to aesthetics would be the same*** as the impact of the proposed Project, which would be less than significant should the proposed Project be subject to a review of aesthetics under CEQA**.**

Light/Glare (Non-CEQA)

As described in the *Lighting Technical Report* (see Appendix AES), the Aerial Gondola Variant would not substantially increase spill light or glare on game nights or non-game nights before businesses' anticipated closing times, referred to as *curfew*.[11] After businesses close for the night, lighting would exceed spill light thresholds, but would not exceed glare thresholds. Receptor locations 1A, 5B, 5C, 7, and 7A (see Section 4.1, *Aesthetics, Shadow and Wind*, for a map showing receptor locations) would be influenced primarily by light and glare from the Aerial Gondola Variant. Because light and glare at these receptor locations would also be influenced by lighting from the proposed Project, albeit to a lesser extent, they are listed in Table 4.1-3 and referenced here.

As shown in Table 4.1-3, the Aerial Gondola Variant would result in spill light increases of between 0.7 lux at receptor location 5B on non-game nights pre-curfew and game nights post-curfew; 0.1 lux at receptor location 5C on non-game nights pre-curfew and game nights post-curfew; and 0.1 lux on game nights at receptor location 7 on game nights pre-curfew and game nights post-curfew. This variant would not result in any increase in spill light at receptor location 7A. These values are below the thresholds discussed in Section 4.1 and thus would result in less-than-significant impacts at these locations, should the proposed Project be subject to an aesthetics analysis under CEQA.

At receptor location 1A, spill light on game nights post-curfew would increase by 6.2 at full buildout. This increase is greater than the threshold of 5 lux post-curfew, representing a potentially significant increase in spill light. Improvement Measure AES-2 would also apply to this variant, which would reduce light impacts. However, light impacts on receptors under this variant would be substantial, similar to the proposed Project scenario, which would result in the *same significant and unavoidable light and glare impacts* should the proposed Project be subject to a review of aesthetics under CEQA.

Therefore, this variant, in combination with the proposed Project, would have the *same significant and unavoidable light and glare impacts*, but in different locations, should the proposed Project be subject to a review of aesthetics under CEQA.

Shadow

The ferry lawn at the foot of Washington Street (between Washington and Clay Streets) and the "square" at Water Street and the foot of Broadway, are existing open spaces located in proximity to this this variant, neither of which are affected by substantial shadow from the Jack London

[11] Pre-curfew is the time of the day when businesses are expected to be open. Post-curfew is the time of day after businesses are closed and before sunrise.

Square Station in particular at any times and durations through the year, resulting in a less than significant effect. See **Figure 5-23**.

There are no shadow-sensitive open spaces near the proposed Convention Center Station or the gondola tower. Year-round shadow cast by this proposed station is modeled in **Figure 5-24a** and **Figure 5-24b**. These diagrams demonstrate the limited shadow effects of this proposed gondola station**.** However, as described below in Section 5.2.4, *Cultural and Tribal Cultural Resources*, the gondola would travel through the middle of the Old Oakland district and would cross above, or be visible from, a total of 28 historic structures. In addition, the Convention Center Station would be located approximately 250 feet from Swan's Market (538 9th Street), which contains solar collectors on the roof.

This variant would include two new stations, which would be approximately 70 feet tall (Jack London Square Station) and nearly 100 feet tall (Convention Center Station), and a new 230-foot tower along Washington Street. However, new shadow cast by these structures would not reach the solar collectors at 538 9th Street at any point during the year. Therefore, solar collectors would not be affected such that the function of a building with solar collectors would be substantially impaired.

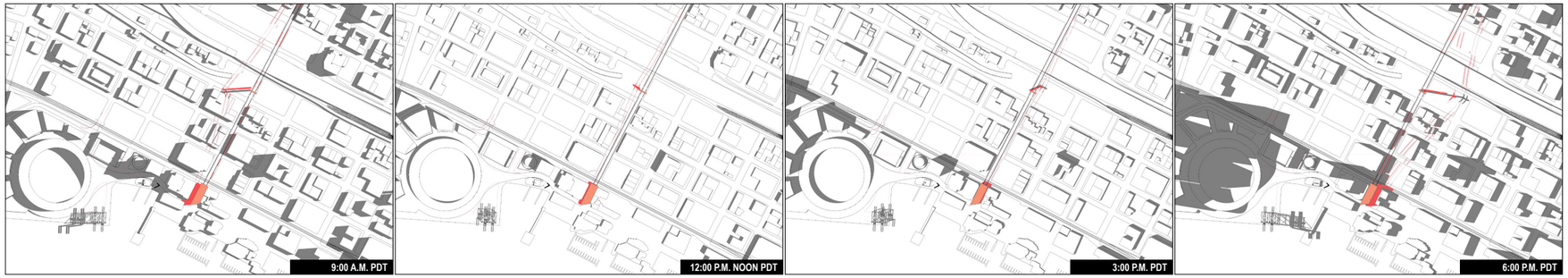
Although access to light is not typically an important characteristic of most historic buildings, it may be important at historic places of worship where the light, specifically the light through stained glass windows, conveys its historical significance. None of the historic structures in the area require access to direct sunlight as a defining characteristic of their historical significance, given their lack of stained glass or other elements that require access to light. Therefore, historic structures would not be adversely affected by new shadow from the gondola structures. Therefore, the overall impact of this variant related to shadow, should the proposed Project be subject to a review of aesthetics under CEQA, would be the *same as the impact of the proposed Project, which would be less than significant*.

Wind

A building that stands alone or is much taller than the surrounding buildings can intercept and redirect winds that might otherwise flow overhead and bring them down the vertical face of the building to ground level, where they create ground-level wind and turbulence. The gondola stations would be largely porous at ground level, and would not be substantially taller than surrounding buildings. These characteristics would limit the potential for the stations to intercept strong winds and redirect them to ground level. In addition, the tower and gondola/ropeway system are slim structures that would not be substantial enough to have a noticeable effect on winds.

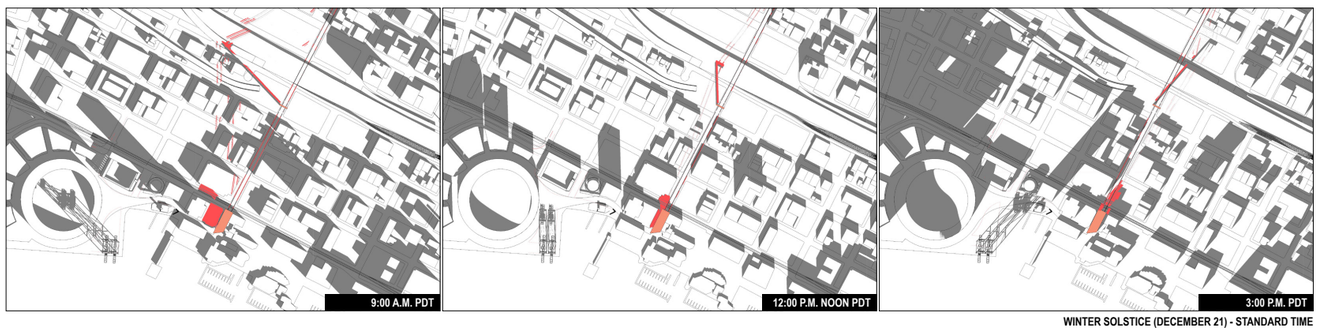
The Convention Center Station is anticipated to be nearly 100 feet tall; the Jack London Square Station would be up to approximately 70 feet tall. If the Convention Center Station is ultimately designed to be 100 feet or taller, it would be subject to Mitigation Measure AES-1 (Wind Impact Analysis and Mitigation for Buildings 100 Feet or Greater in Height). Although Mitigation Measure AES-1 would reduce the severity of wind impacts, it cannot be stated with certainty that Mitigation Measure AES-1 would reduce impacts to a less-than-significant level. As a result, the

SPRING EQUINOX (MARCH 21) - DAYLIGHT SAVINGS TIME



SUMMER SOLSTICE (JUNE 21) - DAYLIGHT SAVINGS TIME

FALL EQUINOX (SEPTEMBER 21) - DAYLIGHT SAVINGS TIME



WINTER SOLSTICE (DECEMBER 21) - STANDARD TIME

PROPOSED PROJECT
PROJECT VARIANTS
CUMULATIVE PROJECTS
EXISTING (CURRENT) SHADOWS
NEW SHADING BY PROPOSED PROJECT
NEW SHADING BY CUMULATIVE PROJECTS
NEW SHADING BY PROJECT VARIANTS

NOTE: VISUAL SIMULATION ILLUSTRATES MAXIMUM ALLOWABLE BUILDING MASSING, REFER TO S1030 MAXIMUM BUILDING HEIGHT PLAN FOR BLOCK HEIGHTS.

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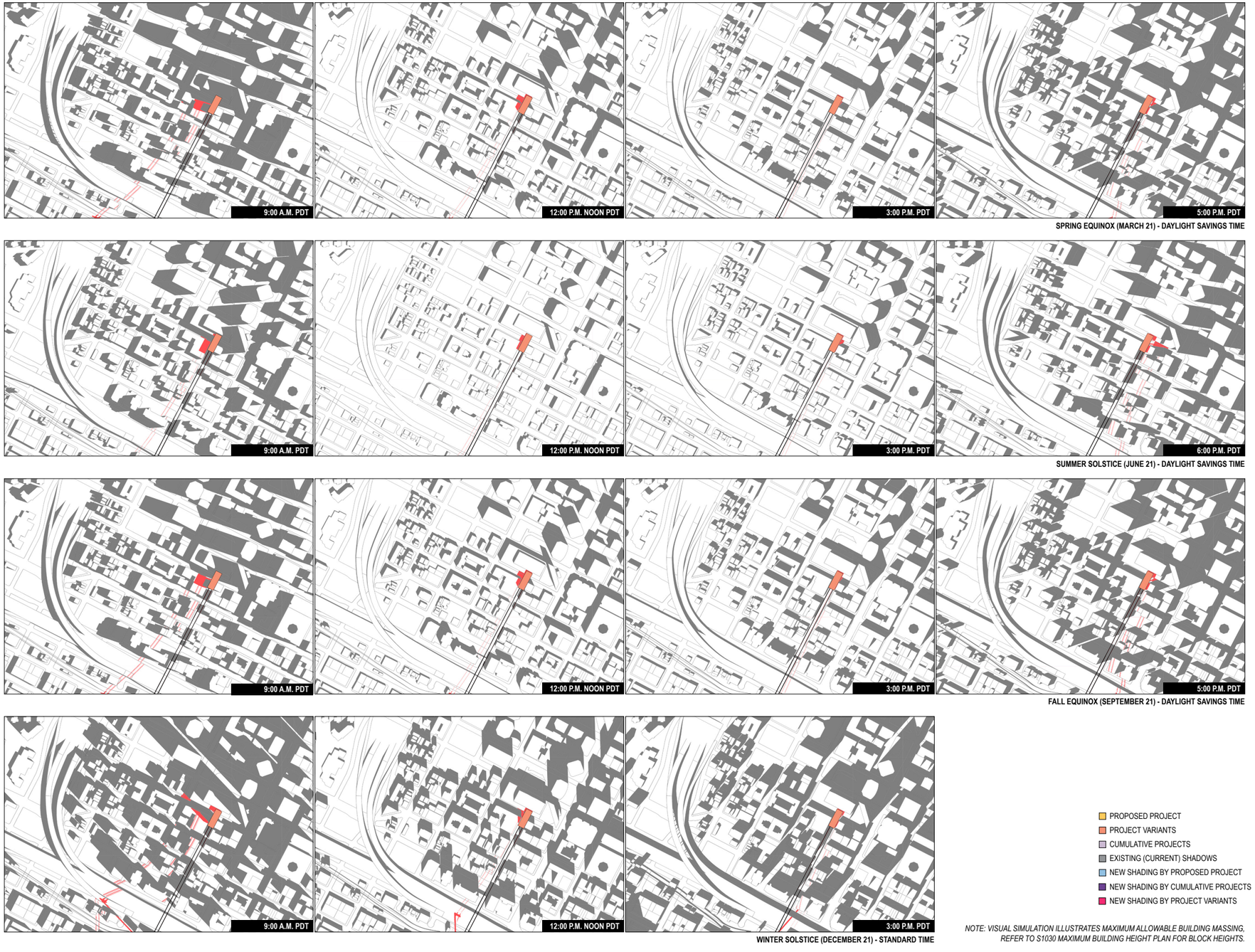
SOURCE: BIG, 2020

Oakland Waterfront Ballpark District Project

Figure 5-23
Shadow Diagrams – Existing and Gondola Variant - Jack London Square Station

ESA



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SOURCE: BIG, 2020

Oakland Waterfront Ballpark District Project

Figure 5-24a
Shadow Diagrams – Existing and Gondola Variant - Convention Center Station (Option 1)

ESA

SPRING EQUINOX (MARCH 21) - DAYLIGHT SAVINGS TIME

SUMMER SOLSTICE (JUNE 21) - DAYLIGHT SAVINGS TIME

FALL EQUINOX (SEPTEMBER 21) - DAYLIGHT SAVINGS TIME

WINTER SOLSTICE (DECEMBER 21) - STANDARD TIME

PROPOSED PROJECT
PROJECT VARIANTS
CUMULATIVE PROJECTS
EXISTING (CURRENT) SHADOWS
NEW SHADING BY PROPOSED PROJECT
NEW SHADING BY CUMULATIVE PROJECTS
NEW SHADING BY PROJECT VARIANTS

NOTE: VISUAL SIMULATION ILLUSTRATES MAXIMUM ALLOWABLE BUILDING MASSING, REFER TO S1030 MAXIMUM BUILDING HEIGHT PLAN FOR BLOCK HEIGHTS.

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SOURCE: BIG, 2020

Oakland Waterfront Ballpark District Project

Figure 5-24b
Shadow Diagrams – Existing and Gondola Variant - Convention Center Station (Option 2)

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impact of the proposed Project with the Aerial Gondola Variant related to hazardous wind conditions would be significant and unavoidable with mitigation. Because it was determined that the proposed Project would have a significant and unavoidable impact related to wind, the proposed Project with this variant would *likewise have a significant and unavoidable impact* because of the possible height of the Convention Center Station over 100 feet, although the impact would likely be no worse than that of the proposed Project.

Cumulative

As described in Section 4.1, *Aesthetics,* development of cumulative projects, including development of the proposed Project, would result in incremental changes to aesthetics, light, glare, wind, and shadow in the area. Cumulative projects would have a less-than-significant impact with respect to aesthetics because all substantial projects with potential to change the visual landscape would undergo design review by the City Planning Commission to determine their consistency with the General Plan. Figure 5-8 (previously presented) depicts the simulation of cumulative development, where the Aerial Gondola Variant is not visible.

Figure 5-25 and **Figure 5-26** show the year-round shadow effects cast by the proposed Project, variants, and other cumulative development. With respect to shadow, there are no public parks or quasi-public spaces other than the ones analyzed for the proposed Project; the ferry lawn and Jack London Plaza at the foot of Broadway are situated where they would not be subject to prolonged adverse shadow effects. As discussed above, the historic resources in the cumulative projects area are not particularly light-sensitive or light-dependent, given their lack of stained glass or other elements that require access to light. Therefore, increased shadow on these resources would not substantially impair the resources' historic significance such that they would no longer be eligible for listing on a national, State, or local register of historic places. The cumulative projects with the proposed Project and this variant would result in the same less-than-significant cumulative impact as described in Section 4.1 for aesthetics and shadow, if the proposed Project's aesthetics impacts were subject to CEQA.

In terms of light and glare, the proposed Project's contribution to a significant and unavoidable cumulative impact was determined to be cumulatively considerable. Improvement Measure AES-2 would also apply to this variant, and this measure would reduce light/glare impacts. Nevertheless, because this variant would increase spill light and glare under the cumulative scenario, the proposed Project with this variant would likewise result in a considerable contribution to a significant and unavoidable cumulative light and glare impact, if the proposed Project's aesthetics impacts were subject to CEQA.

In terms of wind effects, the proposed Project's contribution to a significant and unavoidable cumulative impact was determined to cumulatively considerable. This variant would include the Convention Center Station, which would be nearly 100 feet tall and thus could be subject to Mitigation Measure AES-1. While this variant by itself may not have a noticeable impact on localized pedestrian wind patterns, the proposed Project without the variant would make a considerable contribution to a significant and unavoidable cumulative impact, as described in

Section 4.1-1. Therefore, the cumulative impact with the proposed Project and this variant would also be significant and unavoidable because of the height of the Convention Center Station.

No new or changed impacts or mitigation measures for this topic would be required with this variant.

Air Quality

As discussed above, the Aerial Gondola Variant includes full buildout of the proposed Project and the construction and operation of the aerial gondola. Therefore, construction and operation of the Aerial Gondola Variant would result in only slightly different emissions than construction and operation of the Project. These emissions differences would result from the additional construction activity required for building the gondola, and from reduced criteria pollutant emissions as on-road vehicle trips shift to the electrically powered gondola as a mass transit option for people going to the Project site daily and for events. However, although the Aerial Gondola Variant would result in slightly different emissions and health risks, this variant would have the ***same air quality impacts and mitigation measures*** as identified for the proposed Project.

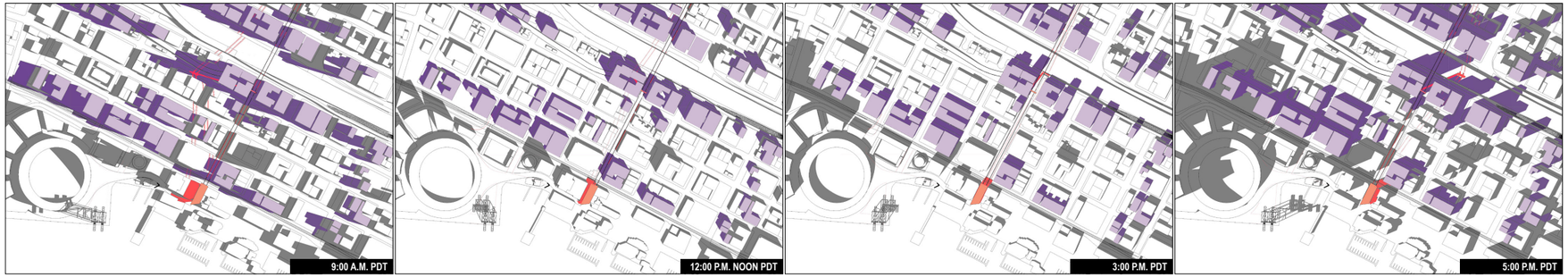
The gondola would transport people from downtown Oakland near the 12th Street BART Station and Oakland Convention Center to Jack London Square at the foot of Washington Street. This variant could be implemented with the Project in Phase 1 (by opening day for the new ballpark) or before Full Buildout.

Construction Impacts

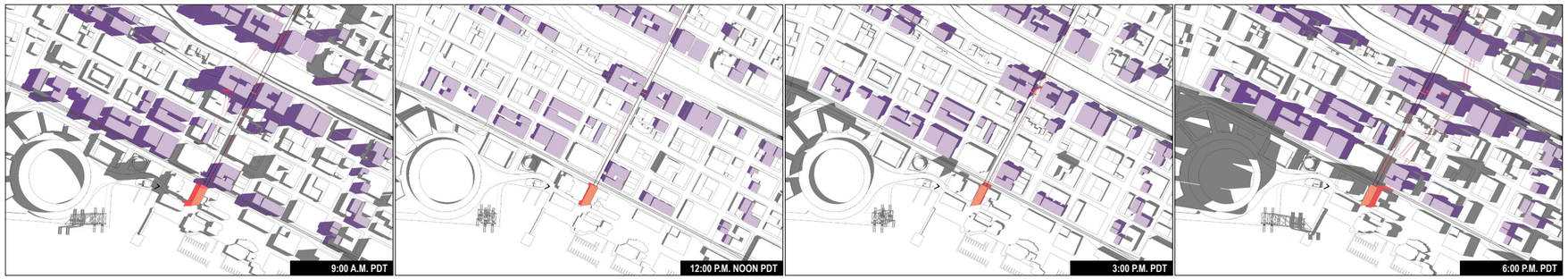
Construction emissions were estimated for activities to build the gondola. Construction would occur from Year 2 to Year 4 and would involve additional off-road activity by construction equipment and on-road construction worker, vendor and truck trips. All other activities associated with ballpark and non-ballpark building construction would remain the same as under the proposed Project. Details of the construction assumptions are presented in Appendix AIR.

Because construction for the Aerial Gondola Variant includes construction of the full-buildout Project, plus construction of the gondola, unmitigated construction emissions of ROG, NO_X, and PM_{10} would exceed thresholds in multiple years, similar to the Project. As such, this variant would require the same mitigation measures as the Project: Mitigation Measures AIR-1a (Dust Controls), AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), and AIR-1d (Super-Compliant VOC Architectural Coatings during Construction).

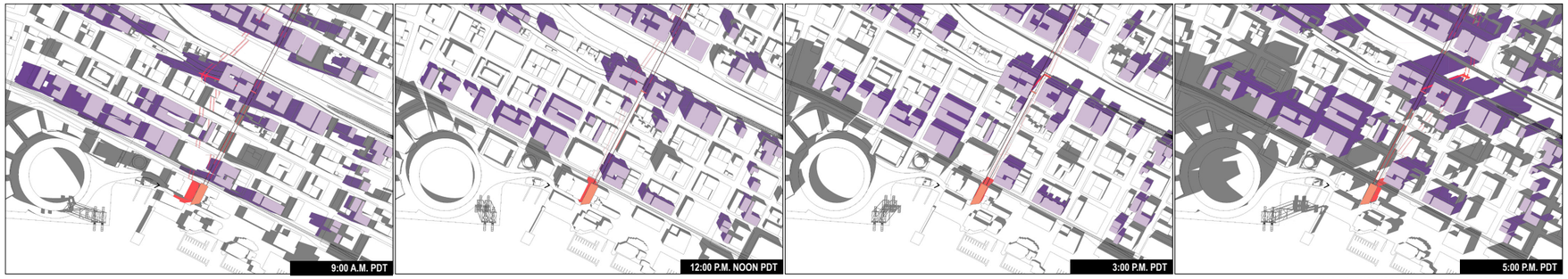
Table 5-12 presents average daily mitigated construction-related emissions of criteria pollutants under the Aerial Gondola Variant with implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls) and AIR-1d (Super-Compliant VOC Architectural Coatings during Construction). As shown in the table, the combined average daily emissions with implementation of Mitigation Measures AIR-1c and AIR-1d would exceed the City's significance threshold for NO_X in Year 2, with maximum average daily emissions of 82.0 lbs/day. This exceedance would be slightly greater than that of the Project; however, this impact would *remain significant and unavoidable with mitigation*, as identified for the Project without this variant.



SPRING EQUINOX (MARCH 21) - DAYLIGHT SAVINGS TIME



SUMMER SOLSTICE (JUNE 21) - DAYLIGHT SAVINGS TIME



FALL EQUINOX (SEPTEMBER 21) - DAYLIGHT SAVINGS TIME

WINTER SOLSTICE (DECEMBER 21) - STANDARD TIME

PROPOSED PROJECT
PROJECT VARIANTS
CUMULATIVE PROJECTS
EXISTING (CURRENT) SHADOWS
NEW SHADING BY PROPOSED PROJECT
NEW SHADING BY CUMULATIVE PROJECTS
NEW SHADING BY PROJECT VARIANTS

NOTE: VISUAL SIMULATION ILLUSTRATES MAXIMUM ALLOWABLE BUILDING MASSING, REFER TO S1030 MAXIMUM BUILDING HEIGHT PLAN FOR BLOCK HEIGHTS.

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SOURCE: BIG, 2020

Oakland Waterfront Ballpark District Project

Figure 5-25
Shadow Diagrams – Existing and Gondola Variant - Jack London Square Station and Cumulative

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SPRING EQUINOX (MARCH 21) - DAYLIGHT SAVINGS TIME

SUMMER SOLSTICE (JUNE 21) - DAYLIGHT SAVINGS TIME

FALL EQUINOX (SEPTEMBER 21) - DAYLIGHT SAVINGS TIME

WINTER SOLSTICE (DECEMBER 21) - STANDARD TIME

- PROPOSED PROJECT
- PROJECT VARIANTS
- CUMULATIVE PROJECTS
- EXISTING (CURRENT) SHADOWS
- NEW SHADING BY PROPOSED PROJECT
- NEW SHADING BY CUMULATIVE PROJECTS
- NEW SHADING BY PROJECT VARIANTS

NOTE: VISUAL SIMULATION ILLUSTRATES MAXIMUM ALLOWABLE BUILDING MASSING, REFER TO S1030 MAXIMUM BUILDING HEIGHT PLAN FOR BLOCK HEIGHTS.

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SOURCE: BIG, 2020

Oakland Waterfront Ballpark District Project

Figure 5-26
Shadow Diagrams – Existing and Gondola Variant – Convention Center Station and Cumulative

ESA

TABLE 5-12
AVERAGE DAILY MITIGATED CONSTRUCTION EMISSIONS BY POLLUTANT AND YEAR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA)

Year[a]	Average Daily Emissions (lbs/day)[b,c]			
	ROG	NO_X	PM_{10} (exhaust)[d]	$PM_{2.5}$ (exhaust)[d]
Significance Threshold	**54**	**54**	**82**	**54**
Year 1	1.7	14	0.51	0.48
Year 2	8.9	**82**	1.57	1.48
Year 3	28	41	0.75	0.71
Year 4	24	21	0.40	0.37
Year 5	3.5	42	0.58	0.54
Year 6	26	32	0.46	0.42
Year 7	45	36	0.56	0.53
Year 8	45	39	0.54	0.52

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter that is 10 microns or less in diameter; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter

a The technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the emissions estimates presented in this table are conservative because emissions are expected to decrease over time due to improvements in technology and regulatory requirements.

b **Bold values** = threshold exceedance

c Mitigation Measures included in the emissions shown in this table include Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), modeled as Tier 4 engines on all off-road equipment (as available), and Mitigation Measure AIR-1d (Super-Compliant VOC Architectural Coatings during Construction), modeled as super-compliant volatile organic compound (VOC) coatings with 10 grams VOC per liter for all interior coatings. This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing and other off-site transportation improvements, which are required as mitigation in Section 4.15, *Transportation and Circulation*.

d Only exhaust emissions of PM_{10} and $PM_{2.5}$ emissions are shown, because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a (Dust Controls).

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020.

Operational Impacts, and Combined Construction and Operational Impacts

Because the Aerial Gondola Variant would preserve all of the square footage of the Project, the land uses, activities, attendance, and population data would be the same as for the Project. Additionally, mobile-source construction trips for hauling, vendor deliveries, and workers would remain the same. However, the Aerial Gondola Variant would result in avoided emissions of criteria pollutants and GHGs because a reduction of VMT would occur as people use the gondola as a mass transit option instead of on-road vehicles. Between 4 and 10 percent of non-delivery vehicle trips are assumed to be replaced by gondola trips, with the percentage varying based on land use scenario.[12]

The Aerial Gondola Variant would also result in new emissions associated with the operation of generators at three locations: the Jack London Square and Convention Center gondola stations and the gondola tower. Generator emissions were calculated using the same methodology as for the Project.

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

Based on the above assumptions, during full-buildout operations, the Aerial Gondola Variant would result in unmitigated reductions in ROG emissions of 6.4 lbs/day and 1.2 tons per year; reductions in NO_X emissions of 17.2 lbs/day and 3.1 tons per year; reductions in PM_{10} emissions of 15.5 lbs/day and 2.8 tons per year; and reductions in $PM_{2.5}$ emissions of 3.5 lbs/day and 0.6 tons per year, when compared to Project full-buildout operations in Year 8. This represents a 3 percent reduction in ROG, an 8 percent reduction in NO_X, an 11 percent reduction in PM_{10}, and a 10 percent reduction in $PM_{2.5}$ emissions. It should be noted that these reductions were not estimated for Phase 1 operations in Year 4–Year 7; only full-buildout emissions in Year 8 and Year 9 include these reductions.

Table 5-13 summarizes total net new annual and average daily unmitigated emissions by year from Year 4 through Year 9 under the Aerial Gondola Variant, and compares variant emissions with the City of Oakland's significance thresholds. Similar to the Project, operational emissions of ROG and NO_X under the Aerial Gondola Variant at partial buildout would exceed the significance thresholds in Year 8, and operational emissions of ROG, NO_X, and PM_{10} at full buildout would exceed the significance thresholds in Year 9. Thus, the Aerial Gondola Variant would require the same mitigation measures as the Project: Mitigation Measures AIR-2a (Use Low and Super-Compliant VOC Architectural Coatings in Maintaining Buildings through Covenants, Conditions, and Restrictions); AIR-2b (Promote Use of Green Consumer Products); AIR-2c (Diesel Backup Generator Specifications); AIR-2d (Diesel Truck Emission Reduction); and AIR-2e (Criteria Pollutant Mitigation Plan).

Table 5-14 presents total net new annual and average daily combined mitigated construction and mitigated operational emissions under the Aerial Gondola Variant during the years when construction and operations would overlap. This table presents overlapping construction emissions with Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and with Mitigation Measure AIR-1d (Super-Compliant VOC Architectural Coatings during Construction). As shown in Table 5-10, mitigated emissions would remain above the significance thresholds despite implementation of Mitigation Measures AIR-2a, AIR-2b, AIR-2d, and AIR-2e, as well as Transportation Mitigation Measures TRANS-1a, TRANS-1b, TRANS-1c, TRANS-1d, TRANS-1e, TRANS-2a, TRANS-2b, TRANS-2c, TRANS-3a, and TRANS-3b. However, under the Aerial Gondola Variant, NO_X emissions would be notably reduced at full buildout in Year 8–Year 9, although emissions would still exceed the significance thresholds in Year 5–Year 9, similar to the Project.

Similar to the Project, NO_X emissions under the Aerial Gondola Variant would exceed the significance thresholds in all years from Year 5 through Year 9; ROG emissions would exceed the thresholds in all years from Year 6 through Year 9; PM_{10} emissions would exceed the thresholds in Year 9; and $PM_{2.5}$ emissions would not exceed the significance thresholds in any year. These exceedances would be less than those of the Project because of the reduction in operational mobile-source emissions. Although the variant's impact would be less than that of the proposed Project, it would *remain significant and unavoidable with mitigation*, as identified for the Project without this variant.

TABLE 5-13 TOTAL UNMITIGATED ANNUAL AND AVERAGE DAILY OPERATIONAL EMISSIONS BY YEAR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA)

Year[a]		Average Daily Emissions (lbs/day)[b,c]				Total Annual Emissions (tons/year)[b,c]			
		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
	Significance Threshold	**54**	**54**	**82**	**54**	**10**	**10**	**15**	**10**
	A's-Related Existing Conditions (2018)[d]	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
Year 4	Phase 1 Operational Emissions[e,f]	43.9	30.2	33.9	7.9	8.0	5.5	6.2	1.4
	Net New Emissions[g]	*11.0*	*11.2*	*13.2*	*3.2*	*2.0*	*2.0*	*2.4*	*0.6*
Year 5–Year 7[h]	Phase 1 Operational Emissions[e,f]	80.5	82.5	60.7	14.8	14.7	15.1	11.0	2.7
	Net New Emissions[g]	*47.6*	***63.6***	*40.0*	*10.1*	*8.7*	***11.6***	*7.3*	*1.8*
Year 8	Full Buildout Operational Emissions[e,f]	118.2	121.5	83.8	20.7	21.6	22.2	15.3	3.8
	Net New Emissions[g]	***85.3***	***102.5***	*63.2*	*16.0*	***15.6***	***18.7***	*11.5*	*2.9*
Year 9	Full Buildout Operational Emissions[f,i]	194.5	200.2	130.6	32.7	35.5	36.5	23.8	6.0
	Net New Emissions[g]	***161.6***	***181.3***	***110.0***	*28.0*	***29.5***	***33.1***	***20.1***	*5.1*
	Maximum Net New Operational Emissions	***161.6***	***181.3***	***110.0***	*28.0*	***29.5***	***33.1***	***20.1***	*5.1*

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter that is 10 microns or less in diameter; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter

a The technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the emissions estimates presented in this table are conservative because emissions are expected to decrease over time due to improvements in technology and regulatory requirements.

b **Bold values** = threshold exceedance for net new emissions.

c Due to rounding, emissions from individual sectors may not add up to the total.

d Emissions for A's-related existing conditions are presented in Table 4.2-8. These emissions only represent emissions associated with A's operations and ballgames that would be relocated to the new ballpark. Only emissions for A's-related existing conditions were subtracted from variant emissions to determine the net new emissions associated with the variant.

e Operational emissions are scaled for partial years of operation in Year 4 and Year 8, based on the number of days of full operations (ballpark and ancillary) for those years compared to 365 total days per year (30 days for the Project and 274 days for the Aerial Gondola Variant in Year 4 and 120 days for the Project in Year 8). Note that the Aerial Gondola Variant is assumed to operate for a full 365 days in Year 8. For Year 4, ballpark emissions are not scaled because the ballpark would be operational at the start of Phase 1. Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days. Mobile-source emissions reductions associated with the Aerial Gondola Variant were not included for Phase 1 operations from Year 4–Year 7; only full-buildout emissions in Year 8 and Year 9include the mobile-source reductions.

f Mobile-source emissions include the 20% trip reduction required by Assembly Bill 734 and implementation of on- and off-site transportation improvements and mitigation measures included in Section 4.15, *Transportation and Circulation*. For emissions without the 20% trip reduction, see Appendix AIR, *Air Quality Supporting Information*.

g Net new emissions represent Project and variant construction *plus* Project and variant operational emissions *minus* A's-related existing emissions.

h Operational emissions are anticipated to be the same during Year 5–Year 7 when Phase 1 would be operational and before full Project buildout occurs.

i Year 9 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll, 2020

TABLE 5-14
TOTAL ANNUAL AND AVERAGE DAILY COMBINED MITIGATED CONSTRUCTION AND MITIGATED OPERATIONAL EMISSIONS BY YEAR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA)

		Average Daily Emissions (lbs/day)[b,c]				Total Annual Emissions (tons/year)[b,c]			
		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
Year[a]	Significance Threshold	54	54	82	54	10	10	15	10
	A's-Related Existing Conditions[d]	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
Year 4	Construction[e]	23.8	20.9	0.4	0.4	3.1	2.7	0.05	0.05
	Phase 1 Operations[f,g]	42.9	24.3	33.7	7.7	7.8	4.4	6.1	1.4
	Net New Emissions[h]	*33.8*	*26.2*	*13.4*	*3.4*	*4.9*	*3.7*	*2.4*	*0.6*
Year 5	Construction[e]	3.5	42.1	0.6	0.5	0.5	5.5	0.08	0.07
	Phase 1 Operations[f]	78.4	71.7	60.3	14.4	14.3	13.1	11.0	2.6
	Net New Emissions[h]	*49.0*	***94.8***	*40.2*	*10.2*	*8.8*	***15.1***	*7.3*	*1.8*
Year 6	Construction[e]	25.8	31.7	0.5	0.4	3.4	4.1	0.06	0.05
	Phase 1 Operations[f]	78.4	71.7	60.3	14.4	14.3	13.1	11.0	2.6
	Net New Emissions[h]	***71.3***	***84.3***	*40.1*	*10.1*	***11.7***	***13.7***	*7.3*	*1.8*
Year 7	Construction[e]	45.2	36.3	0.6	0.5	5.9	4.7	0.07	0.07
	Phase 1 Operations[f]	78.4	71.7	60.3	14.4	14.3	13.1	11.0	2.6
	Net New Emissions[h]	***90.8***	***89.0***	*40.2*	*10.2*	***14.2***	***14.3***	*7.3*	*1.8*
Year 8	Construction[e]	45.0	38.5	0.5	0.5	3.9	3.4	0.05	0.05
	Full Buildout Operations[f,g]	115.0	106.8	83.3	20.2	21.0	19.5	15.2	3.7
	Net New Emissions[h]	***127.1***	***126.3***	*63.2*	*16.0*	***18.9***	***19.4***	*11.5*	*2.9*
Year 9	Construction[e]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Full Buildout Operations[f,i]	189.2	177.7	129.9	31.9	34.5	32.4	23.7	5.8
	Net New Emissions[h]	***156.4***	***158.7***	***109.2***	*27.2*	***28.5***	***29.0***	***19.9***	*5.0*
	Maximum Net New Operational Emissions	***156.4***	***158.7***	***109.2***	*27.2*	***28.5***	***29.0***	***19.9***	*5.0*

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter that is 10 microns or less in diameter; $PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter.

a The technical analysis assumes Phase 1 construction begins in 2020 rather than 2022 as now anticipated, and also assumes that all construction is completed by 2027 rather than 2029 as now anticipated. Therefore, the emissions estimates presented in this table are conservative because emissions are expected to decrease over time due to improvements in technology and regulatory requirements.

b **Bold values** = threshold exceedance for net new emissions.

c Due to rounding, emissions from individual sectors may not add up to the total.

d Existing A's-related emissions are presented in Table 4.2-8.

e Average daily construction emissions represent total annual emissions divided by 260 workdays per year (with the exception of the ballpark construction emissions, which are divided by 312 workdays per year to account for weekend work). Emissions include implementation of Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), and AIR-1d (Super-Compliant VOC Architectural Coatings during Construction). This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing and other off-site transportation improvements, which are required as mitigation in Section 4.15, *Transportation and Circulation*.

f Average daily operational emissions represent total annual emissions divided by 365 days per year. Emissions include the 20% trip reduction required by Assembly Bill 734, implementation of on- and off-site transportation improvements, and mitigation measures included in Section 4.15, *Transportation and Circulation*, Mitigation Measure AIR-2a (Use Low and Super-Compliant VOC Architectural Coatings in Maintaining Buildings through Covenants, Conditions, and Restrictions) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications).

TABLE 5-14
TOTAL ANNUAL AND AVERAGE DAILY COMBINED MITIGATED CONSTRUCTION AND MITIGATED OPERATIONAL EMISSIONS BY YEAR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA)

g Operational emissions are scaled for partial years of operation in Year 4 and Year 8 based on the number of days of full operations (ballpark and ancillary) for those years compared to 365 total days per year (30 days for the Project and 274 days for the Aerial Gondola Variant in Year 4 and 120 days for the Project in Year 8). Note that the Aerial Gondola Variant is assumed to operate for a full 365 days in Year 8. For Year 4, ballpark emissions are not scaled because the ballpark would be operational at the start of Phase 1. Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days. Mobile-source emissions reductions associated with the Aerial Gondola Variant were not included for Phase 1 operations from Year 4–Year 7; only full-buildout emissions in Year 8 and Year 9 include the mobile-source reductions.
h Net new emissions represent Project and variant construction *plus* variant operational emissions *minus* A's-related existing emissions.
i Year 9 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll, 2020

Carbon Monoxide

The Aerial Gondola Variant would reduce mobile-source emissions compared to the Project because a reduction of VMT would occur as people use the gondola as a mass transit option instead of on-road vehicles. Therefore, the impacts of the Aerial Gondola Variant associated with CO emissions would be less than those discussed above for the Project. Development under the Aerial Gondola Variant would not be required to estimate localized CO concentrations because it would not contribute to CO concentrations exceeding the California ambient air quality standard. The impact would be *less than significant and no mitigation measures are required*, the same as identified for the proposed Project without this variant.

Toxic Air Contaminants

The Aerial Gondola Variant would result in reduced mobile-source TAC emissions as on-road vehicle trips shift to the electrically powered Gondola as a mass transit option for people going to the Project site daily and for events. This would also result in reduced health risks at both the on-site and off-site MEIRs. However, this reduction in mobile-source TAC emissions is not expected to materially affect health risk impacts because operational vehicle trips would be reduced by fewer than 10,000 vehicles per day, which is BAAQMD's recommended volume at which health risk impacts should be evaluated for roadways. Therefore, this reduction in traffic was not included in the HRA for this variant.

As discussed above, three emergency generators would operate under the Aerial Gondola Variant. TAC emissions were estimated for each generator and health risks were calculated using the same methods as used for the Project. Generators used for the gondola were assumed to be at ground level. All other source parameters are consistent with those used for the Project generators. The Aerial Gondola Variant would not have other additional operational sources of TACs.

Impacts on Existing Sensitive Receptors

Construction of the Aerial Gondola Variant includes construction of the full buildout of the Project, plus additional activities to construct the gondola, and construction TACs would drive health risks at the off-site MEIR. Thus, the unmitigated cancer risk and annual average $PM_{2.5}$ concentrations associated with this variant would exceed the health risk thresholds, similar to the Project. As such, the Aerial Gondola Variant would require the same mitigation measures as the Project: Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate

Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-3a (Truck-Related Risk Reduction Measures – Toxic Air Contaminants).

Table 5-15 shows the mitigated HRA results for existing off-site receptors with exposure to construction and operation of the Aerial Gondola Variant under Scenario 1. These results account for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse and the implementation of Mitigation Measure AIR-1c, assuming the use of all Tier 4 Final equipment for construction emissions (where feasible); and of Mitigation Measure AIR-2c, assuming the use of all Tier 4 Final emergency generators, 20 hours of annual generator testing and maintenance, and venting of all generator exhaust at the building rooftops.

Therefore, similar to the Project, when accounting for mitigation measures, both cancer risk and annual average $PM_{2.5}$ concentrations associated with the Aerial Gondola Variant would be reduced below the significance thresholds. These exceedances would be slightly greater than those of the Project because of the additional construction activity. See Section 4.2, *Air Quality*, Table 4.2-13, for estimated health risks associated with TACs from the Project at the existing off-site MEIR. This impact would be greater than that of the Project but would *remain less than significant with mitigation*, the same as identified for the proposed Project without this variant.

Impacts on New Sensitive Receptors

Operational generator emissions of TACs would be greater under the Aerial Gondola Variant than under the Project because of the additional three emergency generators associated with the variant's operation, and operational generator TACs would drive health risks at the new on-site MEIR. Thus, the unmitigated cancer risk and annual average $PM_{2.5}$ concentration associated with this variant would exceed the health risk thresholds, similar to the Project. In addition, because construction for the Aerial Gondola Variant would include construction of the full-buildout Project, plus additional activities to build the gondola, the unmitigated cancer risk and annual average $PM_{2.5}$ concentration would exceed the health risk thresholds, similar to the Project.

As noted above, although operational-mobile source TAC emissions would be less under the Aerial Gondola Variant than under the Project, the reduction in traffic is not expected to materially affect health risk values at the MEIR. Thus, the Aerial Gondola Variant would require the same mitigation measures as the Project: Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-3a (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), and AIR-4a (Install MERV16 Filtration Systems).

Table 5-16 shows the mitigated HRA results for new on-site receptors with exposure to construction and operation of the Aerial Gondola Variant under Scenario 2. These results account for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse and the implementation of Mitigation Measures AIR-1c, AIR-2c, and AIR-4a. The same as the Project, Mitigation Measure AIR-4a was assumed to reduce particulate pollution, including diesel particulate matter and $PM_{2.5}$, by approximately 76 percent; this would substantially reduce cancer risk, the chronic HI, and $PM_{2.5}$ concentrations at on-site MEIR locations.

TABLE 5-15
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION OF THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Chronic Hazard Index[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**10.0**	**1.0**	**0.3**
Scenario 1: Construction plus Operations			
Existing Howard Terminal[d]	-2.2	-8.1E-05	-6.4E-04
Gondola Construction	0.04	–	–
Gondola Operations	0.07	2.4E-05	1.2E-04
Project Contribution	8.3	0.004	0.19
Potential Truck Parking Relocation to the Roundhouse[e]	0.4	5.2E-05	4.1E-04
Total Mitigated Project + Gondola	8.4	0.004	0.19
Total Mitigated Net New Project w/ Roundhouse + Gondola[f]	6.6	0.004	0.19
MEIR Location (UTM – X)	563080	563180	563180
MEIR Location (UTM – Y)	4183660	4183920	4183920
Year of Maximum Exposure[g]	n/a	Year 8	Year 8

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; n/a = not applicable; UTM = Universal Transverse Mercator; – = no value reported; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance.
b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also assumes the 20% trip reduction requirement of Assembly Bill 734 is met and includes construction activities associated with implementation of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, Transportation and Circulation.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust, tire wear, brake wear, and road dust. $PM_{2.5}$ concentrations at off-site receptors in Scenario 1 include contributions from multiple phases of Project construction and subsequent Project operations since Year 8 includes construction and operation.
d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the toxic air contaminant (TAC) emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.
e Health risks associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
f Total mitigated net new Project w/ Roundhouse + Gondola represents total Project + Gondola health risks *minus* health risks from Howard Terminal truck activity *plus* potential health risks from relocating truck parking to the Roundhouse.
g For cancer risk, the exposure is excess lifetime 30-year exposure; for non-cancer chronic hazard index (HI) and $PM_{2.5}$ concentrations, this represents the year when the maximum value would occur at the MEIR.

SOURCE: Appendix AIR, Air Quality Supporting Information.

TABLE 5-16
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION OF THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR

Scenario/Emissions Source/ Location/Year	Excess Lifetime Cancer Risk (per million)[a]	Chronic Hazard Index[a]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**10.0**	**1.0**	**0.3**
Scenario 2: Construction plus Operations			
Gondola Construction[d]	–	–	–
Gondola Operations	0.03	7.6E-06	3.8E-05
Project Contribution	2.1	0.0021	0.024
Potential Truck Parking Relocation to the Roundhouse[e]	0.6	1.2E-04	9.1E-04
Total Mitigated Project + Gondola	2.2	0.0021	0.024
Total Mitigated Project w/Roundhouse + Gondola[f]	2.7	0.0022	0.025
MEIR Location (UTM – X)	562940	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640
Year of Maximum Exposure[g]	n/a	Year 8	Year 8

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; n/a = not applicable; UTM = Universal Transverse Mercator; – = no value reported; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance
b Health risks include implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-4a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction requirement of Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a (Dust Controls). For operations, $PM_{2.5}$ concentrations include exhaust, tire wear, brake wear, and road dust. $PM_{2.5}$ concentrations at on-site receptors in Scenario 2 include contributions from multiple phases of Project construction and subsequent Project operations since Year 8 include construction and operation.
d Construction of the Aerial Gondola Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction only affects off-site receptors.
e Health risks associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
f Total mitigated net new Project w/ Roundhouse + Gondola represents total Project + Gondola health risks *plus* potential health risks from relocating truck parking to the Roundhouse.
g For cancer risk, the exposure is excess lifetime 30-year exposure; for the non-cancer chronic HI and $PM_{2.5}$ concentrations, this represents the year when the maximum value occurs at the MEIR.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020.

Therefore, similar to the Project, when accounting for mitigation measures, both cancer risk and annual average $PM_{2.5}$ concentrations associated with the Aerial Gondola Variant would be reduced below the significance thresholds. These health risk values would be slightly greater than those of the Project because of the increased operational TAC emissions from emergency generators. Although the gondola would reduce vehicle trips, which would in turn reduce health risks associated with lower vehicle trips, these reduced health risks were not explicitly calculated and are therefore not included in the table above. See Section 4.2, *Air Quality*, Table 4.2-15, for estimated health risks associated with TACs from the Project at the existing off-site MEIR. Overall, this impact would be greater than the Project but would *remain less than significant with mitigation*, the same as identified for the Project without this variant.

Odors

The Aerial Gondola Variant would not change odor sources compared to the Project, because the land uses, activities, attendance, and population data would be generally the same as for the Project. In addition, this variant would site the same number of residential users in the same locations as the Project, and new residential development under the Aerial Gondola Variant would occur well within the recommended odor buffer of numerous existing sources. Therefore, the impacts and analysis for the Aerial Gondola Variant associated with odors would be the *same as for the Project without this variant – less than significant*.

Cumulative Regional Criteria Pollutant Emissions

As discussed above, construction and operational emissions associated with the Aerial Gondola Variant would be similar to those of the Project, though slightly different because of the additional construction activity, increased generator emissions, and reduced operational mobile-source emissions. Thus, criteria pollutant emissions under the Aerial Gondola Variant would be *similar to those of the Project and the same mitigation measures would be required*. As would be the case for the proposed Project without this variant, the Aerial Gondola Variant's emissions of criteria air pollutants would be cumulatively considerable, and this cumulative impact would be *significant and unavoidable with mitigation*. No new or changed impacts or mitigation measures would be required.

Cumulative Regional Health Risks

As discussed above, health risks associated with the Aerial Gondola Variant would be very similar to those of the Project because the variant would include the full Project, though slightly different because of the additional construction activity, increased generator emissions, and reduced operational mobile-source emissions. As discussed above, background risk values were determined using both the standard BAAQMD CEQA Guidelines approach and BAAQMD's health risk modeling for the WOCAP. The tables below present the results of both methods.

Impacts on Existing Sensitive Receptors

Table 5-17 summarizes the HRA results for the existing off-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks, using the standard BAAQMD approach. **Table 5-18** summarizes the HRA results for the existing off-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks, using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average $PM_{2.5}$ concentrations, with the contribution from the Aerial Gondola Variant, would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). Thus, the Aerial Gondola Variant would require the same mitigation measures as the Project: Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant Mitigation Plan), AIR-3 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-4a (Install MERV16 Filtration Systems), AIR-4b (Exposure to Air Pollution – Toxic Air Contaminants), and AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan), as well as Transportation

TABLE 5-17
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT USING THE STANDARD BAAQMD APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Non-Cancer Chronic Hazard Index (unitless)[a]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**10**	**0.8**
Project Contributions – Mitigated			
Existing Howard Terminal[d]	-2.2	-8.1E-05	-6.4E-04
Gondola Construction[e]	0.04	–	–
Gondola Operations	0.1	2.4E-05	1.2E-04
Project Contribution	8.3	0.0039	0.186
Potential Truck Parking Relocation to the Roundhouse[f]	0.4	5.2E-05	4.1E-04
Total Mitigated Project + Gondola	8.4	0.0039	0.19
Total Mitigated Net New Project w/Roundhouse + Gondola[g]	6.6	0.0039	0.19
MEIR Location (UTM – X)	563080	563180	563180
MEIR Location (UTM – Y)	4183660	4183920	4183920
Cumulative Contributions			
Existing Stationary Sources[g]	0.9	0.0023	0.076
Roadways[i]	0	–	0.11
Highways[j]	19.1	–	0.56
Major Streets[j,k]	4.1	–	0.060
Railways[j]	66.7	–	0.017
Total Cumulative	*91*	*0.0023*	*0.82*
Project Plus Cumulative			
Mitigated Net New Project + Gondola	6.6	0.0039	0.19
Cumulative Contributions	91	0.0023	**0.8**
Cumulative Total	*98*	*0.0062*	***1.0***

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; BAAQMD = Bay Area Air Quality Management District; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; – = no risk was calculated or data was missing; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance
b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction requirement of Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the transportation section.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.
d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the toxic air contaminant (TAC) emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.
e Construction of the Aerial Gondola Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.
f Health risks associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.

TABLE 5-17 (CONT.)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT USING THE STANDARD BAAQMD APPROACH

g Total mitigated net new Project w/ Roundhouse + gondola represents total mitigated Project + gondola health risks *minus* health risks from existing Howard Terminal truck activity *plus* potential health risks from relocating truck parking to the Roundhouse.
h Existing stationary sources includes all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool, with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
i Roadways include nearby roads between 10,000 and 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the off-site cancer or on-site cancer and $PM_{2.5}$ MEIRs.
j Includes nearby major streets, highways, and railways. Cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. BAAQMD's raster screening tools do not estimate chronic hazards because the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
k Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information.*

TABLE 5-18
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**0.8**
Project Contributions – Mitigated		
Existing Howard Terminal[d]	-2.2	-6.4E-04
Gondola Construction[e]	0.04	–
Gondola Operations	0.07	1.2E-04
Project Contribution	8.3	0.19
Potential Truck Parking Relocation to the Roundhouse[f]	0.4	4.1E-04
Total Mitigated Project + Gondola	8.4	0.19
Total Mitigated Net New Project w/ Roundhouse + Gondola[g]	6.6	0.19
MEIR Location (UTM – X)	563080	563180
MEIR Location (UTM – Y)	4183660	4183920
Cumulative Contributions – Year 5		
Highway[h]	4.0	0.38
Other[i]	14	0.012
Permitted[j]	2.2	0.15
Dynegy[k]	0.010	8.2E-04
Schnitzer[l]	26	0.16
Port[m]	128	0.20
Rail[n]	148	0.055
Street[o]	4.0	2.0
Total Cumulative	*326*	*3.0*
Project Plus Cumulative		
Mitigated Project + Gondola Total	6.6	0.19
Cumulative Contributions	**325.6**	**3.0**
Cumulative Total	**332.2**	**3.1**

TABLE 5-18 (CONT.)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE EXISTING OFF-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT USING THE WOCAP APPROACH

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; WOCAP = West Oakland Community Action Plan; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance
b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction required by Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.
d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the toxic air contaminant (TAC) emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.
e Construction of the Aerial Gondola Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.
f Health risks associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
g Total mitigated net new Project w/ Roundhouse + gondola represents total mitigated Project + gondola health risks *minus* health risks from existing Howard Terminal activity *plus* potential health risks from relocating truck parking to the Roundhouse.
h Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.
i Other includes ferries and truck-related businesses.
j Permitted includes all Bay Area Air Quality Management District (BAAQMD)–permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.
k Dynegy includes TAC emissions from the BAAQMD-permitted existing Dynegy jet-fueled power plant currently operating on the Peaker Power Plant Variant site.
l Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels, and trucks.
m Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the Burlington Northern Santa Fe railyard, and trucks.
n Rail includes the Union Pacific railyard and both freight and passenger locomotives operating on the various rail lines in the area.
o Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

Mitigation Measures TRANS-1a, TRANS-1b, TRANS-1c, TRANS-1d, TRANS-1e, TRANS-2a, TRANS-2b, TRANS-2c, TRANS-3a, and TRANS-3b.

As presented above in Table 5-18, the total cumulative mitigated cancer risk for the new on-site MEIR would be 332.2 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented in Table 5-18, the total mitigated annual average $PM_{2.5}$ concentrations for the existing off-site MEIR would be 3.14 micrograms per cubic meter ($\mu g/m^3$), which would exceed the cumulative significance threshold of 0.8 $\mu g/m^3$. Non-cancer chronic risk would not exceed the thresholds for the existing off-site MEIRs, as presented in Table 5-17. Therefore, the same as the Project without this variant, the Aerial Gondola Variant's cumulative cancer risk and $PM_{2.5}$ concentration impact at new on-site receptors would be cumulatively considerable. These exceedances would be slightly greater than those of the Project; however, this impact would *remain significant and unavoidable with mitigation*, the same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

Impacts on New Sensitive Receptors

Table 5-19 summarizes the HRA results for the new on-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks, using the standard BAAQMD approach. **Table 5-20** summarizes the HRA results for the new on-site MEIR under mitigated conditions accounting for the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, along with the cumulative background health risks, using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average $PM_{2.5}$ concentrations with the contribution from the Aerial Gondola Variant would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). Thus, the Aerial Gondola Variant would require the same mitigation measures as the Project: Mitigation Measures AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant Mitigation Plan), AIR-3 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-4a (Install MERV16 Filtration Systems), AIR-4b (Exposure to Air Pollution – Toxic Air Contaminants), and AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan) as well as Transportation Mitigation Measures TRANS-1a, TRANS-1b, TRANS-1c, TRANS-1d, TRANS-1e, TRANS-2a, TRANS-2b, TRANS-2c, TRANS-3a, and TRANS-3b.

As presented in Table 5-20, the total cumulative mitigated cancer risk for the new on-site MEIR would be 324.1 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented in Table 5-20, the total mitigated annual average $PM_{2.5}$ concentrations for the existing off-site MEIR would be 2.4 $\mu g/m^3$, which would exceed the cumulative significance threshold of 0.8 $\mu g/m^3$. Non-cancer chronic risk would not exceed the thresholds for the existing off-site MEIRs, as presented in Table 5-19. Therefore, the same as the Project without this variant, the Peaker Power Plant Variant's cumulative cancer risk and $PM_{2.5}$ concentration impact at new on-site receptors would be cumulatively considerable. These exceedances would be slightly greater than those of the Project; however, this impact would *remain significant and unavoidable with mitigation*, the same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

Biological Resources

The Aerial Gondola Variant would result in the ***same biological resources impacts and mitigation measures*** as identified for the proposed Project without this variant. Specific to this variant, surveys for nesting birds and bat roosts would be warranted to characterize their activity near any proposed gondola facilities and determine effects on nesting birds and special-status or protected bats.

TABLE 5-19
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) USING THE STANDARD BAAQMD APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million)[a,b]	Non-Cancer Chronic Hazard Index (unitless)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**10.0**	**0.8**
Project Contributions – Mitigated			
Gondola Construction[d]	–	–	–
Gondola Operations	0.03	7.6E-06	3.8E-05
Project Contribution	2.1	0.0021	0.024
Potential Truck Parking Relocation to the Roundhouse[e]	0.6	1.2E-04	9.1E-04
Total Mitigated Project + Gondola	2.2	0.0021	0.024
Total Mitigated Project w/ Roundhouse + Gondola[f]	2.7	0.0022	0.025
MEIR Location (UTM – X)	562940	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640
Cumulative Contributions			
Existing Stationary Sources[g]	0.002	0.0055	0.60
Roadways[h]	0	–	0
Highways[i]	13.3	–	0.27
Major Streets[j,k]	2.9	–	0.029
Railways[i]	16.7	–	0.082
Cumulative Total	*33*	*0.0055*	*1.0*
Project Plus Cumulative			
Mitigated Project + Gondola Total	2.7	0.0022	0.02
Cumulative Contributions	33	0.0055	**1.0**
Cumulative Total	36	0.0077	**1.0**

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; BAAQMD = Bay Area Air Quality Management District; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; – = no risk was calculated or data was missing; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance.
b Health risks include implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.
d Construction of the Aerial Gondola Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.
e Health risks associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
f Total mitigated Project w/ Roundhouse + Gondola represents total mitigated Project + Gondola health *plus* potential health risks from relocating truck parking to the Roundhouse.

TABLE 5-19 (CONT.)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) USING THE STANDARD BAAQMD APPROACH

g Existing stationary sources include all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool, with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.
h Roadways include nearby roads between 10,000 and 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the on-site cancer or on-site cancer and $PM_{2.5}$ MEIRs.
i Includes nearby major streets, highways, and railways. Cancer and $PM_{2.5}$ impacts were taken from BAAQMD raster files for the Project area. BAAQMD's raster screening tools do not estimate chronic hazards because the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.
j Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

TABLE 5-20
SUMMARY OF CUMULATIVE LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Lifetime Excess Cancer Risk (per million)[a,b]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[a,b,c]
Significance Threshold	**100**	**0.8**
Project Contributions – Mitigated		
Gondola Construction[d]	–	–
Gondola Operations	0.03	3.8E-05
Project Contribution	2.1	0.024
Potential Truck Parking Relocation to the Roundhouse[e]	0.6	9.1E-04
Total Mitigated Project + Gondola	2.2	0.024
Total Mitigated Project w/Roundhouse + Gondola[f]	2.7	0.025
MEIR Location (UTM – X)	562940	563020
MEIR Location (UTM – Y)	4183440	4183640
Cumulative Contributions – Year 5		
Highway[g]	2.9	0.19
Other[h]	21	0.020
Permitted[i]	1.9	0.14
Dynegy[j]	0.0033	3.8E-04
Schnitzer[k]	53	0.36
Port[l]	186	0.24
Rail[m]	54	0.14
Street[n]	2.2	1.3
Cumulative Total	*321*	*2.4*
Project Plus Cumulative		
Mitigated Project + Gondola Total	2.7	0.02
Cumulative Contributions	**321**	**2.4**
Cumulative Total	**324**	**2.4**

TABLE 5-20 (CONT.)
SUMMARY OF CUMULATIVE LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATION AT THE NEW ON-SITE MAXIMALLY EXPOSED INDIVIDUAL RECEPTOR FOR THE AERIAL GONDOLA VARIANT USING THE WOCAP APPROACH

NOTES:

$PM_{2.5}$ = particulate matter that is 2.5 microns or less in diameter; $\mu g/m^3$ = micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; WOCAP = West Oakland Community Action Plan; E = In scientific notation, the letter E is used to mean "10 to the power of."

a **Bold values** = threshold exceedance
b Health risks include implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by Assembly Bill 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in Section 4.15, *Transportation and Circulation*.
c For construction, $PM_{2.5}$ concentrations include exhaust only because fugitive dust emissions would be addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, $PM_{2.5}$ concentrations include exhaust only, tire wear, brake wear, and road dust.
d Construction of the Aerial Gondola Variant would occur during Phase 1 of the Project, before any residents move in, and so variant construction would only affect off-site receptors.
e Health risks associated with potential relocation of truck parking from the Howard Terminal to the Roundhouse represents a conservative analysis scenario because it assumes that 100% of existing truck activity would be relocated to the Roundhouse, and risks would likely be less if some or all of the truck parking were to be relocated elsewhere in the Seaport, the City, or the region. Note that Roundhouse health risk is less than existing Howard Terminal health risk because the existing off-site MEIR is located further away from the Roundhouse than from Howard Terminal.
f Total mitigated Project w/ Roundhouse + Gondola represents total mitigated Project + Gondola health *plus* potential health risks from relocating truck parking to the Roundhouse.
g Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.
h Other includes ferries and truck-related businesses.
i Permitted includes all Bay Area Air Quality Management District (BAAQMD)–permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.
j Dynegy includes toxic air contaminant (TAC) emissions from the BAAQMD-permitted existing Dynegy jet-fueled power plant currently operating on the Peaker Power Plant Variant site.
k Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels and trucks.
l Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the Burlington Northern Santa Fe railyard, and trucks.
m Rail includes the Union Pacific railyard and both freight and passenger locomotives operating on the various rail lines in the area.
n Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

In addition, this variant may have a new less-than-significant impact related to potential bird interactions or collisions with the aerial gondola ropeline. The topic of avian collisions with overhead wires has been well examined, for example, by the Avian Power Line Interaction Committee. Based on the committee's methodology for identifying and mitigating potential hazards from new overhead wires, the proposed aerial gondola has few risk factors that would constitute a significant bird collision hazard (APLIC, 2012). For example, it would be situated in an urban setting with limited daily bird use, and seasonal migrations generally do not traverse downtown Oakland urban areas; the overhead wires or ropeline are not proposed between resting and feeding areas, which would increase collision risk; the overhead wires would not be placed close to nests; the tramway would be located away from foraging areas in the Estuary; and the large-diameter wires would be easily visible by birds. Therefore, although the wires would present a potential additional risk to birds in flight that would not be present with the proposed Project, the additional exposure to hazards would be minimal and considered less than significant with no additional mitigation required. No new or changed impacts or mitigation measures for this topic would be required with this variant.

Cultural and Tribal Cultural Resources

Historic Architectural Resources

The Aerial Gondola Variant would be subject to the same impacts and mitigation measures as identified for the proposed Project without the variant; however, this variant would ***result in new impacts and mitigation measures not identified for the proposed Project without this variant***, as follows:

Impact CUL-10: The proposed Project, with the Aerial Gondola Variant, would result in impacts to the Old Oakland API. (Criterion 1) (*Significant and Unavoidable with Mitigation*)

The Old Oakland API has a distinctive 19th-century commercial district setting that is defined by its range of characteristic 19th- and 20th-century architecture styles and its pedestrian focus. This is represented in the narrow streets, granite and cobble stone curbs, masonry and metal building materials, mix of commercial and residential (now primarily office) spaces, and overall scale. Overall, these character-defining features would remain intact under the Aerial Gondola Variant, but the concentration of new developments at the northern boundary of the district would affect integrity of feeling and setting.

The northern (Convention Center) gondola station would be adjacent to two contributors to the Old Oakland API: the Washington Hotel (493 10th Street) and Swan's Market (538 9th Street/ 930 Clay Street/901–921 Washington Street). Swan's Market is individually listed on the National Register. In both station design options, two façades of each building would face elements of the station, platform, and support structures.

The Washington Hotel was constructed in 1913 as a hotel. It is a four-story, brick Italianate building. Other than its oversized, projecting, pressed metal cornice, the architectural detailing on this building is simplified and restrained. Windows are trimmed with slightly projecting brick, string courses below the second and fourth floors are executed in brick, and the engaged pilasters are also simply outlined in slightly projecting brick. A double-height first floor houses several commercial spaces as well as the entrance to the hotel, located on 10th Street. At approximately 60 feet in height, the Washington Hotel is the tallest building in the Old Oakland API.

Swan's Market occupies an entire city block bounded by 10th Street to the north, Washington Street to the east, 9th Street to the south, and Clay Street to the west. It is constructed with brick exterior walls and an internal steel-frame support structure. The original one-story building was constructed in 1917 and expanded in 1918, 1925, and 1940. Its iconic marquee was added in 1952. In 2000, a major rehabilitation project resulted in repairs to the original one- and two-story portions of the building and the addition of a three-story structure along Clay Street. The current interior configuration of the building dates to 2000. It was listed under Criterion C (architecture) on the National Register in 2001 as "an early local example of the public market building type" (National Register Nomination, 2001). This resource includes the following character-defining features:

- White glazed brick
- Terra cotta tile exterior cladding
- Polychrome terra cotta ornament

- Regular storefront/entry bays
- Three-story vertical marquee at Washington and 10th Streets

Under both options, the Convention Center Station would have a platform height of 58 feet, approximately equal in height to the top of the Washington Hotel. This is approximately 40 feet higher than Swan's Market and 20 feet higher than the Swan's Market marquee at the corner of 10th and Washington Streets. With the Option 1 design for a cantilevered Convention Center Station, the station would sit back from the 10th Street elevations of both buildings, terminating at the approximate centerline of 10th Street. The Option 1 design would then extend down Washington Street for the length of three bays of Swan's Market and half the Washington Street façade of the Washington Hotel. This station design would maintain a minimum 20-foot clearance from the buildings. The station's support piers would partially obscure views of the historic buildings from the street below the station platform. The station platform itself would be high enough to avoid obstructing at-grade views along 10th Street, including views of the Swan's Market marquee. However, it would cast additional shadow over portions of both buildings and alter the setting of the district at its northern boundary by introducing a modern transportation system with its associated structures.

The Option 2 design for a non-cantilevered Convention Center gondola station would sit at the same height (58 feet), but would extend both the station mass and the platform mass farther into the API. Under this design option, the Convention Center Station would terminate at the southern edge of 10th Street, closer to the 10th Street elevations of both buildings. The station would terminate closer to, but still approximately 20 feet above, the Swan's Market marquee. It would be much closer to the 10th Street elevation of the Washington Hotel, creating additional shadow at the northwest corner of the building. The platform would extend farther down Washington Street than in the cantilever station option, creating additional shadow over approximately four bays of Swan's Market and three-quarters of the Washington Street elevation of the Washington Hotel. Option 2 would be more visually present at the northern district boundary and would be directly visible from all hotel rooms facing Washington Street.

As viewed from the intersection of 7th and Washington Streets at the southern end of the API, looking north through the district, the both station designs would be visible against the solid backdrop of the Convention Center's south elevation, a contemporary building located outside the API. Looking south through the API from the intersection of 10th and Washington Streets at the northern end of the API, the 72-inch-diameter station's support piers would frame views down Washington Street, partially obscuring street-level views of Swan's Market (538 9th Street/930 Clay Street/901-921 Washington Street) and the Washington Hotel (493 10th Street). Under either option, the platform would cast additional shade over the intersection and both buildings. In this section of the API, the setting of a 19th-century commercial district would be altered by introducing the new platform and station structure, both of which would have a modern appearance that is not in keeping with the existing setting. It would also affect the integrity of feeling in this section of the district. Introducing these new elements is likely to diminish the 19th-century character through visual interruption of building façades and longer views through the district from its northern boundary.

Additionally, both station designs would result in additional shadow and limited visual obstruction directly in front of two contributors to the Old Oakland API. In the rest of the API, the gondola cabins would pass above the street at heights greater than the tops of the buildings in the Aerial Gondola Variant study area. As the gondola cabins pass through the Old Oakland API, they would have the potential to cast limited, brief, additional shadows within the API. While not directly affecting the district, their presence would serve as a distraction from the 19th-century pedestrian setting by introducing a new form of aerial transportation through the district.

Under the Aerial Gondola Variant, no contributing resources would be demolished or otherwise physically altered, and all character-defining features would remain intact. However, impacts on the setting at the district's northern boundary and overhead through the district would result from the introduction of new gondola-related features.

Impacts of introducing new elements into the Old Oakland API would stem primarily from the location, mass, bulk, and design of the Convention Center Station. Overhead cars and the ropeline would be generally outside the field of vision from observers at ground level in the district. As discussed above, the most impactful element would be the gondola station itself. Therefore, the Convention Center Station would be subject to special design standards set forth in new Mitigation Measure CUL-7 to ensure that a sensitive and responsive contextual design is developed for the Convention Center gondola station within the Old Oakland API.

> **Mitigation Measure CUL-7: Convention Center Station Contextual Design Review.**
>
> The design of the Convention Center Station should minimize the horizontal and vertical extent of the new architectural structure to the greatest extent feasible within the final determined design constraints. It should occupy the minimal footprint possible and locate that footprint outside of the Old Oakland API to the greatest extent possible. In addition, the design of the platform should follow the minimal dimensions possible to limit visual intrusions and obstruction within the Old Oakland API. In addition, the stations should be composed of transparent materials, small-dimension structural elements, and/or design features that minimize the structure's bulk and mass within the intersection of 10th and Washington Streets.

Regardless of the final design, the Convention Center Station and platform would still be located within the Old Oakland API; would still have a substantial physical presence in that area of the district; and by its very nature, would be a clearly modern transportation-related addition in a 19th-century pedestrian-oriented commercial district. Therefore, this mitigation measure would not reduce the impacts of the Aerial Gondola Variant to less than significant. Therefore, the impact would be *significant and unavoidable*.

Because of the anticipated proximity of construction activities for the Convention Center Station to contributors of the Old Oakland API, the following Project mitigation measure would also apply to the Aerial Gondola Variant.

Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (See Section 4.4, *Cultural and Tribal Cultural Resources*)

Significance after Mitigation: Significant and Unavoidable.

Impact CUL-11: The proposed Project, with the Aerial Gondola Variant, would not result in indirect impacts to the former Alameda County Coroner's Office and Morgue at 480 4th Street, a potentially historic resource. (Criterion 1) (*Less than Significant*)

As proposed, the design of the central gondola tower would consist of a four-pier base topped by a tapering steel structure. The piers would be 72 inches in diameter for the first 3 feet above grade, decreasing to 60 inches in diameter from 3 to 15 feet above grade (see Figure 5-13). Above 15 feet, the structure would change to a series of steel structural members, similar to an electrical transmission tower (see Figure 5-13). The overall design would be transparent above 15 feet, with limited obstruction of views of adjacent buildings as seen from grade. The new gondola and its tower would not block views of the Alameda County Coroner's Office, nor would it obstruct passage to or around the building. The building is potentially historically significant for its Art Deco architecture and its design by master architect Henry H. Meyers and is conservatively considered a historic resource for the purposes of analysis in this EIR only. This significance would not be altered and views of the primary (south) façade would not be obstructed by the introduction of the gondola tower on Washington Street. The proposed location of the gondola tower has the potential to partially obstruct access to the current parking lot associated with the building; however, this lot is not historically significant and a secondary entrance to the lot is available from 4th Street. Because the building is historically significant for its historical function as a county morgue, partial obstruction of its secondary (west) façade would not diminish its historical integrity. Therefore, the impact would be *less than significant*.

Impact CUL-12: The proposed Project, with the Aerial Gondola Variant, could result in indirect impacts to the West Waterfront ASI. (Criterion 1) (*Less than Significant with Mitigation*)

From the street, the gondola would not block views or otherwise interfere with the early-20th-century industrial setting that is a character-defining feature of the West Waterfront ASI.[13] The passing gondola cabins would cast shadows within the ASI as they pass overhead but would not directly affect any of the contributors. As viewed from the street, the presence of an overhead transportation system would not alter views through the ASI, relationships between the contributing buildings, or any architectural features of the district or any individual contributor.

Because of the anticipated proximity of construction activities for the Jack London Square Station to the Western Pacific Railroad Depot, Project Mitigation Measure CUL-2 (Vibration Analysis

[13] The City of Oakland Historic Preservation Element does not confer historic status to ASIs for the purposes of CEQA. However, out of an abundance of caution, the City has elected to treat the West Waterfront ASI as a resource for the purposes of this CEQA analysis.

for Historic Structures) would also apply to the Aerial Gondola Variant. Maintaining vibration levels below a site-specific threshold would limit the potential for damage associated with construction activities. Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures) would reduce potential impacts to less than significant. Therefore, with implementation of this mitigation measure, the impact of the Aerial Gondola Variant on the West Waterfront ASI would be less than significant.

> **Mitigation Measure CUL-2: Vibration Analysis for Historic Structures.** (See Section 4.4, *Cultural and Tribal Cultural Resources*)
>
> **Significance after Mitigation:** Less than Significant.

Impact CUL-13: The proposed Project, with the Aerial Gondola Variant, could introduce new structures that could impact the setting immediately adjacent to the Western Pacific Railroad Depot, a historic resource. (Criterion 1) (*Less than Significant with Mitigation*)

The Aerial Gondola Variant would travel down Washington Street, along the western, secondary façade of the Western Pacific Railroad Depot. The Depot is a one-story building that is approximately 20 feet in height. The gondola cabins would pass over the depot at a height of approximately 70 feet. The new gondola features would not block views of the depot, obstruct passage to or around the depot, or otherwise alter the depot's significance as a contributor to the industrial growth of Oakland during the early 20th century.

From the street, the gondola cabins would not block views or otherwise interfere with the architectural character or any individual character-defining features of the Western Pacific Railroad Depot. The passing gondola cabins would cast intermittent shadows on the resource but would not directly affect it. The presence of an overhead transportation system would not alter the resource or relationships between the building and the former track locations along 3rd Street. This resource would not be demolished or otherwise physically altered as a result of the Aerial Gondola Variant. Therefore, the indirect impact of the Aerial Gondola Variant on the Western Pacific Railroad Depot resulting from the altered setting would be less than significant.

Because of the anticipated proximity of construction activities for the Jack London Square Station to the Western Pacific Railroad Depot, Project Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures) would also apply to the Aerial Gondola Variant. Maintaining vibration levels below a site-specific threshold would limit the potential for damage associated with construction activities. Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), would reduce potential impacts to less than significant.

> **Mitigation Measure CUL-2: Vibration Analysis for Historic Structures.** (See Section 4.4, *Cultural and Tribal Cultural Resources*)
>
> **Significance after Mitigation:** Less than Significant.

Impact CUL-4.CU: The proposed Project, in combination with the Aerial Gondola Variant, would contribute to a citywide significant cumulative impact on cultural and historic resources identified in the DOSP EIR through changes to the setting of the Old Oakland API. (Criterion 1) (*Significant and Unavoidable with Mitigation*)

The Aerial Gondola Variant would introduce a modern gondola station along the northern boundary of the Old Oakland API that would be located close to two contributors to the API, one of which is individually listed on the National Register. This variant would also introduce a ropeline above the district, following Washington Street, through the API. Both elements of the variant would be visible within the API, as viewed at grade from Washington Street. Only the ropeline would be visible from within the API as viewed from other locations. The station would introduce new shadows up to one-quarter block into the API along Washington Street. The ropeline and gondola cabins would cast intermittent shadows on those API contributors along Washington Street. As discussed above, the Aerial Gondola Variant has the potential to significantly alter the setting of the Old Oakland API.

The Draft Downtown Oakland Specific Plan EIR identifies two types of cultural resources impacts related to increased development: one related to the potential loss of specific properties and the other related to potential alterations of specific properties. The DOSP EIR also identifies a significant and unavoidable cumulative impact with regard to citywide cultural resources, including "past, present, existing, approved, pending, and reasonably foreseeable future development" (City of Oakland, 2019:362).

The Aerial Gondola Variant falls within the boundaries of the DOSP, and would result in a significant and unavoidable impact on the setting of the Old Oakland API, a historic resource subject to the DOSP. Even with implementation of Mitigation Measure CUL-7 (Convention Center Station Contextual Design Review) and Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), this impact cannot be mitigated to a less-than-significant level. It would therefore contribute to the citywide significant and unavoidable cumulative impact identified in the DOSP EIR.

> **Mitigation Measure CUL-7: Convention Center Station Contextual Design Review.** (See Impact CUL-10)
>
> **Mitigation Measure CUL-2: Vibration Analysis for Historic Structures.** (See Section 4.4, *Cultural and Tribal Cultural Resources*)
>
> **Significance after Mitigation:** Significant and Unavoidable.

Archaeological Resources, Human Remains, and Tribal Cultural Resources

The Aerial Gondola Variant would result in the ***same archaeological resources, human remains, and tribal cultural resources impacts and mitigation measures*** as identified for the proposed Project without the variant (Chapter 4 and Table 2-1). Similar to the proposed Project, this variant is in a location that does not have any previously recorded prehistoric resources. Construction of the variant would occur in areas that have been highly disturbed and consist primarily of artificial

fill. The variant would include construction in areas within the historic shoreline and inland that have a heightened potential for prehistoric resources; however, the area has also been highly disturbed by existing infrastructure. Based on a review of site distribution in this area (NWIC, 2018) and previous disturbance, the Aerial Gondola Variant would be constructed in an area that has a lessened potential to uncover previously undiscovered prehistoric archaeological resources, human remains, or tribal cultural resources.

The Aerial Gondola Variant site also does not have any previously recorded historic-era archaeological resources. The variant footprint lies within existing roadways, which have a lessened archaeological sensitivity for historic-era features such as artifact-filled wells and privies that are usually found in the rear lots of residences and businesses. In addition, similar to the proposed Project, the potential exists to uncover historic-era archaeological materials and features such as purposeful fill and architectural features. However, based on the standards in Section 15064.5 of the State CEQA Guidelines, these types of materials are not likely to yield important information in history, nor do they contain information needed to answer important scientific research questions; therefore, such materials are not likely be considered a historical resource or a unique archaeological resource for the purpose of CEQA.

Given the potential to uncover historic-era archaeological materials and features in the vicinity of the Aerial Gondola Variant, the discovery of these types of resources, if not appropriately evaluated after discovery, would be a potentially significant impact. However, implementing the mitigation measures proposed for the Project would reduce impacts on archaeological resources by requiring that archaeological monitoring occur in areas of historic-era archaeological sensitivity and that work halt in the vicinity of a find until it is evaluated by a Secretary of the Interior–qualified archaeologist.

The proposed Project with this variant would be subject to the same mitigation measures as identified for the proposed Project and would result in the same less-than-significant impacts on archaeological resources, human remains, and tribal cultural resources as identified for the proposed Project without this variant.

No new or changed impacts related to archaeological and tribal resources or human remains would occur with this variant and no additional mitigation measures would be required.

Energy

Construction Energy Use

Construction-related energy use was estimated for activities that would be associated with building the Aerial Gondola Variant. Construction would involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other Project activities associated with ballpark and non-ballpark building construction would remain the same as for the Project.

Construction of the Aerial Gondola Variant would result in greater energy use requirements than the Project alone. The construction equipment list for the Aerial Gondola Variant was provided

by the Project sponsor. **Table 5-21** shows diesel and electricity usage by off-road equipment and on-road construction vehicles and electricity associated with water use. Details of the construction assumptions are presented in Appendix ENE.

TABLE 5-21
AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) CONSTRUCTION ENERGY RESOURCE USE

Energy Use Type	Unit of Measure	Project Construction Usage[a]	Aerial Gondola Variant[b]	Combined Project and Aerial Gondola (Variant)
Electricity				
Water Consumption	kWh/Project	815,619	16	815,635
Off-Road Equipment[b]	kWh/Project	3,019,591	8,922	3,028,513
Total Electricity Use	**kWh/Project**	**3,835,210**	**8,938**	**3,844,148**
Annual Average Electricity Consumption[c]	**kWh/year**	**547,887**	**1,277**	**549,164**
Diesel				
On-Road Vehicles	gallons/Project	777,648	503	778,151
Off-Road Equipment	gallons/Project	1,845,763	85,979	1,931,742
Total Diesel Use	**gallons/Project**	**2,623,410**	**86,482**	**2,709,893**
Annual Average Diesel Use[c]	**gallons/year**	**374,773**	**12,355**	**387,128**
Gasoline				
On-Road Vehicles	gallons/Project	869,915	7,445	877,360
Total Gasoline Use	**gallons/Project**	**869,915**	**7,445**	**877,360**
Annual Average Gasoline Use[c]	**gallons/year**	**124,274**	**1,064**	**125,337**

NOTES:

kWh = kilowatt-hours

a See Section 4.5, *Energy*, Table 4.5-3.
b See *Energy Technical Report*, Tables 20 through 23.

SOURCE: Ramboll, 2020. (Detail provided in Appendix ENE to this Draft EIR.)

As shown in Table 5-21, construction of the Aerial Gondola Variant would result in additional consumption of electricity, diesel, and gasoline. The overall energy use requirements of the gondola combined with the Project would not be substantial relative to the total sales of transportation fuels in Alameda County. In addition, implementing Mitigation Measure AIR-1b (Criteria Air Pollutant Controls) would help avoid the wasteful or inefficient use of energy during construction by requiring that equipment be well maintained, and would require that idling of commercial vehicles exceeding 10,000 pounds and off-road equipment exceeding 25 horsepower be limited to a maximum of 2 minutes in accordance with Title 13, Sections 2485 and 2449 of the California Code of Regulations. Implementing Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) would avoid the inefficient use of energy by requiring newer, more efficient off-road construction equipment; Mitigation Measure AIR-2d (Diesel Truck Emission Reduction) would reduce diesel fuel use in trucks by reducing truck idling and requiring electric hook-ups for loading docks; and Mitigation Measure AIR-2e (Criteria Pollutant Mitigation Plan) would incorporate a wide variety of emissions reduction measures into the Project design before the start

of construction, which would further reduce energy use associated with operations (although the specific measures to be implemented are currently not known).

Therefore, construction of the Aerial Gondola Variant would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy, or conflict with adopted energy conservation plans or violate energy standards. The impacts would be *less than significant with mitigation, the same as identified for the proposed Project without the variant*.

Operational Energy Use

The Aerial Gondola Variant would have three effects on energy use:

(1) It would reduce electricity and fuel used by vehicles traveling to and from the Project site, because some visitors to the site would take the Aerial Gondola instead of a vehicle.

(2) It would consume electricity for its own operation at each of the two proposed stations.

(3) It would increase diesel fuel use relative to emergency generator testing.

Table 5-22 shows the energy reduced from vehicles and the energy consumed by the gondola and emergency generators.

The potential for the proposed variant (the Project with the aerial gondola) to result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or to conflict with an adopted energy conservation plan or violate energy standards, would result in a less-than-significant impact relative to electricity consumption. Compared to the Project, the variant would result in beneficial impacts relative to natural gas, diesel, and gasoline consumption. The *same less-than-significant with mitigation impacts would result as identified for the proposed Project without the variant*. No new or additional impacts or mitigation measures for this topic would be required.

Geology, Soils, and Paleontological Resources

The Aerial Gondola Variant would result in similar geology, soils, or paleontological resources to those identified for the proposed Project without this variant. Although geology, soils, and paleontological resources conditions can vary within that distance or less, the setting conditions for geology, soils, and paleontological resources for this variant are based on information obtained from available published sources. For parts of the gondola system located near the proposed Project site (i.e., Jack London Square Station), reasonable assumptions have been made that overall seismic and geologic conditions along the gondola corridor would be similar to those discussed for the proposed Project in Chapter 4 of this document, except as specified below. As stated previously in this chapter, the conceptual design of the gondola considered existing site geology to determine the amount and scale of foundation areas to support the stations and towers (SCJ Alliance, 2019). Also see the discussion of off-site conditions factored into this analysis in Section 5.2.2, *Study Area and Setting*.

TABLE 5-22
AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) OPERATIONAL ENERGY RESOURCE USE

Energy Use Type	Change from Baseline to Full Project Buildout	Aerial Gondola	Combined Project and Aerial Gondola (Variant)
Electricity (MWh/year)			
Buildings	52,391	–	52,391
Water Consumption	3,733	–	3,733
Aerial Gondola	–	4,887	4,887
Mobile Sources	1,063	-123	941
EV Chargers	235	–	235
Total Electricity Use	**57,421**	**4,764**	**62,186**
Natural Gas (kBtu/year)			
Buildings	68,948,041	–	68,948,041
Mobile Sources	3,542,903	-457,205	3,085,697
Total Natural Gas Use	**72,490,944**	**-457,205**	**72,033,738**
Diesel (gallons/year)			
Mobile Sources	1,018,386	-131,723	886,663
TRU Operation	59	–	59
Mobile Source Reduction from EV Chargers	-8,453	–	-8,453
Generator Testing	16,167	8,221	24,388
Total Diesel Use	**1,026,159**	**-123,503**	**902,657**
Gasoline (gallons/year)			
Mobile Sources	3,154,454	-426,824	2,727,631
Mobile Source Reduction from EV Chargers	-26,518	–	-26,518
Total Gasoline Use	**3,127,936**	**-426,824**	**2,701,113**

NOTES:
EV = electric vehicle; kBtu = thousand British thermal units; MWh = megawatt-hours; TRU = transport refrigeration unit
SOURCE: Appendix ENE

Like the proposed Project site, this variant is located in a recognized seismically active region of California and the Bay Area, with the nearest active fault located at the same distance to the east as from the proposed Project site, as discussed in Section 4.6 of Chapter 4. Located in a built-out urban area of downtown and Jack London Square, including the proposed Project gondola tower location at 4th and Washington Streets, the reasonable likelihood of the presence of unmarked utilities, subsurface hazards, or alternative wastewater disposal systems is minimal.

Unlike the proposed Project site and area, which is typified by soils with "High Liquefaction Susceptibility," the Aerial Gondola Variant area north of Water Street (especially nearly all of downtown Oakland) is typified by "Moderate Liquefaction Susceptibility" (City of Oakland, 2019: Figure V.H-3). To the extent that soil conditions are expansive or corrosive, or that unique paleontological resources or geologic features exist, appropriate mitigation measures (or similar

City Standard Conditions of Approval) and regulatory requirements that would apply to the proposed Project or other similar development projects in downtown Oakland would apply to the variant. These measures include Mitigation Measures GEO-1 (Site-Specific Final Geotechnical Report) and GEO-2 (Inadvertent Discovery of Paleontological Resources During Construction). No new or additional impacts or mitigation measures for this topic would be required.

Greenhouse Gas Emissions

The Aerial Gondola Variant would result in additional construction GHG emissions compared to the Project, because of the construction activity required to build the gondola, and in a reduction in operational GHG emissions with the shifting of on-road vehicle trips to the electrically powered gondola as a mass transit option for people going to the Project site.

Construction Emissions of Greenhouse Gases

Construction emissions were estimated for activities to build the gondola. Construction would occur from Year 2 to Year 4 and would involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other Project activities for ballpark and non-ballpark building construction would remain the same as described for the Project. Details of the construction assumptions are presented in Appendix AIR.

Construction for the Aerial Gondola Variant would emit approximately 867 $MTCO_2e$ during the years Year 2 through Year 4, as shown in Table 102 of the *Air Quality Technical Report* (see Appendix AIR). The additional construction emissions would amount to approximately 29 $MTCO_2e$ per year when amortized over the 30-year life of the variant, resulting in total amortized construction emissions for the Aerial Gondola Variant of approximately 1,113 $MTCO_2e$ per year. This value represents mitigated construction emissions, accounting for construction activity associated with implementation of the pedestrian and bicycle overcrossing as well as off-site construction for transportation improvements required as mitigation in Section 4.15, *Transportation and Circulation*.

Operational Emissions of Greenhouse Gases

Because the Aerial Gondola Variant would preserve all of the square footage of the Project, the land uses, activities, attendance, and population data would be the same as for the Project. Additionally, mobile-source trips for Project hauling, vendor deliveries, and workers would remain the same. The Aerial Gondola Variant would require the use of electricity, which would add approximately 477 $MTCO_2e$ per year to the Project, as shown in Table 106 of the *Air Quality Technical Report*. The variant would result in avoided GHG emissions because a reduction of VMT would occur as people use the gondola as a mass transit option instead of on-road vehicles, and in an increase in GHG emissions from the electricity required to power the gondola. As shown in Table 108 of the *Air Quality Technical Report,* the estimated annual reduction in VMT would be more than 15 million miles per year, resulting in an overall annual reduction in GHG emissions of approximately 5,086 $MTCO_2e$ per year at full buildout.

Greenhouse Gas Emissions Impact

Table 5-23 presents total annual GHG emissions (amortized construction plus operations) under the Aerial Gondola Variant at full buildout (Year 8). As shown, net new emissions for the Aerial Gondola Variant would be approximately 48,460 $MTCO_2e$ per year without mitigation, approximately 4,497 $MTCO_2e$ per year less than Project emissions at full buildout. Thus, the Aerial Gondola Variant would have a smaller mitigation obligation than the Project to meet the "no net additional" emissions threshold under Impact GHG-1. With respect to Impact GHG-2, the Aerial Gondola Variant would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Rather, it would support the goals of SB 743, the City's Transportation Impact Review Guidelines, *Plan Bay Area 2040*, and the 2017 Scoping Plan Update, all of which seek to reduce VMT. Thus, with implementation of **Mitigation Measure GHG-1**, the GHG emissions impact of the Aerial Gondola Variant would *remain less than significant with mitigation*, as identified for the Project without this variant.

TABLE 5-23
ESTIMATED EMISSIONS FOR AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) AT FULL BUILDOUT (YEAR 8)

Source	$MTCO_2e$ per Year
Ballpark emissions[a]	10,384
Non-ballpark Project emissions[a]	48,068
Aerial Gondola Variant construction emissions (amortized over 30 years)[b]	**1,113**
Aerial Gondola Variant emissions from additional energy use[c]	**477**
Aerial Gondola Variant avoided emissions[d]	**-5,086**
Aerial Gondola Variant emissions from generators	84
Total variant emissions (unmitigated)	55,040
A's-related existing conditions emissions[e]	-6,580
Net new Variant emissions (unmitigated)	**48,460**

NOTES:

$MTCO_2e$ = metric tons of carbon dioxide equivalent

a From Section 4.7, Greenhouse Gas Emissions, Table 4.7-6.
b Mitigated conduction emissions, from Section 4.7, *Greenhouse Gas Emissions*, Table 4.7-5, adjusted for additional emissions from Aerial Gondola Variant construction as shown in Table 102 of the *Air Quality Technical Report*.
c From *Air Quality Technical Report*, Table 106.
d From *Air Quality Technical Report*, Table 1087.
e From Section 4.7, *Greenhouse Gas Emissions*, Table 4.7-4.

SOURCE: ESA and Ramboll (Appendix AIR)

Hazards and Hazardous Materials

The Aerial Gondola Variant would result in ***different hazardous materials impacts and mitigation measures*** compared to those identified for the proposed Project without this variant.

Hazardous Materials

The footprint of this variant is located entirely outside the footprint of the proposed Project (see Figure 5-1). The Aerial Gondola Variant location includes some of the oldest parts of Oakland

and some of its oldest buildings. Moreover, for years since the 1850s, land uses have included those that could result in soil and groundwater contamination (City of Oakland, 2019: Section H).

Environmental Conditions – Gondola Alignment

Hazardous materials are present at several sites near structures associated with the proposed gondola alignment, as summarized below. As discussed in Section 5.2.2, *Study Area and Setting*, the setting conditions for hazards and hazardous materials for this variant are based on information obtained from available published sources, and for parts of the gondola located near the proposed Project site (i.e., Jack London Square Station), reasonable assumptions have been made based on proximity. This information below is compiled from available site investigation reports and inventories and does not include all properties within the Aerial Gondola Variant alignment, including the stations proposed at Jack London Square (south end of Washington Street) and the Convention Center (Washington Street at 10th Street) and the gondola tower (Washington Street, between 4th and 5th Streets):

- **910 Broadway (hotel)** – During redevelopment of the site, a former parking lot, excavation activities for the hotel foundation encountered residual petroleum hydrocarbon contamination along the sidewalk area along 9th Street. The case met all General Criteria of the State Water Resources Control Board's *Low Threat Underground Storage Tank Case Closure Policy* (LTCP) and two of the three Media Specific LTCP Criteria. The findings of a subsequent vapor intrusion study demonstrated that concentrations of hydrocarbons were below the laboratory reporting limits for the indoor air samples, thus satisfying the LTCP vapor intrusion-indoor criteria.
- **810 Clay Street (former Salvation Army facility)** – A leaking underground storage tank case associated with this site was closed in January 2003. The leak had reportedly resulted from the former operation of a gasoline service station. Although no underground storage tank documentation had been identified, no tanks were encountered when impacts were identified in soil and groundwater in 1999. At the time of case closure, up to 3,800 milligrams per kilogram of total petroleum hydrocarbons as gasoline and 22 milligrams per kilogram benzene remained in the soil, and up to 180 micrograms per liter benzene remained in the groundwater.
- **1100 Clay Street (north of Convention Center/Marriott)** – This site is developed as green space containing art sculptures and large trees, and encloses the entryway and exit for the subterranean Oakland City Center parking garage and the loading dock of the adjacent 1111 Broadway building. The site was under construction for redevelopment when this Draft EIR was being prepared. Historical records indicate that the site was developed with commercial retail space, a boarding house, and a stable as early as 1889. By 1912, a restaurant and a candy factory occupied the area. Four underground storage tanks reportedly may be present at or adjacent to the site from a former Shell-branded service station. Groundwater and soil vapor impacts have been identified, likely associated with the underground storage tanks. The extent of a groundwater plume has not been determined.
- **461 8th Street (southwest corner of Broadway and 8th Street)** – A gasoline service station operated at the site until 1980, and free product was reported in a BART tunnel under the intersection of 7th Street and Broadway in January 1979. Approximately 2,600 gallons of a gasoline/water mixture were removed from the BART tunnel between October 1979 and April 1980. A Corrective Action Plan was prepared for the site in February 2008. Remediation by excavation and secondary remediation by in-situ chemical oxidation was

approved. The site was redeveloped in 2017. During excavation, impacted soil was encountered near the base of the excavation at 14 feet below the ground surface. Semi-annual groundwater monitoring is being performed, and free product was observed during one sampling event. A March 2018 sampling event identified 840 micrograms per liter benzene and 64 micrograms per liter ethylbenzene in groundwater samples. The Alameda County Department of Environmental Health requested a Corrective Action Plan and required delineation of off-site groundwater impacts.

- **Jack London Square – Parcel D (466 Water Street) (southwest corner of Embarcadero West and Broadway)** – Several environmental investigations performed at the site between 1994 and 2014 identified the presence of petroleum compounds and heavy metals in soil and groundwater at concentrations slightly over environmental screening levels. Recent testing identified heavy metals (total chromium, lead, and mercury) and low levels of petroleum hydrocarbons in shallow soil at the site. Soluble lead exceeded federal hazardous waste criteria in selected samples.
- **Jack London Square – Parcel C (south of Washington Street at Water Street)** – A 2007 site characterization identified low levels of metallic constituents in groundwater. Total petroleum hydrocarbons and heavy metals were identified in soil samples, mostly below screening levels. One composite soil sample exhibited a soluble lead concentration that exceeded State hazardous waste criteria.
- **Jack London Square Station – Site A (south of Water Street, between Clay and Washington Streets)** – Site A is located adjacent to the proposed Project site (east of Clay Street) and approximately 200 feet southeast of where the Jack London Square Station would be built (see Figure 4.8-5 in Chapter 4 of this Draft EIR). Construction of the Aerial Gondola Variant could encounter contaminated soil gas, soil, and/or groundwater at the proposed Jack London Square Station because of its location adjacent to the known hazardous materials at Site A. Residual levels of petroleum hydrocarbons, polycyclic aromatic hydrocarbons, and metals are present in soil and groundwater at Site A. Site A was previously investigated and the case closed. The San Francisco Bay Regional Water Quality Control Board concluded that Site A did not pose a threat to the public or the environment because polycyclic aromatic hydrocarbons and metals are not highly mobile; the chemical concentrations in groundwater are relatively low; and the future use of the site was to be open space, public recreation, and commercial. Contact with residual site contaminants is currently prevented by the hardscape of the existing building that covers Site A.

New Impact and Mitigation Measure

Based on the site conditions described above, the Aerial Gondola Variant site would not cause the potentially significant impacts or require the mitigation measures identified for the proposed Project (Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HYD-1 identified in Chapter 4), which are tailored to address the conditions of the proposed Project site, resulting from its historic industrial uses. However, impacted soils (and surface water or groundwater) could exist throughout the gondola corridor, including at the Convention Center Station and gondola tower locations, even though site-specific environmental conditions are not available for those locations for use in this Draft EIR.

The impacts of the Aerial Gondola Variant would be similar to those for any development project located downtown and in Jack London Square; therefore, the mitigation measures and regulatory requirements for traditionally applied to such projects are appropriate for the variant. The

proposed construction of the Aerial Gondola Variant could cause construction workers to encounter contaminated soil, and possibly contaminated groundwater if dewatering is required, resulting in a significant impact. Hence, the following new impact (not identified for the proposed Project without this variant) would apply, and the following new mitigation measure is identified to reduce the new potential impact of the Aerial Gondola Variant to less than significant:

Impact HAZ-5: The proposed Project, with the Aerial Gondola Variant, would have the potential to encounter hazardous materials which could create a significant hazard to the public or the environment. (Criterion 5) (*Less than Significant with Mitigation*)

Mitigation Measure HAZ-3: Aerial Gondola Soil and Groundwater Management Plan.

Soil and Groundwater Management Plan. Prior to issuance of a building permit for the Aerial Gondola Variant, the contractor shall develop a Soil and Groundwater Management Plan (SGMP) specifying how the construction contractor(s) will remove, handle, transport, and dispose of all excavated materials in a safe, appropriate, and lawful manner. The plan shall be implemented before the start of construction activities. The SGMP must identify protocols for soil testing and disposal. Contract specifications shall mandate full compliance with all applicable federal, State, and local regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil.

Hazardous Waste Management Procedures. If soil classified as hazardous waste is encountered, the material shall be managed as hazardous waste pursuant to California Code of Regulations Title 22, Division 45, in accordance with the following procedures:

- Excavation and transportation shall be performed by Occupational Safety and Health Administration–certified personnel, as needed and required by all federal, State, or local laws.
- Soil shall either be characterized in-situ or staged on-site for characterization. If all or any portion of the soil is determined to be hazardous waste, such portion shall be managed and disposed of in accordance with applicable hazardous waste regulatory requirements.
- Breathing zones shall be monitored for dust control.
- All haul trucks (including those transporting soil, sand, or other loose material including demolition debris off-site) shall be covered, as required by applicable laws.
- Soil that is visibly impacted or has an odor shall be stockpiled on-site, if needed, and shall be placed on 10-mil plastic sheeting, or equivalent, pending characterization. As necessary, based on meteorological and site conditions, the soil stockpiles shall be protected and secured to prevent dust or runoff during storm events.

Groundwater Dewatering Controls. As part of the SGMP, the contractor shall develop a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate, and lawful manner. Consistent with Best Management Practices (BMPs), the SGMP must identify the locations at which groundwater dewatering is likely to be required; the test methods to analyze groundwater for hazardous materials; the

appropriate treatment and/or disposal methods; and approved disposal site(s), including written documentation that the disposal site can accept the waste. The contractor(s) may also discharge the effluent under an approved permit to a publicly owned treatment works, in accordance with any requirements the treatment works may have.

Site-Specific Health and Safety Plans (HASPs). The contractor shall develop a site-specific HASP as part of the SGMP to ensure that construction activities are performed in a manner protective of the health and safety of site construction workers and of interim site uses in the construction zone(s). The HASP is a mechanism through which the workers involved in the construction are informed of the presence of chemicals in the area prior to initiating work.

Review and Approval. The SGMP shall be submitted to the California Department of Toxic Substances Control and the City for review and approval prior to commencement of construction.

Significance after Mitigation: Less than Significant.

New Impact HAZ-5 and Mitigation Measure HAZ-3 above would apply specifically to the Aerial Gondola Variant and would not apply to the proposed Project. Impacts of development on the Howard Terminal property are addressed by Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HYD-1.

The use of hazardous materials during the construction and operation of the Aerial Gondola Variant would be subject to the same existing regulations as the proposed Project that address the routine use and accidental spills of hazardous materials (Impact HAZ-1).

Emergency Response/Evacuation

In addition, similar to the proposed Project, the Project sponsor would be required to develop and implement a traffic control plan for the Aerial Gondola Variant to ensure that emergency vehicles could pass through the area during operations and construction, and more generally, to ensure that the variant would not adversely affect emergency response or evacuation plans. With this variant, vehicular traffic other than emergency service vehicles would no longer have access to Washington Street between Embarcadero West and Water Street, because of the development of the Jack London Square Station. The Convention Center Station also may result in changes to, or limited access on, 10th Street and/or parts of Washington Street. Also, the diagonal escalator bank from the Jack London Square Station may encroach on Water Street, potentially limiting traffic flow compared to existing conditions. These potential changes would not cause new significant CEQA impacts but would be managed through the City to ensure safety, traffic flow, and emergency access/egress, and through adherence to improvements and measures in the aforementioned traffic control plan and specifically the Project's Transportation Management Plan (TMP) (see Section 5.2.14 below and Section 4.15 in Chapter 4).

Summary

In summary, the proposed Project with this variant would result in a ***new hazardous materials impact and mitigation measure*** that would replace the site-specific Project impact and mitigation identified to address potential exposure to the public and environment without this variant. With the incorporation of this new mitigation measure, impacts of the Aerial Gondola Variant would be similar to those of the Project.

Hydrology and Water Quality

The Aerial Gondola Variant would result in ***different hydrology and water quality impacts and mitigation measures*** than those identified for the proposed Project without this variant.

Water Quality

As discussed in Section 5.2.2, *Study Area and Setting*, the setting conditions for hydrology and water quality for this variant are based on information obtained from available published sources, and for parts of the gondola located near the proposed Project site (i.e., Jack London Square Station), reasonable assumptions have been made based on proximity to the Project site.

As discussed in Section 4.8, *Hazards and Hazardous Materials,* the Aerial Gondola Variant corridor includes some of the oldest parts of Oakland and some of its oldest buildings. Land uses have included uses that could result in soil and groundwater contamination, although conditions at the variant site are not fully characterized. To the extent that impacted surface water or groundwater exists or would be affected by the variant during construction or operation, appropriate mitigation measures and regulatory requirements appropriate for development projects in the vicinity of downtown and Jack London Square would apply.

Despite the potential for hazardous conditions to exist in or near the gondola corridor (as discussed above in Section 5.2.8), the sites where the two gondola stations and gondola tower would be constructed would not necessarily warrant the same impact or mitigation measures identified for the proposed Project. Therefore, new **Impact HYD-6** below is identified to address potential impacts on surface water and groundwater quality resulting from this variant.

Mitigation measures identified for the proposed Project require preparation, approval, implementation, and compliance of specific remedial action workplans, covenants, and associated plans to address hazardous soil and water conditions (Mitigation Measures HAZ-1a, HAZ-1b, and HAZ-1c and HYD-1 identified in Chapter 4). These requirements are not warranted for the Aerial Gondola Variant and would not apply. New **Mitigation Measure HAZ-3** (identified to address potential hazardous materials) also addresses surface water and groundwater quality and would apply to this variant.

Impact HYD-6: The proposed Project, with the Aerial Gondola Variant, could violate surface water and groundwater quality standards, result in erosion or siltation on- or off-site that could affect receiving water quality, and/or substantially degrade surface water and groundwater quality and conflict with implementation of a water quality control plan. (Criteria 1, 3, and 7) (*Less than Significant with Mitigation*)

> **Mitigation Measure HAZ-3: Aerial Gondola Soil and Groundwater Management Plan** (See Impact HAZ-5)
>
> **Significance after Mitigation:** Less than Significant.

Flooding

Like most of the proposed Project site, the corridor for the Aerial Gondola Variant is completely covered by impervious hardscape and minimal landscaping. Also, except for areas in the north and northeast areas of the proposed Project site (in particular, parts of the Peaker Power Plant Variant, as discussed in Section 5.1), the proposed Aerial Gondola Variant stations and corridor are not in areas subject to the 100-year flood zone, per Federal Emergency Management Agency maps (Moffat & Nichol, 2019; City of Oakland, 2019: Section J). This variant would not change this condition, stormwater flows, the risk of flooding, or the flooding potential into existing City and Port storm drainage facilities that discharge to San Francisco Bay.

With regard to flooding and sea level rise, the proposed Jack London Square Station is in an area that could be inundated with 6.3 feet of sea level rise (City of Oakland, 2019: Section J). The gondola boarding platform at the Jack London Square Station would be approximately 27 feet above the ground, making it resilient to future projected sea level rise; however, the escalators near the ground level and the elevators and storage proposed to occur in an existing building could be susceptible to future rising sea levels. Similar to the proposed Project, at existing grades, the Jack London Square Station site falls within the guidance range (5.7 to 6.9 feet) for medium-high risk aversion from the State (OPC, 2018), and would meet the medium-high risk aversion sea level rise range through 2090.

As with the proposed Project, Mitigation Measure HYD-3 would require the Project sponsor to develop and implement strategies to address the medium-high risk aversion scenario subject to approval by the City and the California State Lands Commission pursuant to AB 1191. With Mitigation Measure HYD-3, the proposed Project with the Aerial Gondola Variant would continue to have a less-than-significant effect related to exposing people or structures to a substantial risk of loss, injury, or death from sea level rise–related flooding under the medium-high risk aversion for the high-emissions scenario through 2100. Therefore, the variant would result in the same impacts as the Project related to flooding. No new or changed impacts would occur and no new mitigation measures would be required.

Summary

No other new or additional impacts or mitigation measures for hydrology and water quality would be required.

Land Use, Plans, and Policies

The Aerial Gondola Variant would result in the same land use, plans, and policies impacts as identified for the proposed Project without the variant (Chapter 4 and Table 2-1). The aerial gondola ropeline and cabins would be elevated above existing structures along Washington Street, and would exceed the minimum vertical clearances required by the California Department of Transportation above I-880 and by the California Public Utilities Commission above the UPRR tracks. Therefore, the gondola would not create a barrier that would prevent or hinder the existing flow of people or goods. The proposed gondola stations would generally sit above existing roadways in urbanized areas, and would not cause a physical division of a community. Therefore, similar to the proposed Project, the Project with this variant would not cause the physical division of an established community.

With regard to land use compatibility, the Project with the Aerial Gondola Variant would introduce transportation-related uses along the existing transportation corridor provided by Washington Street from 10th Street in downtown Oakland to Jack London Square. Adjacent uses to the variant site include mixed-use residential and commercial uses in Old Oakland, civic uses along Washington Street (including the Wiley W. Manuel Courthouse and the Oakland Police Department headquarters), and commercial uses in Jack London Square. The gondola is proposed to cross over the skyway between the courthouse and police building at Washington and 6th Streets (high enough to avoid gondola passengers peering into the 6th floor windows), over I-880, and over the UPRR tracks. The ropeline would be over the street. Thus, the aerial gondola would not disrupt or degrade adjacent land uses to such a degree that the functional use of the adjacent land for its existing or planned purpose would be imperiled.

With regard to conflicts with land use policies, the Jack London Square Station site is located on land subject to trust use restriction. Assuming that the variant site is subject to the trust, impacts related to a conflict with the Public Trust Doctrine would not be greater than those for the proposed Project. The variant site is not located within the BCDC Seaport Plan's designated Port Priority Use Area, and the Seaport Plan would not need to be amended for the variant to move forward.

The variant site includes a General Plan land use designation of Central Business District (CBD) north of I-880, and land use designations of RD&E-1, RD&E-2, and Off-Price Retail District under the Estuary Policy Plan. The proposed transportation-related uses would not conflict with these designations. These uses would support General Plan policies of incorporating design features for alternative travel and linking neighborhoods with the waterfront (Policies T4.1 and W2.1), and Estuary Policy Plan objectives to create greater land use continuity between the Estuary waterfront and adjacent inland district (Objective LU-6). The Jack London Square Station would be subject to the Estuary Policy Plan.

The majority of the proposed aerial gondola, including the tower and ropeline, would be constructed within the City's right-of-way. Under Option 1 for the Convention Center Station (cantilevered station over the Convention Center) would partially be located within a parcel subject to the CBD Zone, specifically the Central Business District General Commercial Zone (CBD-C), Height Area 6, no limit. The intentions for the general CBD Zones include:

(1) Encourage, support, and enhance the CBD as a high density, mixed-use urban center of regional importance and a primary hub for business, communications, office, government, urban residential activities, technology, retail, entertainment, and transportation.

(2) Encourage, support, and enhance a mix of large-scale offices, commercial, urban high-rise residential, institutional, open space, cultural, educational, arts, entertainment, services, community facilities, and visitor uses.

(3) Enhance the skyline and encourage well-designed, visually interesting, and varied buildings.

(4) Encourage and enhance a pedestrian-oriented streetscape.

(5) Encourage vital retail nodes that provide services, restaurants, and shopping opportunities for employees, residents, and visitors.

(6) Preserve and enhance distinct neighborhoods in the CBD.

The intent of the CBD-C Zone is to create, maintain, and enhance areas of the Central Business District appropriate for a wide range of ground-floor office and other commercial activities. Upper-story spaces are intended to be available for a wide range of residential and office or other commercial activities. The proposed Convention Center Station would not fundamentally conflict with the CBD-C Zone, as the aerial gondola would introduce additional transportation infrastructure in the downtown area. Option 2 for the Convention Center Station would be constructed completely within the City's right-of-way, and would require a Major Encroachment Permit, ensuring no conflicts with existing zoning controls.

No new or additional impacts would occur and no new mitigation measures would be required.

Noise and Vibration

Construction

The Aerial Gondola Variant would require additional construction activities relative to the Project, resulting in more construction-related noise in new locations: the Jack London Square Station, the Convention Center Station, and the location of the proposed aerial support tower on Washington Street just north of 4th Street. Constructing the stations and support tower could require installing piles that could be driven by impact hammer or drilled and then cast-in-place. Sensitive land uses near the Jack London Square station would be approximately 450 feet from the Jack London Inn and 560 feet from the Ellington Condominiums (222 Broadway). The aerial support tower location would be approximately 400 feet from the Z Hotel and 600 feet from the Ellington Condominiums (222 Broadway). Noise from construction of the Aerial Gondola Variant would have the potential to exacerbate impacts already identified as significant and unavoidable with the proposed Project: Impact NOI-1, temporary or periodic increases in noise from construction; Impact NOI-2, groundborne vibration during construction; and Impact NOI-1.CU, contribution to cumulative temporary or periodic increases in noise levels due to construction.

The Convention Center Station would be approximately 50 feet or less from the Washington Inn Hotel and 380 feet from the Condominiums at 555 10th Street. However, the receptors nearest the Convention Center Station would be sufficiently distant that they would not be affected by the other construction activities for the proposed Project, unlike activities at the Jack London Square

Station. Thus, the noise impacts in the vicinity of the Convention Center Station would not be more severe than impacts identified as significant and unavoidable for the Project. The Project with the Aerial Gondola Variant would be subject to the same Project mitigation measures related to construction noise (Mitigation Measures NOI-1a, NOI-1b, NOI-1c, NOI-1d, NOI-1e, and CUL-2) that would reduce construction noise and vibration to the extent feasible.

Operations

The Aerial Gondola Variant would reduce roadway traffic volumes and mobile-source emissions compared to the Project, because a reduction of VMT would occur as people use the gondola as a mass transit option instead of on-road vehicles. The air quality analysis estimates that between 0.3 percent and 10 percent of non-delivery vehicle trips could be replaced by gondola trips, with the percentage varying based on land use scenario. However, given this wide range of possible reduction percentages and the modest reduction at the lower end of this estimate, the associated reductions in roadway traffic would not be expected to substantially reduce the roadside noise levels estimated for the proposed Project. Significant and unavoidable impacts related to traffic would be unchanged (Impact NOI-2.CU, contribution to increased noise due to Project-related traffic; and Impact NOI-3, increased noise due to Project-related traffic and concert events at the ballpark).

Operational noise generated by the Aerial Gondola Variant would be associated with stationary equipment (e.g., drive units, motors, cooling fans) and during operation when the gondola passes over lift towers and into the stations, associated with the gondola cabin arms passing over cable wheels and other discontinuities. Because no on-board motor would be required for the individual cabins (ETSAB, 2018), stationary equipment noise would only be generated at the station points. At this time there are no existing specifications for the proposed motors; however, they would be subject to the restrictions of Chapter 17.120 of the Oakland Planning Code and Chapter 8.18 of the Oakland Municipal Code, as required by **Mitigation Measure NOI-2c** (Operational Noise). This measure would apply to the variant such that after completion of the Project (i.e., during Project operation), such sources would comply with the performance standards.

Operational noise from the gondola would also be generated when the gondola passes over lift towers and at the stations points, associated with the gondola cabin arm passing over cable wheels and discontinuities as the cabin enters the station. This operational noise would also be subject to the restrictions of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code, as required by Mitigation Measure NOI-2c (Operational Noise), to the variant such that after completion of the Project (i.e., during Project operation) such sources shall comply with the performance standards. For these noise sources, engineering enclosures around the lift towers and fully enclosing the docking stations could serve to achieve compliance with the standards of the noise ordinance.

Nevertheless, significant and unavoidable impacts related to operations (including baseball and concert events) would be unchanged (Impact NOI-3, increased noise due to operations such as stationary sources, Project-related traffic and concert events at the ballpark).

Population and Housing, Public Services, and Recreation

The Aerial Gondola Variant would result in the same population and housing, public services, and recreation impacts as identified for the proposed Project without this variant (Chapter 4 and Table 2-1). Developing an aerial gondola would have no impacts on employment or resident generation because it would not alter the development program of the proposed Project. Demands for housing, public services, and recreation would not be affected.

Regarding police, fire, and emergency services, during operation, the variant would include private security and operations personnel to assist the Oakland Fire Department (OFD) and Oakland Police Department during emergencies as analyzed previously. As shown in Figure 4.13-2 in Chapter 4, the variant site north of I-880 is located in an area where OFD is currently meeting its response time goal of providing emergency service within 7 minutes of notification 90 percent of the time and would serve the variant site.

The Aerial Gondola Variant would enhance access to the shoreline, as it would facilitate additional modes of transit from downtown into Jack London Square and thereby increase the number of visitors using recreation facilities along the waterfront. The variant would be subject to the same mitigation measures as identified for the proposed Project without the variant to address accelerated physical deterioration of recreational facilities or need for new alternatives. No new or additional mitigation measures would be required for these topics.

Transportation and Circulation

The proposed Project with the Aerial Gondola Variant would encourage more people to take transit and use the gondola to access the Project site. The gondola would have the capacity to transport up to 6,000 people per hour; and like the gondola at the Oakland Zoo (only larger), the gondola could become an attraction, drawing people to ride the gondola on game days and non–game days alike. With possible increases in transit use and in trips by people to downtown Oakland to ride the gondola, it is difficult to project changes in VMT; however, it is reasonable to assume some reduction in vehicle trips and associated VMT because the limited available parking downtown, parking management strategies proposed as part of the Project, and readily available transit nearby would encourage gondola riders to use transit. Nonetheless, the proposed Project with the Aerial Gondola Variant would still increase multimodal traffic using at-grade railroad crossings and contribute to congestion on roadway segments in the Alameda County Congestion Management Program. The Aerial Gondola Variant would be a strategy to achieve the 20 percent vehicle trip reduction mandated for the Project; therefore, the Aerial Gondola Variant would result in similar impacts related to transportation and circulation in this regard.

With the Aerial Gondola Variant, vehicular traffic other than emergency service vehicles would no longer have access to Washington Street between Embarcadero West and Water Street as a result of the development of the Jack London Square Station. The Convention Center Station also may result in changes or limited access on 10th Street and/or parts of Washington Street. Also, the diagonal escalator bank may encroach on Water Street, potentially limiting traffic flow compared to existing conditions. As illustrated in Figures 5-17, 5-18, and 5-19, clearance for emergency vehicles would be maintained. Additionally, pedestrian flow would be managed

through these areas, particularly on event days when street closures would occur and queuing barriers would be placed at ground level on Water Street for the Jack London Square Station and on 10th Street for the Convention Center Station. These potential changes would not cause new significant CEQA impacts but would be managed through the City to ensure safety, traffic flow, and emergency access/egress, and through adherence to improvements and measures in the Project's Transportation Management Plan (see Section 4.15 in Chapter 4). Thus, with some improvement, the variant would result in the ***same transportation and circulation impacts and mitigation measures*** as identified for the proposed Project without this variant.

Utilities and Service Systems

The Aerial Gondola Variant would result in the ***same utility and service system impacts and mitigation measures*** as identified for the proposed Project site without this variant. The utilities setting of this off-site variant differs from that of the proposed Project. However, because this variant is proposed within an urban downtown setting, the gondola site is currently served by water, wastewater, and stormwater facilities supporting a wide range of land uses.

As stated previously for similar topics in this analysis, site-specific information is not fully available for the gondola corridor pertaining to soils, utilities, and other subsurface conditions. However, the conceptual design of the gondola considers underground built infrastructure adjacent to the site to determine the amount and scale of utility relocations, street renovations, and foundation areas to support the stations and towers, as well as the conceptual locations of gondola infrastructure (SCJ Alliance, 2019).

The conceptual plans suggest that some new/updated or relocated underground connections to existing infrastructure may be required. As with the proposed Project, the resulting construction-related impacts are identified and mitigated in other parts of this analysis and the gondola would be subject to construction-related mitigation measures as applicable. However, this variant would not change the development program or layout of the proposed Project on the Project site. The additional demands for water and wastewater, and the increased generation of solid waste, would be from the employees to operate and maintain the gondola, and the use of restroom facilities by the gondola's estimated riders. During ballgames or large concerts at the ballpark, the gondola is estimated to carry up to 6,000 users per hour; however, this would not be a continuous level of use, nor are the majority of these users expected to substantially increase the water and sewer facilities through the use of restrooms in this public transit conveyance.

Should this variant be implemented with the proposed Project, all required and necessary site-specific information about the site conditions and Project design and operations would be obtained and considered. As is typical for all the analysis in this Project-level EIR, to the extent that final variant design and/or site information substantially differs from what is considered herein, appropriate additional environmental analysis would be conducted as necessary in accordance with CEQA requirements.

Mitigation measures identified for the proposed Project require designing a wastewater system and storm drainage system in accordance with the City of Oakland's applicable design standards

and guidelines; these measures would also apply to the variant. No new or modified mitigation measures would be required regarding the infrastructure or capacities of existing wastewater conveyance and treatment systems.

5.2.4 Summary

Development of the Project combined with the Aerial Gondola Variant would result in new or different impacts related to historical resources (Impacts CUL-10, CUL-11, CUL-12, CUL-13, and CUL-4.CU), hazards and hazardous materials (Impact HAZ-5), and hydrology and water quality (HYD-6):

- *Impact CUL-10*, related to impacts of the Aerial Gondola Variant on the Old Oakland API. Impacts on setting at the northern boundary of the district and overhead through the district through the introduction of new gondola-related features would be significant and unavoidable after implementation of new Mitigation Measure CUL-7 (Convention Center Station Contextual Design Review) and previously identified Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures).
- *Impact CUL-11*, related to indirect impacts on the former Alameda County Coroner's Office and Morgue at 480 4th Street. This impact would be less than significant and no new mitigation would be required.
- *Impact CUL-12*, related to indirect impacts on the West Waterfront ASI. This impact would be less than significant after implementation of previously identified Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), and no new mitigation would be required.
- *Impact CUL-13*, related to impacts on the setting immediately adjacent to the Western Pacific Railroad Depot. This impact would be less than significant after implementation of previously identified Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), and no new mitigation would be required.
- *Impact CUL-4.CU*, related to impacts of the Aerial Gondola Variant on the Old Oakland API and its contribution to the significant and unavoidable cumulative, citywide impact identified in the DOSP DEIR. This impact would be significant and unavoidable after implementation of Mitigation Measure CUL-2, previously identified for the Project, and Mitigation Measure CUL-7, identified specifically for this variant (see Impact CUL-10 above).
- *Impact HAZ-5*, related to the potential to encounter hazardous materials on the Aerial Gondola Variant site. This impact would be less than significant after implementation of new Mitigation Measure HAZ-3 (Aerial Gondola Soil and Groundwater Management Plan).
- *Impact HYD-6*, related to potential impacts on surface water and groundwater quality resulting from the Aerial Gondola Variant. This impact would be less than significant after implementation of new Mitigation Measure HAZ-3 (Aerial Gondola Soil and Groundwater Management Plan).

There would be no new or changed impacts and no additional mitigation measures would be required for the remaining topics discussed above.

5.3 Impacts of the Project plus Both Variants

Should both the Peaker Power Plant Variant and the Aerial Gondola Variant be proposed, approved, and constructed as part of the proposed Project, the impacts would generally be as described in Chapter 4, *plus* the impacts described above in Section 5.1, *Peaker Power Plant Variant*, and Section 5.2, *Aerial Gondola Variant*, except where additive or reduced impacts could occur, which are described below.

5.3.1 Aesthetics, Shadow, and Wind

As shown in Figure 5-1, the variants are located two to three blocks from each other; specifically, the closest elements are the proposed Jack London Square Station of the Aerial Gondola Variant and the Peaker Power Plant Variant. Also, the aesthetics analyses consider both variants in combination in the simulation shadow and wind exhibits presented throughout this chapter or in supporting detailed exhibits and reports in Appendix AES. Therefore, for the Project with both variants combined, the aesthetics analysis presented in this chapter reflects the combined effects of both variants. The combined impact would generally be as described in this chapter.

5.3.2 Air Quality

For the Project with both variants combined, criteria pollutant emissions from both construction and operations would be additive. This would result in the same impacts as discussed above for both construction and operations, and no new impacts would be expected. During the year of maximum construction emissions (Year 2), construction of the Peaker Power Plant Variant would generate an additional 0.7 lbs/day of NO_X emissions compared to the Project; construction of the Aerial Gondola Variant would generate an additional 1.4 lbs/day of NO_X emissions compared to the Project. Construction of the Project would generate 81 lbs/day of NO_X emissions in Year 2, so the combined construction of both variants and the Project would result in approximately 82.7 lbs/day of NO_X emissions in Year 2. This would exceed the significance threshold of 54 lbs/day. Therefore, the impact would remain significant and unavoidable with mitigation.

For operations at full buildout in Year 9, the combined variants would result in lower emissions than each variant individually because each would reduce emissions compared to the Project.[14] However, the reduced emissions would still exceed the thresholds of significance at full buildout. For example, in Year 9, the Peaker Power Plant Variant would result in a reduction of 44 lbs/day of NO_X emissions compared to the Project; the Aerial Gondola Variant would result in a reduction of 21 lbs/day of NO_X emissions compared to the Project. Project operations would result in approximately 198.8 lbs/day of NO_X in Year 9, so the combined operations of both variants and the Project would result in approximately 133.4 lbs/day of NO_X emissions. Net new emissions would be 114.4 lbs/day of NO_X. This would exceed the significance threshold of 54 lbs/day. Therefore, the impact would remain significant and unavoidable with mitigation.

[14] Emissions for the combined variants reported in this paragraph are based on Table 110 in Appendix AIR.

For health risks, the combined variants would not necessarily result in combined health risks. Because the locations of the MEIRs matter, along with the timing of construction-related and operational TAC emissions, the health risks for the combined variants would not merely be the sum of health risks for both variants. However, health risks for the combined variants were estimated. For the existing off-site MEIR when taking into account the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, the combined variants would have the following effects:

- Increase the excess lifetime cancer risk by 0.176 for a total mitigated contribution (construction + operations + combined variants) of 6.7, as compared to 6.5 for the Project without the combined variants.
- Increase the non-cancer chronic risk by 2.5E-05 for a total mitigated contribution (construction + operations + combined variants) of 0.00390, as compared to 0.00388 for the Project without the combined variants.
- Increase the average annual $PM_{2.5}$ concentrations by 1.2E-047.6E-04 $\mu g/m^3$ for a total mitigated contribution (construction + operations + combined variants) of 0.1861 $\mu g/m^3$, as compared to 0.1860 $\mu g/m^3$ for the Project without the combined variants.

For the new on-site MEIR when taking into account the health risk associated with the potential relocation of truck parking from Howard Terminal to the Roundhouse, the combined variants would have the following effects:

- Increase the excess lifetime cancer risk by 3.2 for a total mitigated contribution (construction + operations + combined variants) of 5.4, as compared to 2.3 for the Project without the combined variants.
- Increase the non-cancer chronic risk by 7.9E-06 for a total mitigated contribution (construction + operations + combined variants) of 0.0021, as compared to 0.0021 for the Project without the combined variants.
- Increase the average annual $PM_{2.5}$ concentrations by 3.9E-05 $\mu g/m^3$ for a total mitigated contribution (construction + operations + combined variants) of 0.024 $\mu g/m^3$, as compared to 0.024 $\mu g/m^3$ for the Project without the combined variants.

All health risk values for both the Project and each variant at both the existing off-site and new on-site MEIRs would be well below the thresholds of significance, so health risks for the combined variants would also be below the thresholds of significance. Therefore, the impact would remain less than significant with mitigation.

For cumulative health risks, the combined variants would result in cumulative total health risks that would exceed the cumulative thresholds of significance. This is because the background cumulative health risks already exceed the thresholds of significance without the Project or the variants' contribution at all MEIR locations. Therefore, the impact would remain significant and unavoidable with mitigation.

Overall, the combined impacts would generally be as described in this chapter.

5.3.3 Biological Resources

The Project with the Peaker Power Plant and Aerial Gondola Variants together could contribute to the same impacts on biological resources as would occur separately. However, the impacts and mitigation measures identified to reduce biological resources impacts generally would be site-specific, and geographically separated; thus, the variants would not combine to create a new or different impact. The combined impacts would be the same as described in this chapter.

5.3.4 Cultural and Tribal Cultural Resources

The Project with the Peaker Power Plant and Aerial Gondola Variants together would contribute to different and unrelated historical resources impacts, with the exception of the significant and unavoidable cumulative, citywide impact identified in the DOSP DEIR (Impact CUL-3.CU). Because this impact was determined to be significant and unavoidable, the variants would not combine to create a more severe impact.

5.3.5 Energy

As discussed in the analysis in this chapter, the conversion of the Peaker Power Plant would result in different operational energy impacts than the proposed Project without this variant, and the Aerial Gondola Variant would result in the same impacts. Combined, the Project with both variants would not combine to result in increased or reduced results. The variants would not combine to create a more severe impact than identified in the analysis in this chapter.

5.3.6 Geology, Soils, and Paleontological Resources

The Project with the combined Peaker Power Plant and Aerial Gondola Variants would contribute to different and unrelated impacts related to geology, soils, and paleontological resources materials. The impacts and mitigation measures identified are site-specific and geographically separated; thus, the variants would not combine to create a new or different impact than those identified in this chapter.

5.3.7 Greenhouse Gas Emissions

Reduced impacts would occur with regard to GHG emissions, and the mitigation obligation for the Project with the Peaker Power Plant Variant and the Aerial Gondola Variant would be less than it would be with the Project to meet the “no net additional” emissions threshold under Impact GHG-1. Therefore, the mitigation obligation for the Project with the Peaker Power Plant and Aerial Gondola Variants together would be even less than if only one of the variants were implemented.

5.3.8 Hazards and Hazardous Materials

The Project with the Peaker Power Plant and Aerial Gondola Variants together would contribute to different and unrelated impacts on hazards and hazardous materials. The impacts and mitigation measures identified to reduce hazards and hazardous materials impacts are site-specific and geographically separated; thus, the variants would not combine to create a new or different impact.

5.3.9 Hydrology and Water Quality

The new and different impact related to hydrology and water quality (Impact HYD-6) under the Aerial Gondola Variant would be particular to the variant site, but would not combine with development of the Project under the Peaker Power Plant Variant to create a new or different impact. No new or different impacts or mitigation measures would occur as a result of development of the Project with the Peaker Power Plant and Aerial Gondola Variants together.

5.3.10 Land Use, Plans, and Policies

The Project with the Peaker Power Plant and Aerial Gondola Variants together would not change any land use, plans, and policies impacts or mitigation measures identified with the variants separately; the variants are geographically separated and would not involve uses that would affect new or different land use plans or policies compared to those addressed previously. The variants would not combine to create new or changed land use, plans, and policy impacts than identified in the analysis in this chapter.

5.3.11 Noise and Vibration

For the Project with both variants combined, construction noise impacts would be the same as identified for each variant separately, and all development would be subject to the several mitigation measures related to reduce construction noise and vibration to the extent feasible. Operational noise generated by the Aerial Gondola Variant would be associated with stationary equipment as well as gondola passes over lift towers and into the gondola stations. The associated stationary motors would be subject to existing regulatory requirements and compliance with established performance standards.

Operational noise effects of the Peaker Power Plant would include changes caused by slightly different travel patterns into and out of the site, but the overall VMT, travel forecast, modes of travel, and trip distribution outside the immediate area would be the same. The stationary-source noise of the two variants also would not likely combine to result in different or new operational impacts, given the distance between the variant sites. The variants would not combine to create new noise impacts other than those identified in the analysis in this chapter.

5.3.12 Population and Housing, Public Services, and Recreation

The Project with the Peaker Power Plant and Aerial Gondola Variants together would not change any impacts or mitigation measures identified for population/housing, public services, or recreation with the variants separately. Because the aerial gondola would have no impacts on employment or resident generation (because it would not alter the development program of the proposed Project), demands for housing, public services, and recreation would not be affected. Therefore, it could not combine with the housing, public services, and recreation effects resulting from development of the Peaker Power Plant Variant.

5.3.13 Transportation and Circulation

Travel patterns to and from the Project site with each of the variants could be somewhat different than with the Project, but the overall VMT, travel forecast, modes of travel, and trip distribution outside the immediate area would be the same. For this reason, the Project with both variants would result in the same transportation impacts and mitigation measures as identified for the proposed Project without one or either variant. No new or changed impacts would occur and no new mitigation measures would be required.

5.3.14 Utilities and Service Systems

The Project with the Peaker Power Plant and Aerial Gondola Variants together would have the same impacts and mitigation measures as identified for utilities and services systems for the variants separately. While geographically separated, the utility systems for each are related, and therefore could combine. However, as described for each variant, all required and necessary site-specific information about the site conditions, design, and operations of each variant site would be obtained and considered cumulatively through the review process to ensure adequate infrastructure or capacities and conveyance, even if the variants were designed and implemented at different times. Overall, no new or different impacts would result under the combined variants compared to those identified for the Project with each variant separately.

5.4 Maritime Reservation Scenario

As shown in **Figure 5-2.MRS**, the Peaker Power Plant Variant and the Aerial Gondola Variant are not located in areas of the Project site where they would be affected by the Maritime Reservation Scenario. As shown, removal of approximately 10 acres to expand the turning basin would occur in the southwest corner of the Project site, whereas the Peaker Power Plant Variant would occur in the northeast area of the Project site, and the Aerial Gondola Variant would be implemented east and north of the Project site, extending into downtown. The Maritime Reservation Scenario would result in changes to some maximum building heights; however, no changes are proposed to the variant buildings or to the development site at Embarcadero West and Clay Street, adjacent to the Peaker Power Plant site where the fuel storage tank would be redeveloped and one block west of the Jack London Square Station of the gondola. No new or different impacts or mitigation measures would occur.

Table 5-24 on the following page lists the impacts and mitigation measures identified that would occur only with the Project variants.

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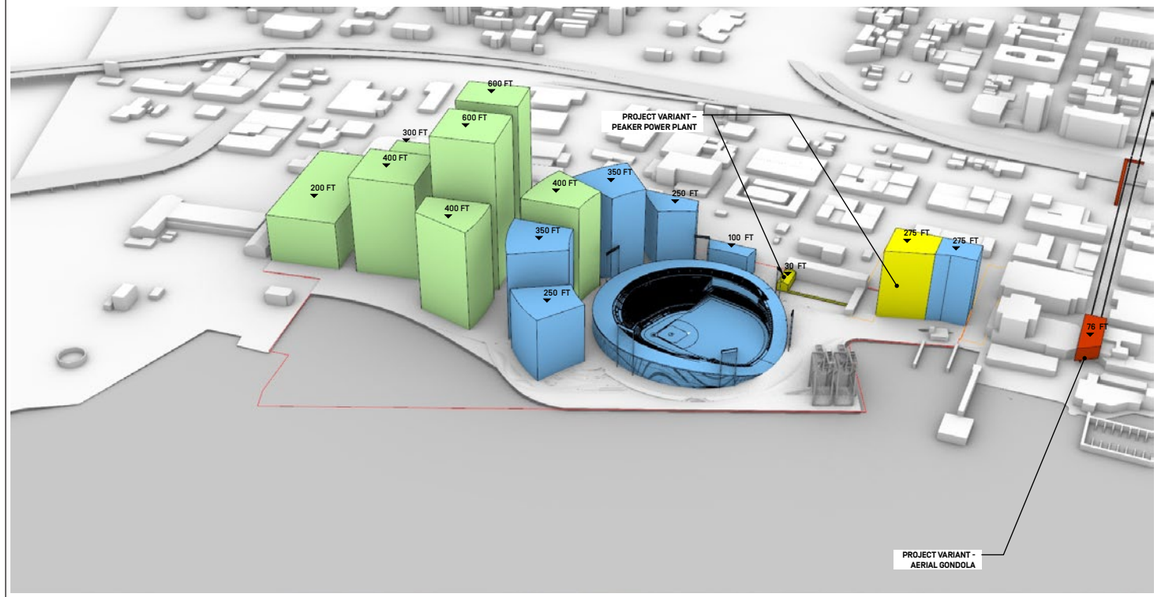

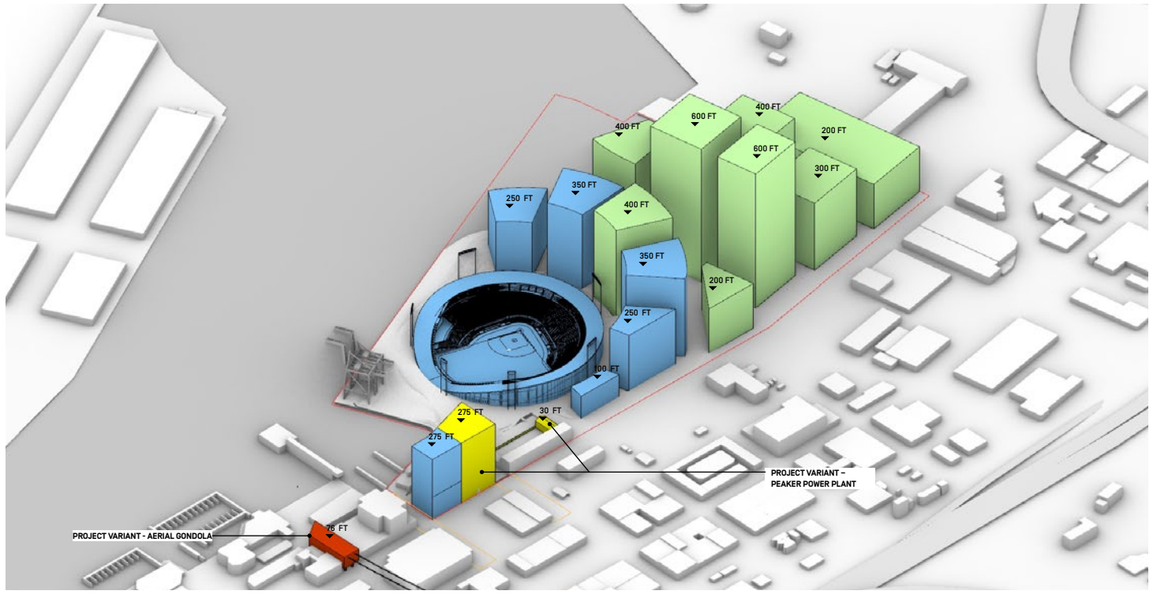

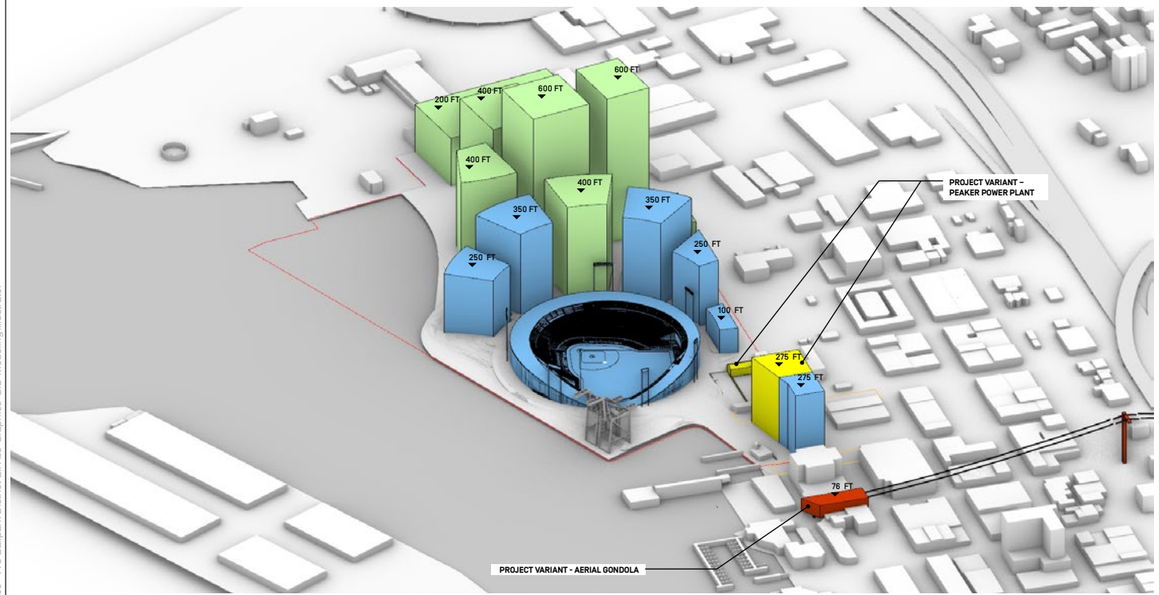

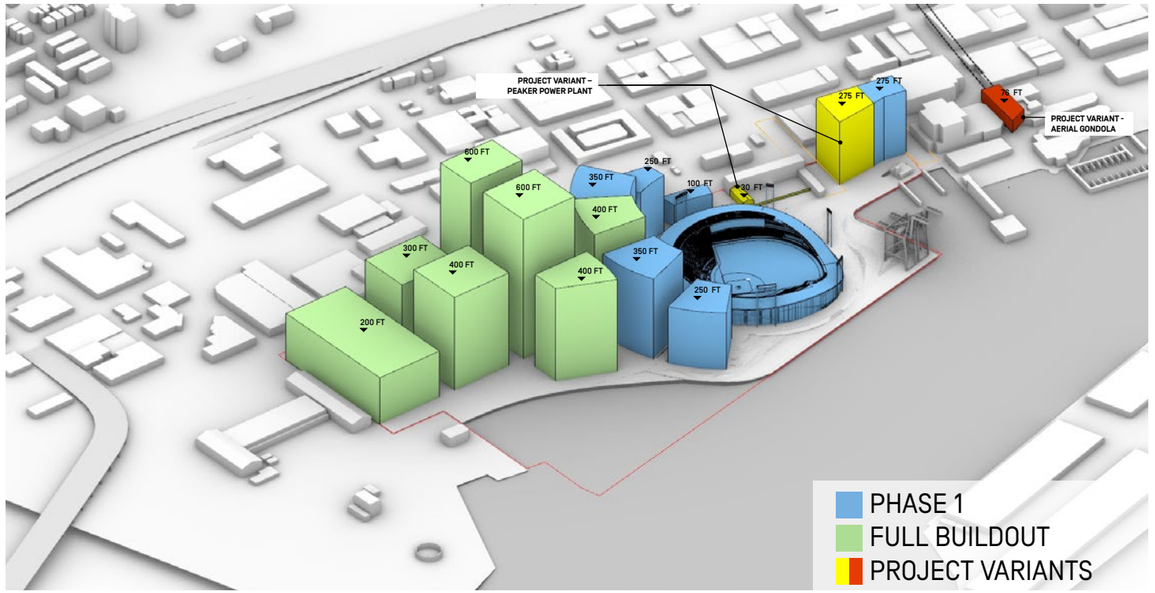

**NOTE: BUILDING ENVELOPE ELEVATIONS ARE MEASURED FROM THE CITY OF OAKLAND DATUM (ELEVATION 10' AT FINISHED FLOOR) AND BASED ON CURRENT ZONING REGULATIONS*

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SOURCE: BIG/JFCO, 2020

Oakland Waterfront Ballpark District Project

Figure 5-2.MRS
Maximum Building Massing Model and Height Plan – Variants and Maritime Reservation Scenario

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TABLE 5-24
SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Impacts	Mitigations	Significance
Peaker Power Plant Variant		
Impact CUL-8: The proposed Project, with the Peaker Power Plant Variant, would directly impact a historical resource through removal of portions of the east and west wings of the building at 601 Embarcadero West. (Criterion 1) (*Significant and Unavoidable with Mitigation*)	**Mitigation Measure CUL-6a: Peaker Power Plant – HABS Documentation (Level II).** Prior to demolition of portions of the building sections located at 601 Embarcadero West, the entire building shall be recorded to the standards required by the Historic American Buildings Survey – Level II. Copies of the documentation shall be deposited locally in the Oakland History Room at the Oakland Public Library and other locations as determined by the City of Oakland. **Mitigation Measure CUL-6b: Peaker Power Plant – Secretary of the Interior's Standards Compliance Analysis.** Prior to demolition, architectural plans for the new end walls on the shortened east and west wings and other modifications to the building shall be reviewed by a professional meeting the Secretary of the Interior's Professional Qualification for Architectural History and/or Historic Architecture to ensure compliance with the Secretary of the Interior's Standards for Rehabilitation. The professional's findings and recommendations shall be subject to review and approval by the City. The findings of this review shall be documented in a Standards Compliance Report.	Significant and Unavoidable
Impact CUL-9: The proposed Project, with the Peaker Power Plant Variant, would not impact a historical resource through introduction of new development that could obstruct views into the resource, a character-defining feature of the PG&E Station C API. (Criterion 1) (*Less than Significant*)	None required	Less Than Significant
Aerial Gondola Variant		
Impact CUL-10*:* The proposed Project, with the Aerial Gondola Variant, would result in impacts to the Old Oakland API. (Criterion 1) (*Significant and Unavoidable with Mitigation*)	**Mitigation Measure CUL-7: Convention Center Station Contextual Design Review.** The design of the Convention Center Station should minimize the horizontal and vertical extent of the new architectural structure to the greatest extent feasible within the final determined design constraints. It should occupy the minimal footprint possible and locate that footprint outside of the Old Oakland API to the greatest extent possible. In addition, the design of the platform should follow the minimal dimensions possible to limit visual intrusions and obstruction within the Old Oakland API. In addition, the stations should be composed of transparent materials, small-dimension structural elements, and/or design features that minimize the structure's bulk and mass within the intersection of 10th and Washington Streets. **Mitigation Measure CUL-2: Vibration Analysis for Historic Structures.** (see Section 4.4, Cultural and Tribal Cultural Resources)	Significant and Unavoidable
Impact CUL-11: The proposed Project, with the Aerial Gondola Variant, would not result in indirect impacts to the former Alameda County Coroner's Office and Morgue at 480 4th Street, a potentially historic resource. (Criterion 1) (*Less than Significant*)	None required	Less Than Significant

TABLE 5-24 (CONT.)
SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Impacts	Mitigations	Significance
Aerial Gondola Variant (cont.)		
Impact CUL-12: The proposed Project, with the Aerial Gondola Variant, could result in indirect impacts to the West Waterfront ASI. (Criterion 1) (*Less than Significant with Mitigation*)	**Mitigation Measure CUL-2: Vibration Analysis for Historic Structures.** (see Section 4.4, Cultural and Tribal Cultural Resources)	Less Than Significant
Impact CUL-13: The proposed Project, with the Aerial Gondola Variant, could introduce new structures that could impact the setting immediately adjacent to the Western Pacific Railroad Depot, a historic resource. (Criterion 1) (*Less than Significant with Mitigation*)	**Mitigation Measure CUL-2: Vibration Analysis for Historic Structures.** (see Section 4.4, Cultural and Tribal Cultural Resources)	Less Than Significant
Impact CUL-3.CU: The Project, in combination with the Peaker Power Plant Variant, would contribute to a citywide cumulative impact on cultural and historic resources identified in the Downtown Oakland Specific Plan EIR through the loss of the historic wings of the Peaker Power Plant. (*Significant and Unavoidable with Mitigation*)	**Mitigation Measure CUL-6a (Peaker Power Plant – HABS Documentation [Level II]).** (see Impact CUL-8) **Mitigation Measure CUL-6b (Peaker Power Plant – Secretary of the Interior's Standards Compliance Analysis).** (see Impact CUL-8)	Significant and Unavoidable
Impact CUL-4.CU*:* The proposed Project, in combination with the Aerial Gondola Variant, would contribute to a citywide significant cumulative impact on cultural and historic resources identified in the DOSP EIR through changes to the setting of the Old Oakland API. (Criterion 1) (*Significant and Unavoidable with Mitigation*)	**Mitigation Measure CUL-7: Convention Center Station Contextual Design Review.** (see Impact CUL-10) **Mitigation Measure CUL-2: Vibration Analysis for Historic Structures.** (see Section 4.4, Cultural and Tribal Cultural Resources)	Significant and Unavoidable
Impact HAZ-4: The proposed Project, with the Peaker Power Plant Variant, would have the potential to encounter hazardous materials, which could create a significant hazard to the public or the environment. (Criterion 5) *(Less than Significant with Mitigation*)	**Mitigation Measure HAZ-2: Peaker Power Plant Fuel Tank Decommissioning and Training/Oversight.** Prior to demolition or removal of the fuel tank, the Project sponsor shall have the fuel tank parcel decommissioned, subject to the oversight and inspection of the Oakland Fire Department. The decommissioning activity shall be performed by qualified personnel trained and certified in environmental health and safety procedures pursuant to Occupational Safety and Health Administration training requirements in Code of Federal Regulations Title 29, Section 1910.120, Hazardous Waste Operations and Emergency Response, including appropriate training for enclosed space activities. The Project sponsor shall ensure that full-time observation under a site management plan occurs during actual removal of the tank to determine whether evidence of subsurface impact is present. **Mitigation Measure HAZ-1a: Preparation and Approval of Consolidated RAW, LUCs and Associated Plans.** (see Section 4.8, Hazards and Hazardous Materials) **Mitigation Measure HAZ-1b: Compliance with Approved RAW, LUCs and Associated Plans.** (see Section 4.8, Hazards and Hazardous Materials) **Mitigation Measure HAZ-1c: Health and Safety Plan.** (see Section 4.8, Hazards and Hazardous Materials) **Mitigation Measure HAZ-1d: Hazardous Building Materials.** (see Section 4.8, Hazards and Hazardous Materials)	Less than Significant

TABLE 5-24 (CONT.)
SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Impacts	Mitigations	Significance
Aerial Gondola Variant (continued)		
Impact HAZ-5: The proposed Project, with the Aerial Gondola Variant, would have the potential to encounter hazardous materials which could create a significant hazard to the public or the environment. (Criterion 5) (*Less than Significant with Mitigation*)	**Mitigation Measure HAZ-3: Aerial Gondola Soil and Groundwater Management Plan.** **Soil and Groundwater Management Plan** Prior to issuance of a building permit for the Aerial Gondola Variant, the contractor shall develop a Soil and Groundwater Management Plan (SGMP) specifying how the construction contractor(s) will remove, handle, transport, and dispose of all excavated materials in a safe, appropriate, and lawful manner. The plan shall be implemented before the start of construction activities. The SGMP must identify protocols for soil testing and disposal. Contract specifications shall mandate full compliance with all applicable federal, State, and local regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil. **Hazardous Waste Management Procedures** If soil classified as hazardous waste is encountered, the material shall be managed as hazardous waste pursuant to California Code of Regulations Title 22, Division 45, in accordance with the following procedures: • Excavation and transportation shall be performed by Occupational Safety and Health Administration–certified personnel, as needed and required by all federal, State, or local laws. • Soil shall either be characterized in-situ or staged on-site for characterization. If all or any portion of the soil is determined to be hazardous waste, such portion shall be managed and disposed of in accordance with applicable hazardous waste regulatory requirements. • Breathing zones shall be monitored for dust control. • All haul trucks (including those transporting soil, sand, or other loose material including demolition debris off-site) shall be covered, as required by applicable laws. • Soil that is visibly impacted or has an odor shall be stockpiled on-site, if needed, and shall be placed on 10-mil plastic sheeting, or equivalent, pending characterization. As necessary, based on meteorological and site conditions, the soil stockpiles shall be protected and secured to prevent dust or runoff during storm events.	Less Than Significant

TABLE 5-24 (CONT.)
SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Impacts	Mitigations	Significance
Aerial Gondola Variant (continued)		
	Groundwater Dewatering Controls As part of the SGMP, the contractor shall develop a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate, and lawful manner. Consistent with Best Management Practices (BMPs), the SGMP must identify the locations at which groundwater dewatering is likely to be required; the test methods to analyze groundwater for hazardous materials; the appropriate treatment and/or disposal methods; and approved disposal site(s), including written documentation that the disposal site can accept the waste. The contractor(s) may also discharge the effluent under an approved permit to a publicly owned treatment works, in accordance with any requirements the treatment works may have. **Site-Specific Health and Safety Plans (HASPs)** The contractor shall develop a site-specific HASP as part of the SGMP to ensure that construction activities are performed in a manner protective of the health and safety of site construction workers and of interim site uses in the construction zone(s). The HASP is a mechanism through which the workers involved in the construction are informed of the presence of chemicals in the area prior to initiating work. **Review and Approval** The SGMP shall be submitted to the California Department of Toxic Substances Control and the City for review and approval prior to commencement of construction.	
Impact HYD-6: The proposed Project, with the Aerial Gondola Variant, could violate surface water and groundwater quality standards, result in erosion or siltation on- or off-site that could affect receiving water quality, and/or substantially degrade surface water and groundwater quality and conflict with implementation of a water quality control plan. (Criteria 1, 3, and 7) (*Less than Significant with Mitigation*)	**Mitigation Measure HAZ-2: Aerial Gondola Soil and Groundwater Management Plan** (see Impact HAZ-5)	Less Than Significant

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