Appendices

Appendix A

Initial Study, Notice of Preparation (NOP), and NOP Comment Letters

Appendix A.1

Initial Study

100 EAST OCEAN BOULEVARD PROJECT

INITIAL STUDY

PREPARED FOR:
The City of Long Beach
Department of Development Services

PREPARED BY:
Eyestone Environmental, LLC

eyestone
ENVIRONMENTAL

December 2018

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Environmental Checklist Form

1. Project Title:	100 E. Ocean Blvd.
2. Lead Agency Name and Address:	City of Long Beach Department of Development Services Planning Bureau 333 West Ocean Boulevard, 5th Floor Long Beach, CA 90802
3. Contact Person and Phone Number:	Anita Juhola-Garcia, Planner (562) 570-6469
4. Project Location:	100 E. Ocean Boulevard Long Beach, Los Angeles County, CA 90802 The property is bounded by Ocean Boulevard to the north, Pine Avenue to the west, Seaside Way to the south, and a commercial building to the east.
5. Project Sponsor's Name and Address:	100 East Ocean Blvd, LP 270 S. Hanford Street Seattle, WA 98134
6. General Plan Designation:	Land Use District Nos. 7 & 11 (Long Beach Local Coastal Program and Downtown Shoreline Planned Development Plan and Ordinance)
7. Zoning:	Subarea 7 of the Downtown Shoreline Planned Development District (Planned Development District 6)

8. Description of the Project:

A. Introduction

100 East Ocean Blvd, LP, the Project Applicant, proposes a new hotel on a 59,501-square-foot (1.36-acre) site located at 100 East Ocean Boulevard (Project Site) in the City of Long Beach (City). The Project Site, which is the former site of the Jergins Trust Building, is bounded by

Ocean Boulevard to the north, the Convention Center Walkway and an office building to the east, Seaside Way to the south, and Pine Avenue to the west. The Project Applicant proposes a 30-story, 537,075-square-foot building of up to 375.5 feet in height that would include 429 hotel rooms, 23,512 square feet of restaurant space, and 26,847 square feet of meeting and ballroom space (collectively, the Project).[1] The proposed building would replace an existing surface parking lot on the Project Site. Pedestrian walkways and new landscaping would be provided. The Project also includes improvements to the portion of Victory Park located within the Project Site boundaries, including new landscaping.

B. Project Location and Surrounding Uses

As illustrated in the Project Location Map provided in Figure 1 on page 3, the Project Site is located in Downtown Long Beach. Primary regional access is provided by Interstate 710 (I-710 or Long Beach Freeway), which runs north-south and terminates 0.9 mile west of the Project Site. Local access is provided via surface streets including Ocean Boulevard and Pine Avenue adjacent to the Project Site.

As shown in Figure 2 on page 4, the Project Site is located in an urbanized area surrounded by a variety of primarily commercial land uses. To the west, across Pine Avenue is the Ocean Center Building, an office building and Long Beach Historic Landmark, with commercial and residential uses and associated surface parking further west along Ocean Boulevard. Commercial and office uses also are located immediately northwest of the Project Site, with the Metro Blue Line Downtown Long Beach (Transit Mall) station further to the north on 1st Street. To the north across Ocean Boulevard are the Renaissance Long Beach Hotel and several restaurants. Immediately to the east of the Project Site, separated by a retaining wall, are the Convention Center Walkway and an office building. Further to the east, across Locust Avenue, is the Breakers Hotel building, a Long Beach Historic Landmark, which is largely vacant at the present time. To the south and southeast, across Seaside Way, is the Long Beach Convention and Entertainment Center. Various commercial uses including restaurant and retail uses are located to the southwest.

C. Existing Project Site Conditions

The majority of the Project Site is currently developed with a surface parking lot containing 80 vehicular parking spaces and an automated pay station. There are no habitable structures or landscaping within the parking lot, and concrete retaining walls line the northern and eastern site boundaries. The northern part of the Project Site along Ocean Boulevard includes a portion of the Victory Park, which includes a temporary public art project known as “The Loop,”

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[1] *This height is to the top of the penthouse screen wall as measured from Ocean Boulevard per Long Beach Municipal Code (LBMC). The building height measured from Seaside Way would be 402.25 feet.*

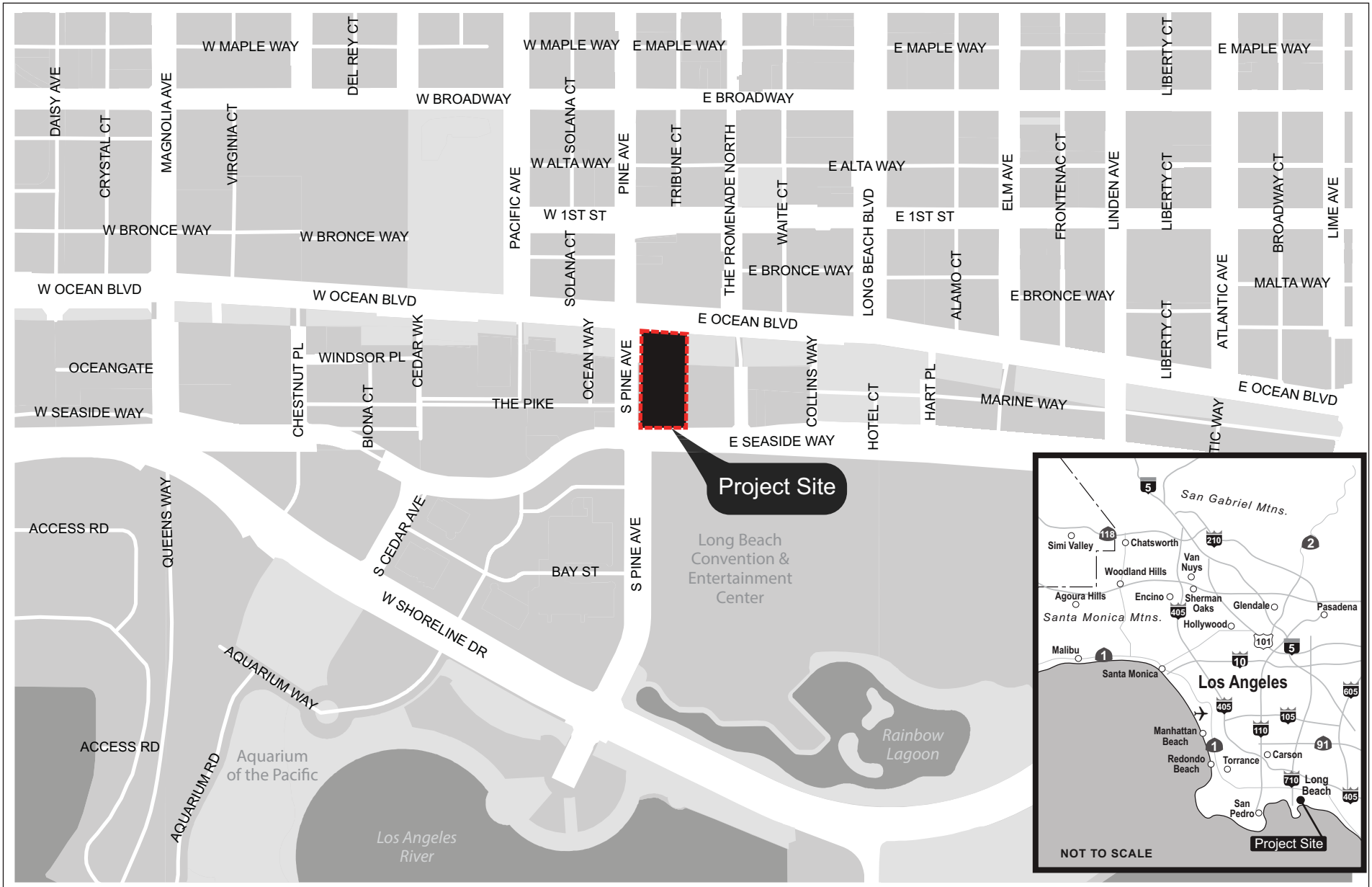

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Figure 1
Project Location Map

Source: City of Long Beach Technology & Innovation Department GIS, 2018; Eyestone Environmental, 2018.

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Figure 2
Aerial Photograph of the Project Vicinity

Source: Google Earth, 2018; Eyestone Environmental, 2018.

along with seating areas and landscaping. A Long Beach Bike Share station is located at the northwestern corner of the Project Site. One street tree is located along Ocean Boulevard, and eight street trees are located along Pine Avenue adjacent to the Project Site. In addition, a single ingress/egress driveway is located along Seaside Way. The Project Site slopes down towards the south at an approximately 7.9 percent grade, with the Ocean Boulevard elevation approximately 25 feet above Seaside Way.

D. Land Use and Zoning

The Project Site is designated as Land Use District (LUD) No. 7, Mixed Use District, and No. 11, Open Space and Park District, by the City's General Plan. As set forth in the General Plan, uses intended for LUD No. 7 include employment centers, such as retail uses, offices, and medical facilities; higher density residences; visitor-serving facilities; personal and professional services; and recreational facilities. LUD No. 11 includes open space and park areas which are intended to remain or be redeveloped in the future in (essentially) an open condition. The Project Site is located within a coastal zone and is therefore subject to the requirements of the City's Local Coastal Program.

The Project Site is zoned by the Long Beach Municipal Code (LBMC) as Subarea 7 within Planned Development District 6 (PD-6), Downtown Shoreline Planned Development District (Downtown Shoreline Plan). As described in the Shoreline Plan, PD-6 provides for a community of residential, business, and light industrial uses integrated by an extensive system of parks, open space, and trails. The Downtown Shoreline Plan specifically identifies residential, hotel, and office uses within Subarea 7 and includes specific requirements pertaining to ancillary uses such as retail uses, restaurants, and art galleries, as well as access, building design, and setbacks. In addition, as the former site of the Jergins Trust Building, the Subarea 7 requirement to provide a corner cut-off at the northeast corner of the site to create a cohesive entry feature to the Promenade South from Pine Avenue applies to the Project.[2]

The Project Site was formerly owned by the Long Beach Redevelopment Agency (Redevelopment Agency). Prior to the dissolution of the Redevelopment Agency, the Project Site was identified for future development within the Downtown Long Beach Project Area.[3] The Project Site is identified in the approved Successor Agency Long Range Management

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[2] *Per City Ordinance No. ORD-U-0017.*

[3] *Long Beach Redevelopment Agency, "Downtown Long Beach," www.longbeachrda.org/civica/filebank/blobdload.asp?BlobID=2456, accessed November 26, 2018.*

Plan for "high-density development to maximize overall economic benefit to downtown and in accordance with the use of eminent domain."[4]

E. Project Characteristics

The Project Applicant proposes to replace the existing parking lot on the Project Site with a new 537,075-square-foot hotel with 429 rooms comprised of 171 king rooms, 152 double queen rooms, 76 suites, and 30 penthouse suites; 23,512 square feet of restaurant uses; and 26,847 square feet of meeting rooms, ballrooms, and pre-function space. In addition, hotel amenities would include a pool deck and bar, fitness center, executive lounge, guest laundry, and a main floor lounge. The Project also includes improvements to Victory Park along Ocean Boulevard including new landscaping. The proposed uses are summarized in Table 1 on page 7, and a composite site plan is provided in Figure 3 on page 8.

The proposed hotel uses would be located in a 30-story building of up to 375.5 feet in height, consisting of a tower over a podium, with new landscaping and outdoor amenity areas. The hotel's main entry would face Ocean Boulevard, fronting Victory Park. Parking for the Project would be provided through a combination of on- and off-site parking. On-site parking would be valet only, with a total of 151 parking spaces provided in one subterranean level and one partial at-grade level with access from Seaside Way and Pine Avenue. Thirty long-term bicycle parking spaces would be located in a secure room on Level 1, and eight short-term bicycle parking spaces would be located near the main entry. Off-site parking would also be valet only, with parking located at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. The Project would reconnect the Project Site with the Jergins Tunnel, a subterranean walkway previously associated with the Jergins Trust Building that extends from the Project Site to the north side of Ocean Boulevard near a sub-grade level of the Renaissance hotel north of Ocean Boulevard (the north end of the tunnel would not be reopened as part of the Project). The tunnel would be used for educational tours, and interpretive signage and images would be introduced to describe the tunnel's history. The Project would have a total floor area ratio (FAR) of approximately 14.32:1.

Improvements to the portion of Victory Park within the Project Site include the installation of new landscaping and completion of a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site as shown on Figure 3. The existing Long Beach Bike Share station located at the northwest corner of the Project Site would remain in place as part of the Project.

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[4] *City of Long Beach, Revised Long Range Property Management Plan, www.lbds.info/documents/LongRangePropMgtPlan/LRPMP.pdf, p.42, property 113, accessed November 26, 2018.*

Table 1
Summary of Proposed Development

Land Use	Floor Area
Hotel (429 rooms)	446,123 sf
Pool deck and bar[a]	*9,500 sf*
Fitness Center[a]	*2,000 sf*
Main Floor Lounge[a]	*1,500 sf*
Executive Lounge[a]	*2,000 sf*
Guest Laundry[a]	*300 sf*
Restaurant—Full Service	23,512 sf
Meeting Rooms, Ballrooms, and Pre-Function Space	26,847 sf
On-Site Parking	40,593 sf
Total	**537,075 sf**

sf = square feet
[a] *The hotel amenities are included in the total hotel square footage.*
Source: GBD Architects Incorporated, 2018.

1. Project Design

As shown in Figure 4 on page 9, the hotel would consist of a tower over a podium. Due to the sloped nature of the Project Site, the main entrance facing Ocean Boulevard and opening onto Victory Park would be located on Level 3 of the building along with the main lobby, while the vehicular entrance on Level 1 would be accessed from Seaside Way on the south side of the building. The podium would rise from Seaside Way, with shifting floorplates to create rooftop decks on Levels 3, 6, and 7 along different sides of the building. In particular, on Level 6 an outdoor amenity deck would feature a pool, spa, bar, and planted areas. At the northeastern corner of the building, the lower floors would have an indented, angled footprint to create a corner cut-off in accordance with PD-6, Subarea 7 requirements. The tower would visually rise from Ocean Boulevard and include a restaurant on Level 30, with outdoor dining areas providing views of Downtown Long Beach and the shoreline. Screened mechanical equipment would be located on the roof. The building would have a height of 375.5 feet as measured from Ocean Boulevard per LBMC. Renderings of the building elevations are provided in Figure 5 through Figure 8 on pages 10 through 13.

The Project would be designed in a contemporary architectural style with a blend of precast concrete and aluminum framed glass systems. More specifically, over half of the building façade area would consist of precast concrete, metal panels, louvers, or opaque glass. The remaining building façade area would be vision glass, 28 percent of which would have bird safe treatments to minimize bird strikes, consistent with the Bird-Safe Buildings requirements

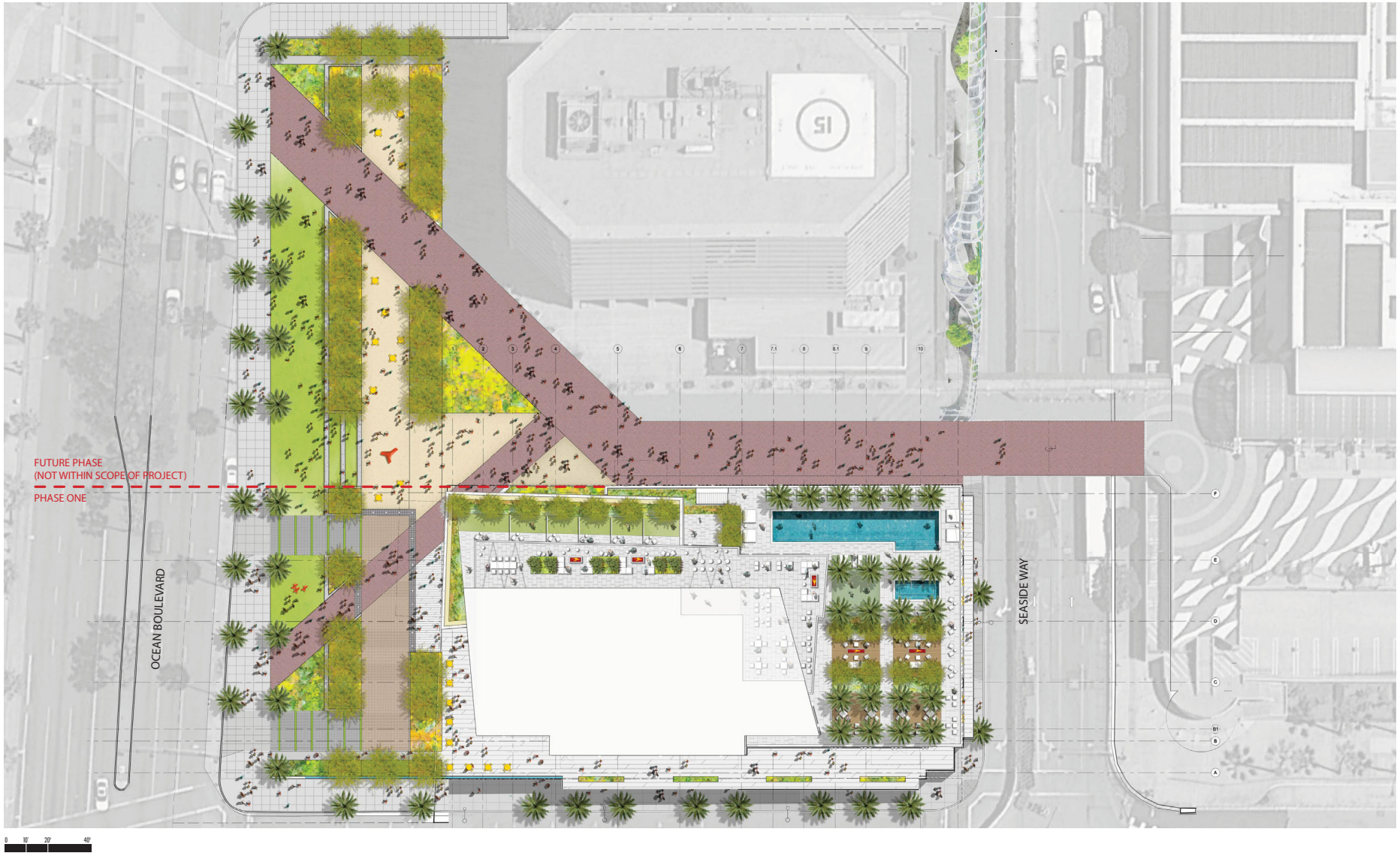

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Figure 3
Composite Site Plan

Source: GBD Architects Incorporated / RELM, 2018.

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Figure 4
Project Rendering

Source: GBD Architects Incorporated / RELM, 2018.

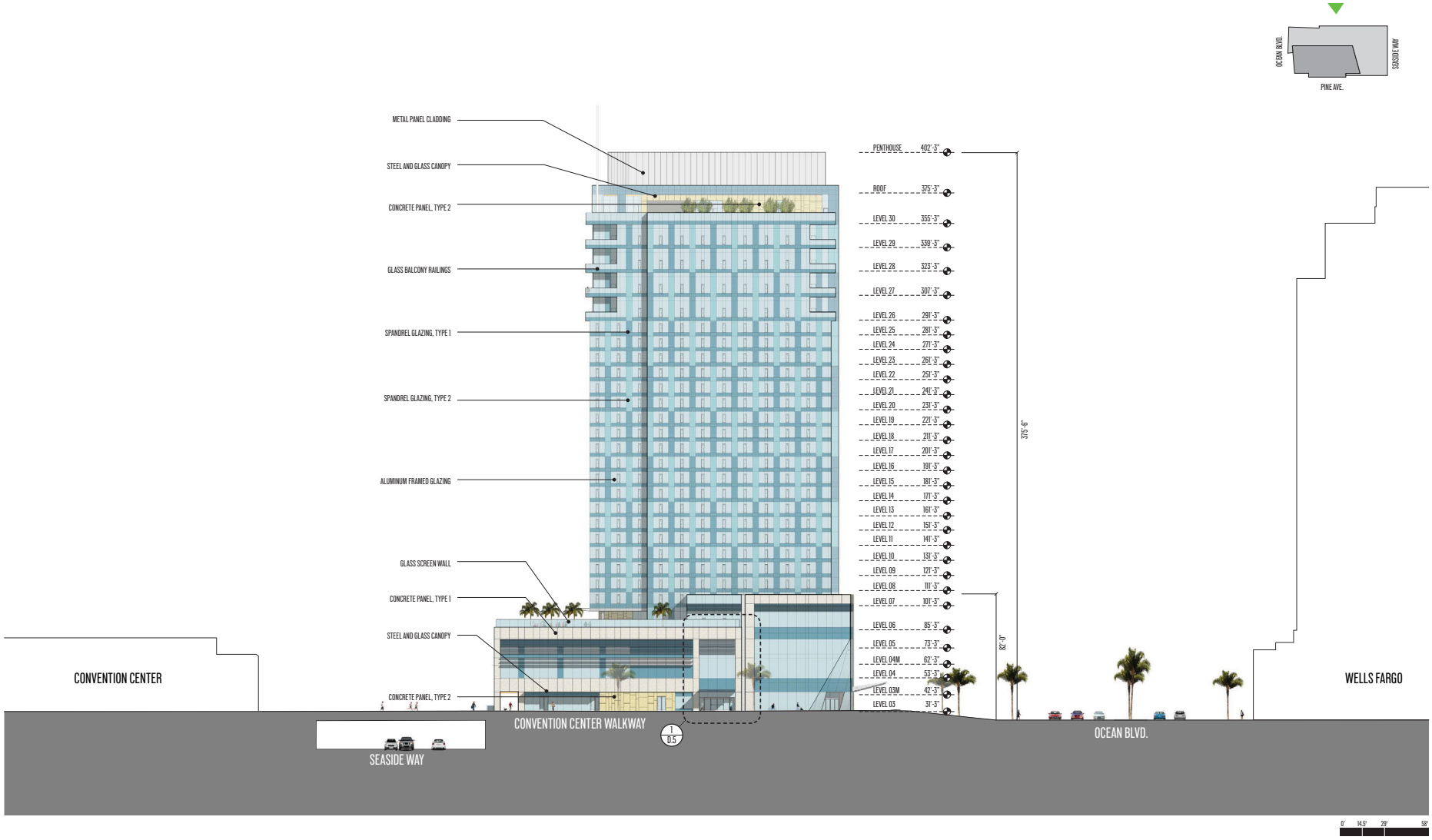

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Figure 5
East Elevation

Source: GBD Architects Incorporated / RELM, 2018.

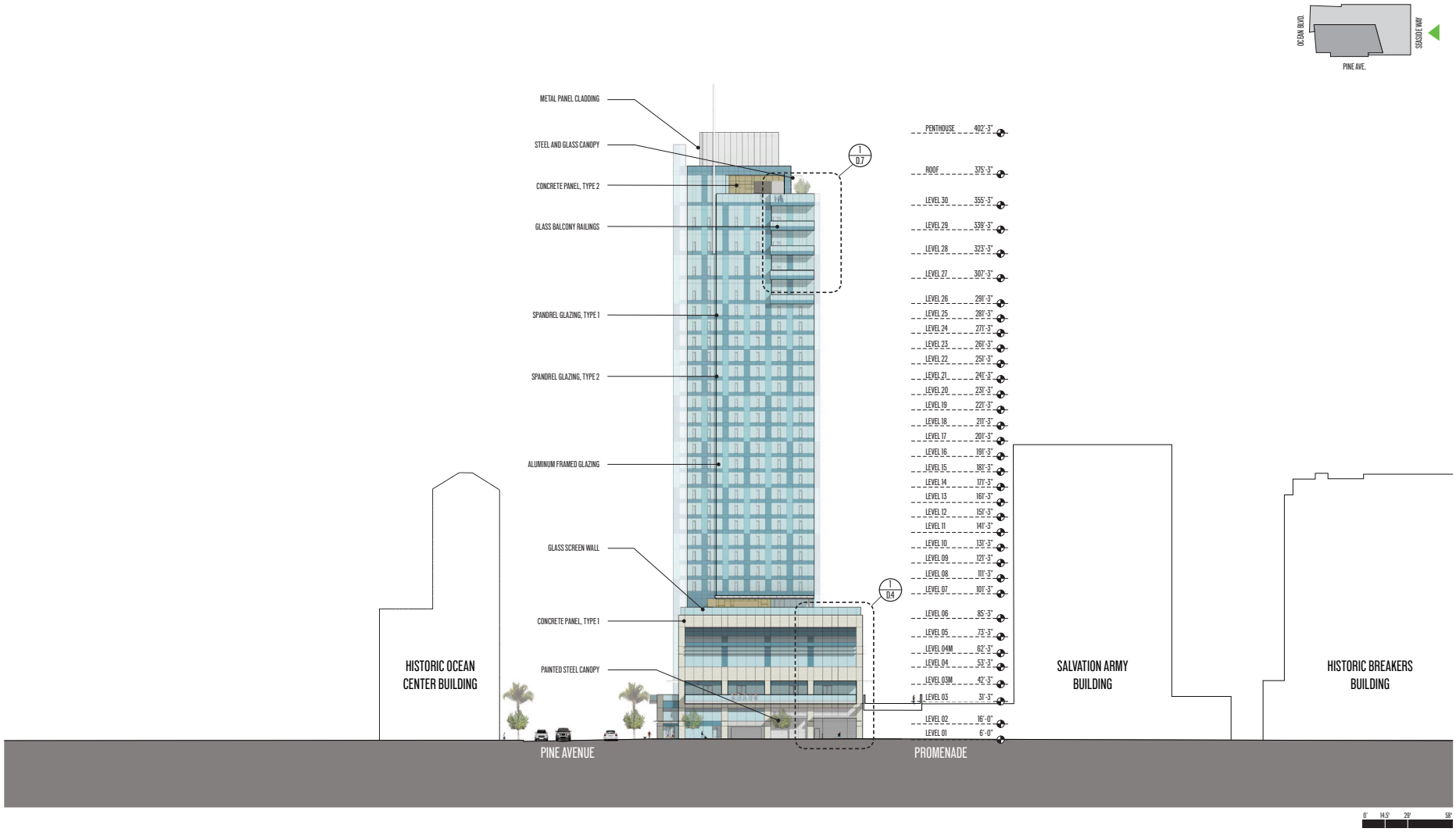

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Figure 6
South Elevation

Source: GBD Architects Incorporated / RELM, 2018.

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Figure 7
West Elevation

Source: GBD Architects Incorporated / RELM, 2018.

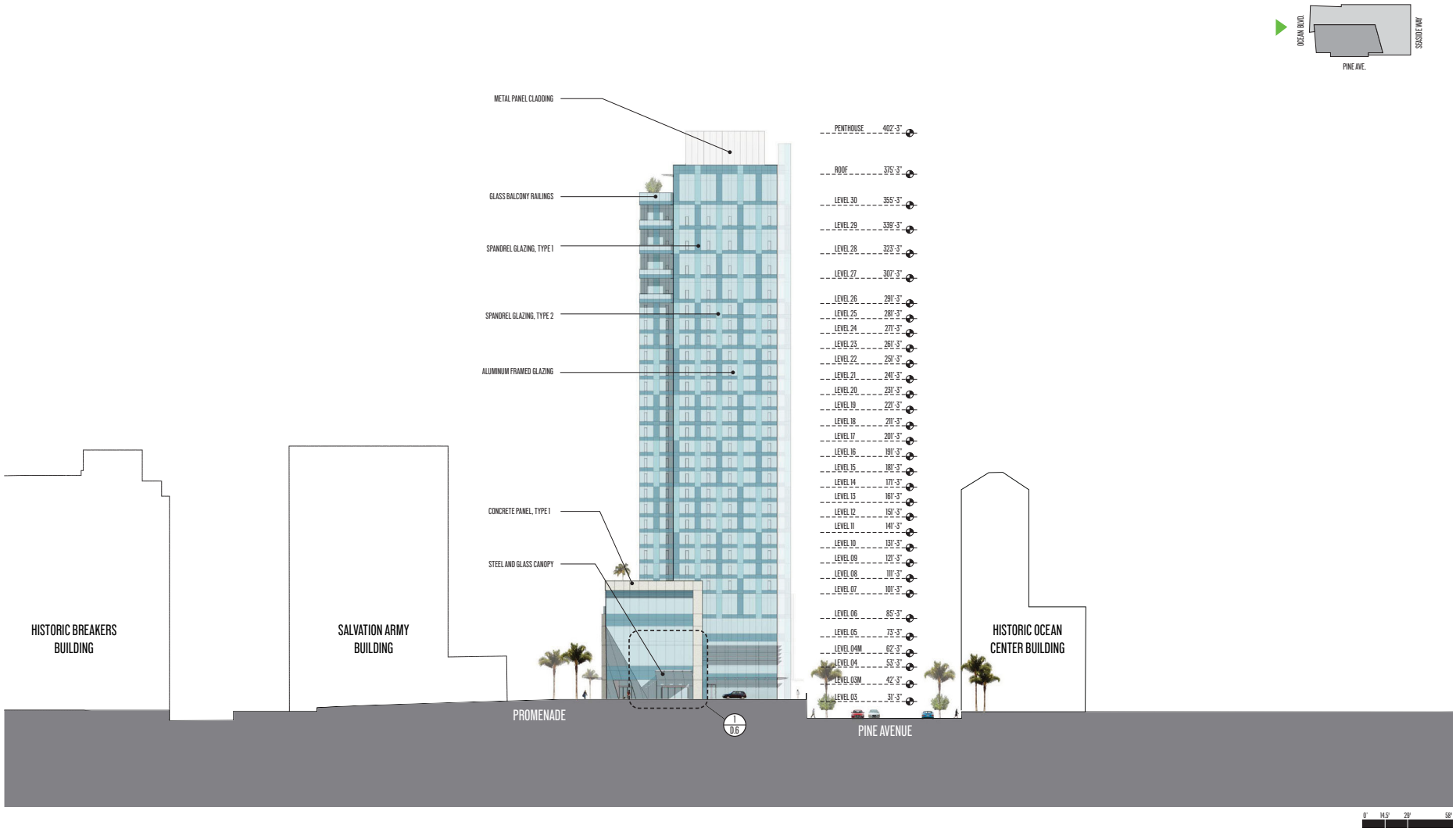

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Figure 8
North Elevation

Source: GBD Architects Incorporated / RELM, 2018.

for PD-6. To help activate the pedestrian environment, the proposed design would include a diagonal walkway from the intersection of Ocean Boulevard and Pine Avenue to the existing Convention Center Walkway. The Project would also capitalize on its location fronting Victory Park by introducing new landscaping and pedestrian pathways. Enhanced paving materials including concrete, cobblestone, decomposed granite, brick, and truncated domes would be utilized along walkways and other outdoor surface areas.

In general, the proposed uses would be located in distinct areas of the new building, as summarized below:

- Level P1—parking;
- Level 1 (Seaside Way)—vehicular access and parking, secondary pedestrian lobby;
- Level 2—meeting rooms, access to Jergins Tunnel;
- Level 3 (Ocean Boulevard)—main lobby with reception/concierge area, lounge, restaurant, outdoor patio;
- Level 4—pre-function space, ballroom, ballroom kitchen;
- Level 5—executive lounge;
- Level 6—executive offices, fitness center, amenity deck with outdoor pool and bar, guest laundry room;
- Level 7—hotel rooms, pet-friendly roof deck;
- Levels 8–29—hotel rooms;
- Level 30—restaurant, rooftop deck and bar.

In addition, mechanical rooms, storage, hotel-related office space, and restrooms would be located throughout various floors of the building.

2. Access and Parking

Vehicular access to the Project Site would be provided via driveways on Seaside Way and Pine Avenue, with primary access from Seaside Way. These driveways would provide access to the valet parking areas on Level 1 and subterranean Level P1. In addition, two existing curb cuts on Ocean Boulevard would be utilized for passenger drop-off and valet service along the main entrance to the hotel on Level 3.

Primary pedestrian access to the hotel would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Upon entering, the main lobby would provide stairway and elevator access to the other areas of the building. Secondary pedestrian access would be provided on Level 1 via a small lobby located at the corner of Pine Avenue and Seaside Way. An exit corridor to Pine Avenue would be provided on Level 2.

As noted above, all on- and off-site parking would be valet only. The valet drop-off area would be located near the main entrance to the hotel on Level 3, accessible via Ocean Boulevard. A total of 151 on-site parking spaces would be provided in a two-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). An additional 280 parking spaces would be located off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site, as well as other Downtown locations during peak or special event times. Valet trips are expected to make a right turn on to eastbound Ocean Boulevard followed by a right at Locust Avenue to access Seaside Way and enter either the on- or off-site parking garage. The Project would also provide 30 long-term bicycle parking stalls in a secure room on Level 1 and 8 short-term bicycle parking stalls near the main entrance on Level 3. Delivery, trash, and other service vehicles would access the building via Seaside Way through a loading bay at the southeast corner of the Project Site.

3. Landscaping and Open Space

While PD-6, Subarea 7 does not include specific open space requirements, the Project would provide 37,404 square feet of open space, including improvements to Victory Park totaling 13,158 square feet, new landscaping, and a variety of amenities for hotel guests and visitors including an 11,288-square-foot pool deck and bar. Specifically, as noted above and depicted in Figure 9 through Figure 13 on pages 16 through 20, the Project would include a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site. An outdoor patio would be located on Level 3, wrapping around the north, west, and south sides of the building. New palm trees would be planted along Seaside Way, Pine Avenue, and Ocean Boulevard within Victory Park, and water efficient plants such as agave, euphorbia, and bamboo muhly would be planted throughout the Project Site and Victory Park. Atop the podium, Level 6 would include various outdoor amenities, including a pool, spa, and planted areas. Level 7 would include an outdoor planted area along the building's eastern side. Levels 26 through 29 would include balconies, and an outdoor seating area with landscaping associated with the proposed restaurant would be located on Level 30. The amenity areas may include amplified sound at the outdoor patio area on Level 3, the pool deck and bar on Level 6, and the rooftop. In addition, any on-site trees or street trees removed during Project construction would be replaced in accordance with the City's Tree Maintenance Policy, LBMC Chapter 14.28 pertaining to street trees, and other applicable City requirements.

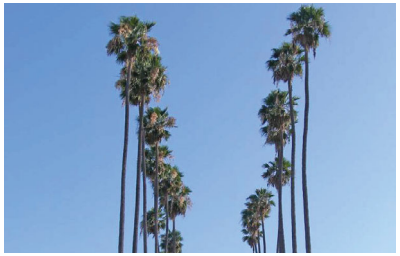

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Figure 9
Landscape Plan—Victory Park

Source: GBD Architects Incorporated, 2018.

NATURAL GREY CONCRETE

Phoenix dactylifera 'Medjool'
Medjool Date Palm
48" box

KEY NOTE

1. STREET TREES WITH TREE GRATE
2. EXISTING STREET LIGHT, TYP.
3. GARAGE ACCESS

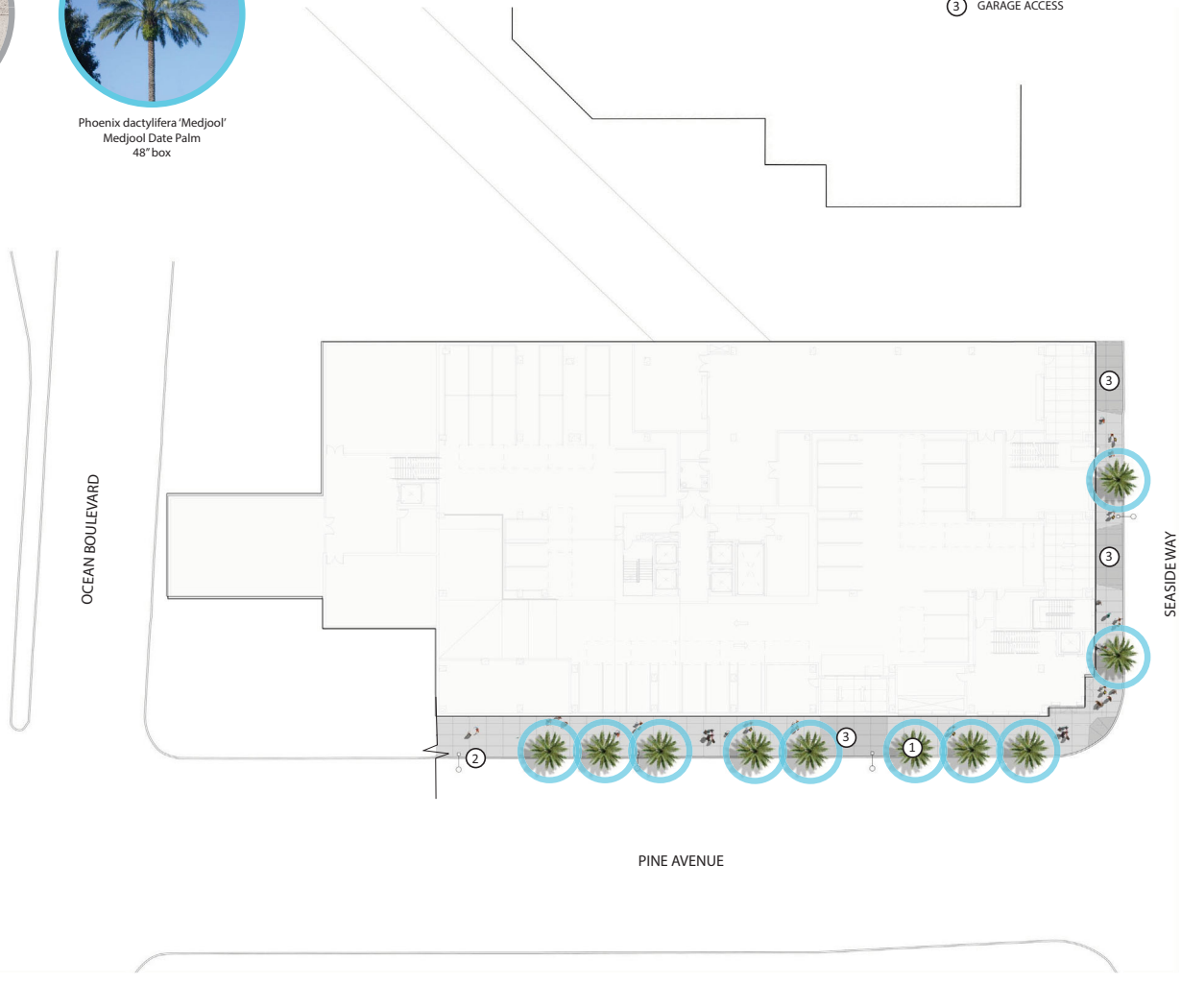

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Figure 10
Landscape Plan—Lower Streetscape

Source: GBD Architects Incorporated, 2018.

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Figure 11
Landscape Plan—Level 6

Source: GBD Architects Incorporated, 2018.

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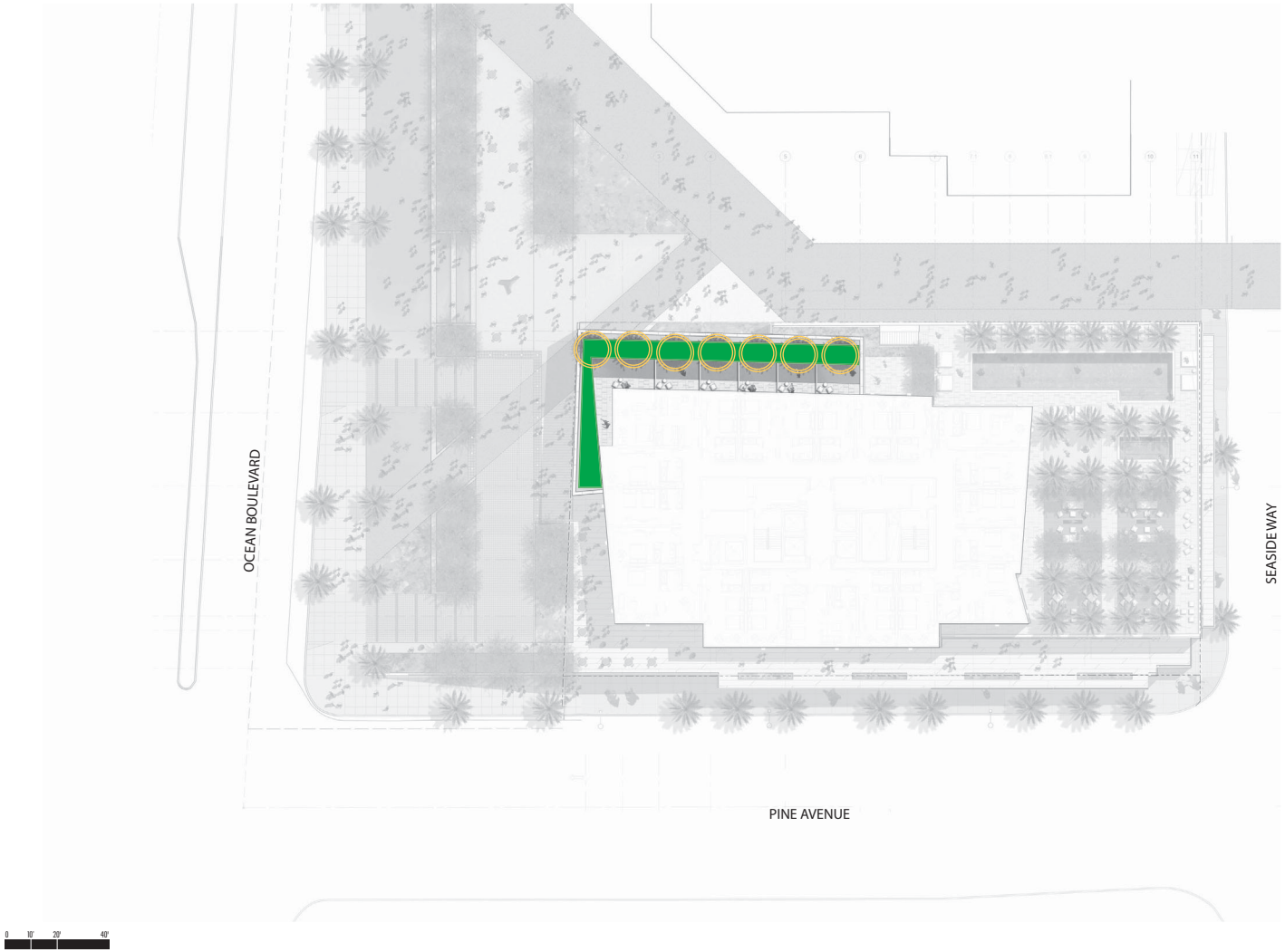
Figure 12
Landscape Plan—Level 7

Source: GBD Architects Incorporated, 2018.



Heuchera maxima
Island Alum Root
1 gal
18" spacing

Heuchera 'Santa Ana Cardinal'
Santa Ana Cardinal Coral Bells
1 gal
12" spacing

Muhlenbergia rigens
Deer Grass
5 gal
36" spacing

Russelia equisetiformis
Coral Fountain
5 gal
36" spacing

Parkinsonia x 'Desert Museum'
Desert Museum Palo Verde
36" box

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Figure 13
Landscape Plan—Level 30

Source: GBD Architects Incorporated, 2018.

4. Lighting and Signage

The Project would include exterior lighting on the building and throughout the site for security and wayfinding purposes, as well as entryway lighting along driveways and pedestrian paths for safety. In addition, decorative and architectural lighting would be added to enhance the site. In accordance with City guidelines, on-site lighting would be shielded to reduce light levels onto off-site uses as well as prevent light aimed upwards to remain in compliance with Dark Sky requirements.

Project signage would include building top identity wall signs, area identification signs, tenant identification wall and blade signs, and directional signage on the building façades. Signage may be projected, raised, and externally illuminated. All Project signage would be visually integrated with the proposed development and would feature colors and lighting that are complementary to the architectural design of the proposed building and the surrounding community. All signage material, sizes, and illumination would comply with LBMC Chapter 21.44 pertaining to on-premises signs.

5. Sustainability Features

The Project would incorporate features to support and promote environmental sustainability. "Green" principles have been incorporated in the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013), and the Project has been designed to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver® certification. Specific energy conservation, water conservation, and waste reduction features include, but are not limited to, the following:

<u>Energy Conservation and Efficiency</u>

- Use of full-cutoff or fully shielded on-street lighting oriented to pedestrian areas/sidewalks so as to minimize overlighting, light trespass, and glare.
- Use of light emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.
- Incorporation of energy-efficient design methods and technologies, such as high performance window glazing; undergrounding parking to reduce heat island effects; high-efficiency domestic heaters; and enhanced insulation to minimize solar heat gain.
- Inclusion of outdoor air flow measuring devices, additional outdoor air ventilation, and use of low emitting materials to promote indoor environmental quality.

- Incorporation of generous operable windows and high performance window glazing; shading of unit fenestration through balcony overhangs to prevent excess heat; and use of natural light.
- Use of insulated plumbing pipes and high-efficiency domestic water heaters.
- Use of insulated mechanical pipes and high-efficiency boilers.
- Use of updated boiler controls to improve efficiency.
- Use of refrigerants that reduce ozone depletion.
- Dedicated outside air units for decoupled heating/cooling.
- Variable air volume kitchen exhaust.
- Occupancy-based hotel room energy management system.
- Demand-controlled ventilation in high occupancy spaces.
- Carbon monoxide monitoring in the parking garage coupled with variable speed garage fans.
- Use of energy-efficient electrical and mechanical equipment and monitoring systems.
- Provision of conduit that is appropriate for future photovoltaic and solar thermal collectors.
- Post-construction commissioning of building energy systems performed on an ongoing basis to ensure all systems are running at optimal efficiency.

<u>Water Conservation</u>

- Inclusion of water conservation measures in accordance with Long Beach Water Department requirements for new development in the City of Long Beach.
- Use of high-efficiency fixtures and appliances.
- Use of high-efficiency Energy Star-rated dishwashers and clothes washers where appropriate.
- Individual metering and billing for water use for the restaurant tenant.
- Prohibition of the use of single-pass cooling equipment (i.e., equipment in which water is circulated once through the system, then drains for disposal with no recirculation).

- Installation of cooling tower automatic water treatment to minimize cooling tower blowdown and water waste.

- Installation of a separate water meter (or submeter), flow sensor, and master valve shutoff for irrigated landscape areas totaling 5,000 square feet and greater.

Water Quality

- Use of on-site storm water treatment and re-use system consisting of a below grade cistern and re-use pump located near the northwest corner of the Project Site. The system will be capable of accommodating up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cfs.

- Installation of catch basin inserts and screens to provide runoff contaminant removal.

- Preparation and implementation of a Stormwater Pollution and Prevention Plan, City of Long Beach Low Impact Development Plan, and Standard Urban Stormwater Mitigation Plan, all of which would include Best Management Practices to control stormwater runoff, minimize pollutant loading and erosion effects during and after construction.

Solid Waste

- Provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied.

- Use of building materials with a minimum of 10 percent recycled-content for the construction of the Project.

- Implementation of a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris or minimize the generation of construction waste to 2.5 pounds per square foot of building floor area.

In addition, the Project would include a stormwater capture and reuse system designed to accommodate up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cubic feet per second (cfs). This system would include underground steel reinforced polyethylene (SRPE) detention tanks with an irrigation reuse pump. The detention system would retain stormwater until it reaches the overflow pipe that connects to the existing storm drain system. The treated stormwater may be used for on-site irrigation.

F. Project Construction and Scheduling

Project construction would commence with demolition of the existing parking lot, followed by grading and limited excavation for the placement of building footings. Building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. Project construction is anticipated to occur over approximately 30 months, with completion anticipated in 2022. Project grading would require an estimated 23,500 cubic yards of soil removal and export.[5] As part of the Project, a Construction Traffic Management Plan would be implemented, subject to City review and approval, to minimize potential conflicts affecting local circulation and surrounding uses.

G. Necessary Approvals

The City of Long Beach has the principal responsibility for approving the Project. Approvals required for Project development may include, but are not be limited to, the following:

- Site Plan Review;
- Local Coastal Development Permit;[6]
- Master Sign Program;
- Certificate of Appropriateness for Reuse and Incorporation of Jergins Tunnel into the Project; and
- Other discretionary and ministerial permits and approvals that may be deemed necessary, including but not limited to temporary street closure permits, grading permits, excavation permits, a haul route permit, foundation permits, and building permits.

9. Surrounding Land Uses and Setting

The Project Site is located in Downtown Long Beach at the southeastern corner of Ocean Boulevard and Pine Avenue. To the west, across Pine Avenue is the Ocean Center Building, a Long Beach Historic Landmark, with surface parking, commercial, and residential uses further west along Ocean Boulevard. Commercial and office uses are located northwest of the Project

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[5] *Final earthwork numbers may change based on soil conditions.*

[6] *Pursuant to LBMC Section 21.25.902, "The coastal zone boundaries are indicated on the official zoning map." The City's Coastal Zone Map shows that the Project Site falls within the Coastal Appealable Area of the City's permit jurisdiction, which gives the Planning Commission (or City Council, upon appeal) the authority to issue coastal development permit approval. Local approval of a coastal development permit may be appealed to the California Coastal Commission pursuant to LBMC Section 21.25.908.*

Site, with the Metro Blue Line Downtown Long Beach station further to the north on 1st Street. To the north across Ocean Boulevard are the Renaissance Long Beach Hotel and several restaurants. Immediately to the east of the Project Site, separated by a retaining wall, are the Convention Center Walkway and an office building. Further to the east, across Locust Avenue, is the Breakers Hotel building, a Long Beach Historic Landmark, which is largely vacant at the present time. To the south and southeast, across Seaside Way, is the Long Beach Convention and Entertainment Center. Various commercial uses including restaurant and retail uses are located to the southwest.[7]

[7] *Although Seaside Way is officially named East Seaside Way east of Pine Street and West Seaside Way west of Pine Street, the general name Seaside Way is used herein except where a distinction is needed based on specific locations or routes.*

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☐ Biological Resources	☒ Cultural Resources	☐ Geology and Soils
☒ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials	☐ Hydrology and Water Quality
☐ Land Use and Planning	☐ Mineral Resources	☒ Noise
☐ Population and Housing	☐ Public Services	☐ Recreation
☒ Transportation and Traffic	☐ Tribal Cultural Resources	☐ Utilities and Service Systems
☒ Mandatory Findings of Significance		

DETERMINATION (To be completed by Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.	
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	**X**
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Christopher Koontz

Signature

11/30/18

Date

ENVIRONMENTAL IMPACTS. (Explanations for all answers are required):

1. Aesthetics.

In September 2013, Governor Edmund G. "Jerry" Brown (Governor Brown) signed Senate Bill (SB) 743, which became effective on January 1, 2014. Among other provisions, SB 743 adds Public Resources Code (PRC) Section 21099, which provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." PRC Section 21099 defines a "transit priority area" as an area within 0.5 mile of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an employment center project as "a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area" and defines an infill site as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

The Project meets the PRC Section 21099 definition of an employment center project as a commercially zoned site with a proposed FAR of greater than 0.75:1 within a transit priority area (i.e., within 0.5 mile of the Long Beach Transit Mall, which is served by the Los Angeles County Metropolitan Transportation Authority [Metro] Blue Line, as well as numerous bus lines); and meets the PRC Section 21099 definition of an infill site as a lot located within an urban area that has been previously developed. Therefore, pursuant to SB 743, the Project's aesthetic impacts shall not be considered a significant impact on the environment as a matter of law. Notwithstanding the mandate imposed by SB 743, the following aesthetics analysis is provided for informational purposes only.

Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Less Than Significant Impact. A scenic vista is a view of one or more visual resources. Scenic vistas generally include panoramic views of natural features, unusual terrain, or unique

urban or historic features, for which the field of view can be wide and extend into the distance, and focal views that focus on a particular object, scene, or feature of interest. While the Project Site is relatively close to the Rainbow Harbor shoreline, views of this visual resource are not available from the Project Site due to intervening development. Views from the Project Site are limited to the surrounding built environment of Downtown Long Beach.

As noted above, the Project Site is currently occupied by a surface parking lot and a portion of Victory Park. The Project includes development of a 30-story, 375.5-foot tall building on the Project Site, which could obstruct views of the shoreline from some of the nearby buildings. However, such views are already largely obstructed by other high-rise buildings in the vicinity. Additionally, the Project would improve the overall visual quality of the Project Site itself. Given the surrounding topography, intervening development, limited views of the shoreline under existing conditions and improved on-site aesthetic conditions, the Project would not have an adverse effect on scenic vistas. Furthermore, in accordance with SB 743, impacts would not be considered significant.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No Impact. The Project Site is not located along a state scenic highway. The nearest officially eligible state scenic highway is State Route 1 (Pacific Coast Highway or PCH), approximately 3.3 miles northeast of the Project Site.[8] The City's General Plan Scenic Highway Element notes that Ocean Boulevard is part of a proposed Los Angeles County (County) Scenic Highway System, and the former (1974) County General Plan Scenic Highway Element identified Ocean Boulevard as part of a coastal alignment proposed for further study.[9,10] However, the County's current General Plan adopted in 2015 no longer includes this designation and refers only to state scenic highways.[11] Furthermore, with regard to scenic resources, there are no protected trees or rock outcroppings within the Project Site,

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[8] *California Department of Transportation, California Scenic Highway Program, Scenic Highway Routes, www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/, accessed June 7, 2018.*

[9] *City of Long Beach General Plan, Scenic Routes Element (Scenic Highways), May 9, 1975, p. 51.*

[10] *County of Los Angeles General Plan, Scenic Highway Element, October 11, 1974, p. SHA-1.*

[11] *County of Los Angeles General Plan 2035, Conservation and Natural Resources Element, October 6, 2015, p. 159.*

and the Jergins Trust Building, a Long Beach Historic Landmark formerly located on-site, was demolished in 1988. As discussed below in Section 5, Cultural Resources, the subterranean Jergins Tunnel is eligible for listing in the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and as a City of Long Beach Historic Landmark; however, it is not visible from the street, nor is it open to the public. As such, it is not considered a scenic resource for purposes of this analysis. Therefore, the Project would not substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. In any event, in accordance with SB 743, impacts would not be considered significant.

Nevertheless, given the proximity of several off-site historic resources (discussed below in Response to Question 5.a) and pursuant to PRC Section 21099(d)(1)(B), potential aesthetic impacts to historic resources will be analyzed in the Draft EIR as part of the evaluation of historic resources.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

Less Than Significant Impact. As described above, the Project would involve the development of a 30-story, 537,075-square-foot building of up to 375.5 feet in height that would include 429 hotel rooms, 23,512 square feet of restaurant space, and 26,847 square feet of meeting rooms, ballrooms, and prefunction space. The proposed uses would replace the existing surface parking lot on the Project Site, and the portion of Victory Park located on-site would be improved. As such, the Project would alter the existing visual character of the Project Site.

Construction

Construction activities can disrupt the general aesthetic character of an area, and although temporary in nature, may cause a visually unappealing quality. During the Project's construction phase, the visual appearance of the Project Site would be altered due to the demolition of the existing surface parking lot, removal of an existing art installation referred to as The Loop, site preparation, grading and limited excavation, building construction, and the installation of paving/concrete and landscaping. The staging of construction equipment and materials, which is anticipated to occur primarily on-site, also would temporarily alter the visual appearance of the Project Site. Project construction is anticipated to occur over a period of approximately 30 months.

Construction activities would be visible from adjacent land uses and pedestrians and motorists on Ocean Boulevard, Pine Avenue, and Seaside Way. In accordance with Project Design Feature AES-1 below, the Project would include the installation of temporary construction fencing around the perimeter of the Project Site, thereby minimizing views of construction activities from adjacent streets. The Project would also implement Project Design Feature AES-2, which would ensure that no unauthorized materials are posted on any temporary construction barriers or temporary pedestrian walkways and that such barriers or walkways are maintained in a visually attractive manner.

Overall, while affecting the visual character of the Project area on a temporary, short-term basis, Project construction would not substantially degrade or alter the long-term visual character or quality of the Project Site or its surroundings. Implementation of project design features would further ensure that the overall aesthetic character would not be substantively degraded. Furthermore, in accordance with SB 743, impacts would not be considered significant.

Operation

As shown in Figures 4 through 8 above, the Project would consist of a tower over a podium. Due to the sloped nature of the Project Site, the main entrance facing Ocean Boulevard and opening onto Victory Park would be located on Level 3 of the building along with the main lobby, while the vehicular entrance on Level 1 would be accessed from Seaside Way on the south side of the building. The podium would rise from Seaside Way, with shifting floorplates to create rooftop decks on Levels 3, 6, and 7 along different sides of the building. In particular, on Level 6 an outdoor amenity deck would feature a pool, spa, bar, and planted areas. At the northeastern corner of the building, the lower floors would have an indented, angled footprint to create a corner cut-off in accordance with PD-6, Subarea 7 requirements. The tower would visually rise from Ocean Boulevard and include a restaurant on Level 30, with outdoor dining areas providing views of Downtown Long Beach and the shoreline to the south. The building would have a height of 375.5 feet as measured from Ocean Boulevard per LBMC.

The proposed building would be contemporary in design and include a variety of building materials. Specifically, the building façade would consist of precast concrete, metal panels, louvers, and either opaque glass or vision glass, 28 percent of which would have bird safe treatments to minimize bird strikes. On the ground level at Ocean Boulevard, the Project would include a diagonal walkway from the intersection of Ocean Boulevard and Pine Avenue to the existing Convention Center Walkway, which is intended to activate the pedestrian environment. The Project would capitalize on its location fronting Victory Park by introducing new landscaping and pedestrian pathways. Enhanced paving materials including concrete, cobblestone, decomposed granite, brick, and truncated domes would be utilized along walkways and other outdoor surface areas.

The aesthetic environment of the Project vicinity includes a variety of low-, mid-, and high-rise structures with various land uses, including hotels, government facilities, commercial, and residential uses. The Project would become part of this urban fabric, and the massing, height, and aesthetic character of the proposed building would be consistent with many of the existing and proposed structures in the vicinity. In particular, the proposed height of 30 stories would be consistent with other buildings in Downtown Long Beach, such as the 30-story One World Trade Center building and the 29-story West Ocean Condominium building, located approximately 0.4 and 0.25 mile west of the Project Site, respectively. Furthermore, the Project area continues to change, with new and ongoing developments incorporating a variety of uses with mid- and high-rise buildings of contemporary design. The Project would not be in substantial conflict with the surrounding visual environment in terms of building height, design, massing, or scale.

Project signage would include building top identity wall signs, area identification signs, tenant identification wall and blade signs, interpretive signage related to the Jergins Tunnel, and directional signage on the building façades. Signage may be projected, raised, and externally illuminated. All Project signage would be visually integrated with the proposed development and would feature colors and lighting complementary to the architectural design of the proposed building and the surrounding community. All signage material, sizes, and illumination would comply with LBMC Chapter 21.44 pertaining to on-premises signs.

Overall, while the Project would change the visual character of the Project Site, the building height, design, massing, and scale would be compatible with the existing urban uses in the vicinity. Based on the analysis above, the Project would not substantially degrade the existing visual character or quality of the Project Site or surrounding vicinity. Furthermore, in accordance with SB 743, impacts would not be considered significant.

Shading

The visual character or quality of a site and its surroundings can also be affected by shading cast upon adjacent areas by proposed structures. Shadows may provide positive effects, such as cooling effects during warm weather, or negative effects, such as the loss of natural light necessary for solar energy purposes, or the loss of warming influences during cool weather. Shadow effects depend on several factors, including the local topography, height and bulk of a project's structural elements, sensitivity of adjacent land uses, existing conditions on adjacent land uses, season, and duration of shadow projection. Facilities and operations generally considered sensitive to the effects of shading include: routinely useable outdoor spaces associated with residential, recreational, or institutional land uses (e.g., schools, convalescent homes); commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor dining areas; nurseries; and existing solar collectors. In the City of Long Beach, a proposed project would have a significant shading impact if shadow sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 A.M.

and 3:00 P.M. Pacific Standard Time (between late October and early April), or more than four hours between the hours of 9:00 A.M. and 5:00 P.M. Pacific Daylight Time (between early April and early October).

While there are no shade sensitive uses adjacent to the Project Site, the portion of Victory Park within the Project Site is considered sensitive to shading. In addition, the City's Downtown Plan included Mitigation Measure AES-3, which requires proposed buildings over 45 feet adjacent to light sensitive uses to prepare a shading study that includes calculations of the extent of shadowing arches for winter and equinox conditions.[12] For these reasons, a shading study was completed for the Project. Figure 14 through Figure 16 on pages 33 through 35 depict the shadows that would be cast by the Project. For information purposes, the following discussion evaluates the Project's shading impacts by determining whether the Project would shade any shade sensitive uses (i.e., the portion of Victory Park within the Project Site) for more than three hours between the hours of 9:00 A.M. and 3:00 P.M. Pacific Standard Time (between late October and early April), or more than four hours between the hours of 9:00 A.M. and 5:00 P.M. Pacific Daylight Time (between early April and early October).

As shown in Figure 14 on page 33, during the Spring and Fall Equinoxes, shadows from the proposed building would sweep from west to east throughout the day, and portions of Victory Park would be shaded in excess of established thresholds. As shown in Figure 15 on page 34, Project shadows would be the shortest during the Summer Solstice due to the higher position of the sun and would move from west to east throughout the day. No single portion of Victory Park would be shaded for more than four hours between 9:00 A.M. and 5:00 P.M. As shown in Figure 16 on page 35, during the Winter Solstice, shadows from the proposed building would sweep from west to east throughout the day, and portions of Victory Park would be shaded in excess of established thresholds.

Based on the above, the Project would shade portions of Victory Park for more than three hours during the Spring Equinox, Fall Equinox, and Winter Solstice. However, such shading is common in densely developed areas such as Downtown Long Beach, and the shadows would vary throughout the day. In addition, the park would be landscaped with plants that can thrive in a shaded urban environment. Furthermore, pursuant to SB 743, impacts with respect to shading would not be considered significant.

[12] *City of Long Beach Downtown Plan Final Environmental Impact Report, Mitigation Monitoring and Reporting Program, November 2011.*

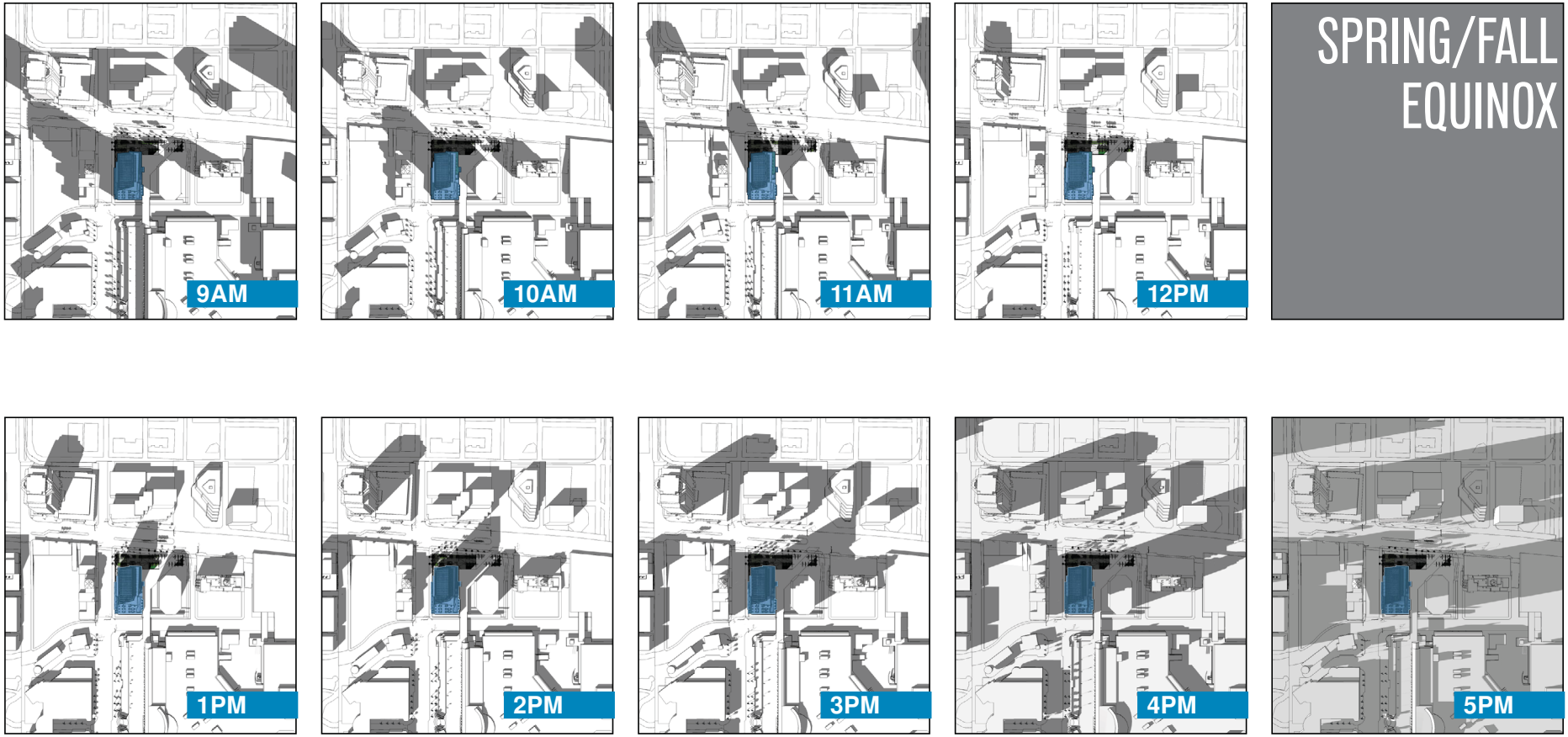

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Figure 14
Project Spring and Fall Equinox Shadows

Source: GBD Architects Incorporated, 2018.

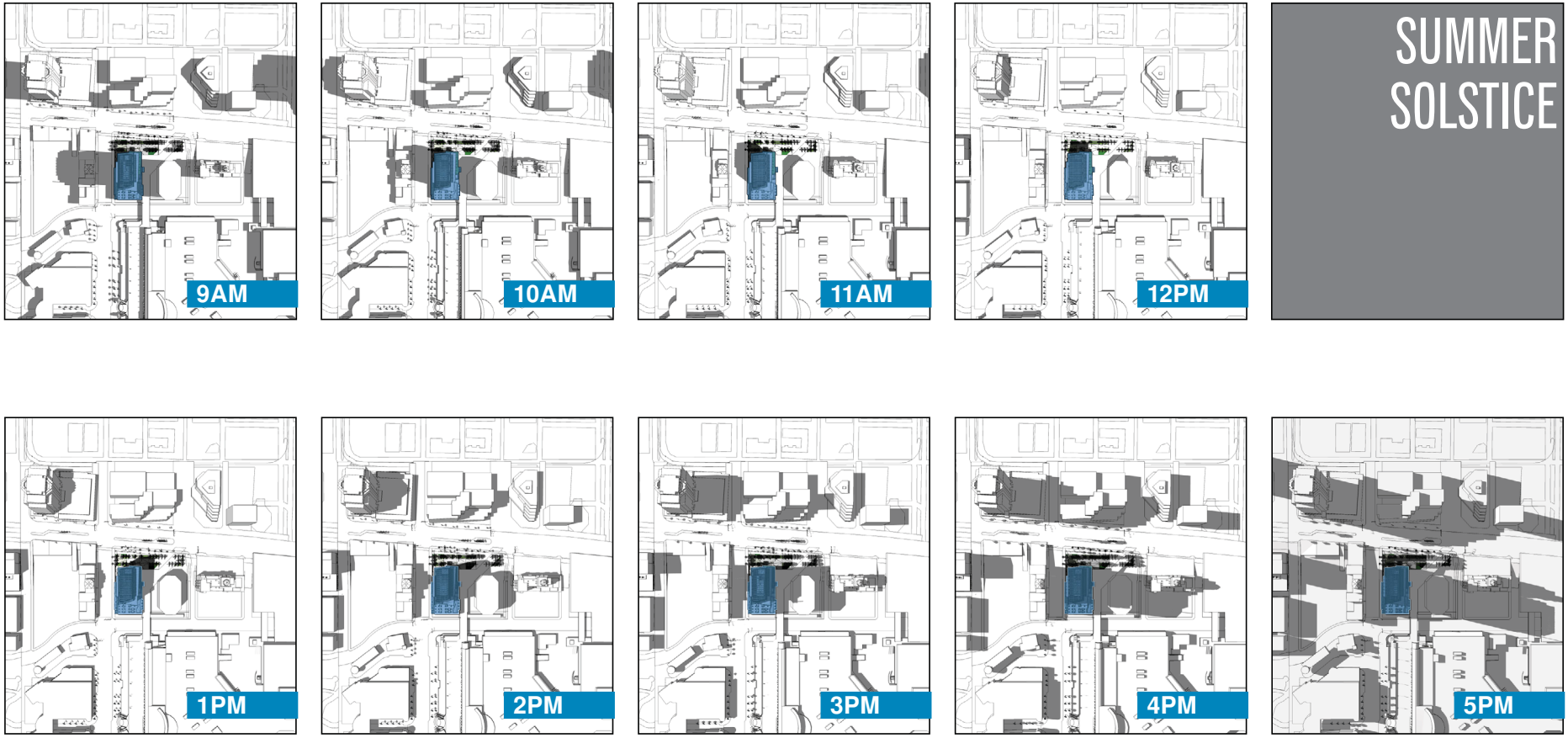

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Figure 15
Project Summer Solstice Shadows

Source: GBD Architects Incorporated, 2018.

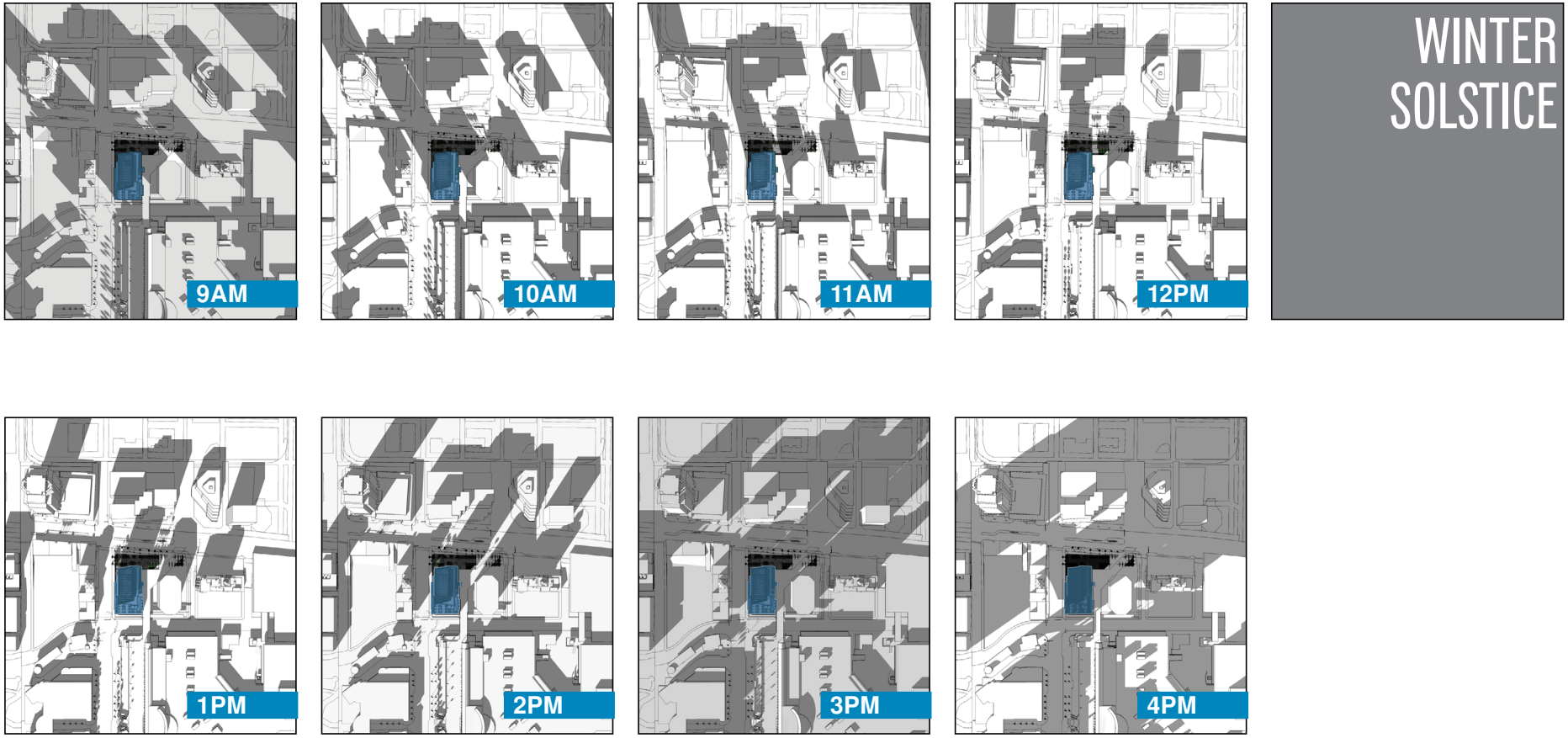

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Figure 16
Project Winter Solstice Shadows

Source: GBD Architects Incorporated, 2018.

Project Design Features

As discussed above, the Project would implement the following project design features with respect to visual character and quality:

Project Design Feature AES-1: Temporary construction fencing shall be placed around the perimeter of the Project Site to screen construction activity from views at street level.

Project Design Feature AES-2: The Applicant shall ensure through appropriate postings and daily visual inspections that no unauthorized materials are posted on any temporary construction barriers or temporary pedestrian walkways that are accessible/visible to the public and that such temporary barriers and walkways are maintained in a visually attractive manner throughout the construction period.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Less Than Significant Impact. Under existing conditions, the Project Site generates low to moderate levels of light and glare typical of the area. Light sources include low-level parking lot lighting, street lighting, and vehicle headlights. Glare sources within the Project Site include glass and metal vehicle surfaces. The surrounding ambient nighttime lighting environment is typical of a developed, urban area. The primary nighttime lighting sources in the vicinity include interior light spillage from buildings, vehicle headlights along roadways and in parking areas, illuminated signage, street lamps, and security/parking lighting.

The Project would introduce new sources of light and glare that are typical of commercial development, including architectural lighting, signage lighting, interior lighting, and security and wayfinding lighting. Nearby uses that are considered sensitive to nighttime light are limited and include the Renaissance Long Beach hotel, located north of the Project Site across Ocean Boulevard, and condominiums located both east and west of the Project Site along Seaside Way.

Construction—Lighting

Project construction could generate light spillover affecting off-site uses in the immediately surrounding area. However, construction activities would generally occur during daylight hours; with only limited construction activities taking place after 4:00 P.M., construction during

non-daylight hours would be confined to winter months. Any nighttime construction lighting would be used for safety and security and, per Project Design Feature AES-3 below, light sources associated with Project construction would be shielded and/or aimed so that no direct beam illumination is directed outside the Project Site boundary. Light associated with construction vehicle headlights would be similar to existing lighting sources (i.e., vehicles accessing the site) and would not result in increased lighting as compared to existing conditions. Therefore, Project construction would not create a new, permanent source of substantial light that would adversely affect nighttime views in the area. Furthermore, in accordance with SB 743, such impacts would not be considered significant.

Construction—Glare

Daytime glare could potentially occur during construction if reflective construction materials or equipment are positioned in highly visible locations exposed to direct sunlight. However, any glare would be highly transitory and short-term, given the movement of construction equipment and materials within the construction area and the temporary nature of construction activities. Furthermore, flat, shiny surfaces that could reflect sunlight or otherwise cause glare are not typically an element of construction activities. Therefore, Project construction would not create new sources of substantial glare that would adversely affect day or nighttime views in the area. Furthermore, in accordance with SB 743, such impacts would not be considered significant.

Operation—Lighting

As shown in Figure 17 on page 38, the Project would include exterior lighting on the building and throughout the site for security and wayfinding purposes, as well as entryway lighting along driveways and pedestrian paths for safety. In addition, decorative and architectural lighting would be added to enhance the site. In accordance with City guidelines and Project Design Feature AES-4 below, on-site lighting would be shielded to reduce light levels at off-site uses as well as to prevent light aimed upwards in compliance with Dark Sky requirements. Furthermore, in compliance with Title 24 energy efficiency standards and City of Long Beach lighting requirements, exterior lighting would be low-level, energy efficient, shielded, and directed onto the Project Site.

With the introduction of new land uses under the Project, the overall intensity of on-site lighting would increase. However, lighting on the Project Site would be consistent with the lighting in the general Project vicinity and would be appropriate in the context of the developed, urban environment. Furthermore, the proposed lighting would be concentrated on-site, with limited spill-over to surrounding uses given implementation of Project Design Feature AES-4. The proposed setbacks and landscaping along the site perimeter would further limit the potential for light spillover onto surrounding uses.

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Figure 17
Night Perspective Looking Southwest

Source: GBD Architects Incorporated, 2018.

Headlights from vehicles accessing the Project's on- and off-site parking would create additional sources of light during the evening and nighttime hours. As noted above, access to the Project Site would be via Seaside Way and Pine Avenue, with primary access from Seaside Way. These driveways would provide access to on-site valet parking areas located on Level 1 and subterranean Level P1. In addition, two existing curb cuts on Ocean Boulevard would be utilized for passenger drop-off and valet service at the main hotel entrance on Level 3. Off-site valet parking would be located at the existing Terrace Theater Parking Garage, located approximately 0.2 mile southeast of the Project Site. Valet trips are expected to make a right turn on to eastbound Ocean Boulevard followed by a right at Locust Avenue to access Seaside Way and enter either the on- or off-site parking garage. During peak or special event times, other off-site parking may be utilized but it is expected that the valet would follow a similar travel pattern. While the number of vehicles accessing the Project Site and off-site parking lot would increase relative to existing conditions, the light generated from these vehicles would be consistent with that currently associated with vehicles accessing the existing parking lot on-site and would be typical of the vehicle-oriented Project area; as such, vehicle headlights would not be anticipated to result in a substantial adverse impact.

As noted above, light sensitive uses in the vicinity include the Renaissance Long Beach hotel directly north of the Project Site and condominiums along Seaside Way to the east and west. While on-site lighting would add to the ambient lighting in the area, it would not result in changes to the overall light environment at any nearby sensitive locations. The surrounding area is fully developed with existing lighting from the various commercial, residential, and institutional uses in Downtown Long Beach. In addition, the surrounding streets are already characterized by headlights from vehicles and street lighting, and the addition of Project traffic would not substantially increase the number of vehicles on these streets. Furthermore, implementation of Project Design Feature AES-4 and compliance with City requirements would further ensure that light generated by the Project would not result in light spillover onto sensitive uses. In particular, the shielding and directing of on-site street and pedestrian lighting onto the intended surfaces in accordance with Project Design Feature AES-4 would reduce the potential for skyglow. While on-site lighting would add to the ambient lighting in the area, it would not result in changes to the overall light environment at any nearby sensitive locations.

Overall, operation of the Project would not create a new source of substantial light that would adversely affect nighttime views in the area. Moreover, such impacts would not be considered significant pursuant to SB 743.

Operation—Glare

The proposed building would be designed with a blend of precast concrete and aluminum framed glass systems. More specifically, over half of the building façade area would consist of precast concrete, metal panels, louvers, or opaque glass. The remaining building façade area

would be vision glass, 28 percent of which would have bird safe treatments to minimize bird strikes. This variety of materials and treated glass would minimize glare from the building. Substantial landscaping would be placed around the periphery of the Project Site, further limiting the potential for glare to affect off-site uses, including drivers on adjacent roadways. In addition, all on-site parking would be concealed within the building's parking levels. While use of the off-site parking area could potentially result in an incremental increase in glare from parked vehicles, this lot is already in use for the Terrace Theater and the limited increase in the number of vehicles parked there would not result in a substantial increase in glare. Based on the above, Project operation would not create new sources of substantial glare that would adversely affect day or nighttime views in the area. Furthermore, such impacts would not be considered significant pursuant to SB 743.

Project Design Features

As discussed above, the Project would implement the following project design features with respect to light and glare:

Project Design Feature AES-3: Light sources associated with Project construction shall be shielded and/or aimed so that no direct beam illumination is provided outside of the Project Site boundary.

Project Design Feature AES-4: All exterior lighting required for the Project shall be shielded and directed away from any off-site light-sensitive uses.

2. **Agriculture and Forest Resources.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

No Impact. The Project Site is located in an urbanized area of the City of Long Beach and does not include any agricultural land. In addition, the Project Site and surrounding area are not mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation's Division of Land Resource Protection.[13] As such, the Project would not convert farmland to a non-agricultural use. No impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No Impact. The Project Site is not zoned for agricultural use under the Long Beach Municipal Code, and no agricultural zoning is present in the surrounding area. The Project Site and surrounding area also are not enrolled under a Williamson Act Contract.[14] Therefore, the Project would not conflict with existing zoning for agricultural uses or a Williamson Act Contract. No impacts would occur, and no mitigation measures would be required.

[13] *California Department of Conservation, California Important Farmland Finder, https://maps.conservation.ca.gov/dlrp/ciff/, accessed May 1, 2018.*

[14] *California Department of Conservation, Los Angeles County Williamson Act FY 2015/2016, 2015.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220 (g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined in Government Code Section 51104(g))?	☐	☐	☐	☒

No Impact. The Project Site is located in an urbanized area of the City and does not include any forest land or timberland. Additionally, the Project Site is currently zoned for commercial land uses, is not zoned for forest land, and is not used as forest land. Therefore, the Project would not rezone forest land or timberland as defined by the PRC. No impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. Result in the loss of forest land or conversion of forest land to a non-forest use?	☐	☐	☐	☒

No Impact. As mentioned above, the Project Site is located in an urbanized area of the City, is not zoned for forest land, and does not include any forest or timberland. Therefore, the Project would not result in the loss or conversion of forest land. No impacts would occur, and no mitigation measures would be required. No further analysis of this issue is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact. As noted above, the Project Site is located in an urbanized area of the City and does not contain any agricultural or forest uses, nor are any agricultural or forest uses located in the Project vicinity. Thus, Project development would not convert any farmland or forest land to non-agricultural or non-forest use. No impacts would occur, and no mitigation measures would be required.

3. **Air Quality.** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐

Potentially Significant Impact. The Project Site is located within the 6,700-square-mile South Coast Air Basin (Basin). Within the Basin, the South Coast Air Quality Management District (SCAQMD) is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in non-attainment (i.e., ozone, particulate matter less than ten microns in size [PM_{10}], and particulate matter less than 2.5 microns in size [$PM_{2.5}$]). The SCAQMD's 2016 Air Quality Management Plan (AQMP) contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG). SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment.[15] With regard to future growth, SCAG has prepared the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS), which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2016–2040 RTP/SCS are based on growth projections in local general plans for jurisdictions in SCAG's planning area.

Construction and operation of the Project may result in an increase in stationary and mobile source air emissions. As a result, Project development could have an adverse effect on the SCAQMD's implementation of the AQMP. Therefore, the EIR will provide further analysis of the Project's consistency with the SCAQMD's AQMP.

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[15] *SCAG serves as the federally designated metropolitan planning organization (MPO) for the Southern California region.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐

Potentially Significant Impact. The Project would contribute to regional and localized air pollutant emissions from the Project Site during construction (short-term) and operation (long-term). Construction-related pollutants would be associated with sources such as construction worker vehicle trips, the operation of construction equipment, site grading and preparation activities, and the application of architectural coatings. During Project operation, air pollutants would be emitted on a daily basis from motor vehicle travel, energy consumption, and other on-site activities. Therefore, the EIR will provide further analysis of the Project's construction and operational air pollutant emissions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐

Potentially Significant Impact. As described above, construction and operation of the Project would result in the emission of air pollutants in the Basin, which is currently in non-attainment of both federal and state air quality standards for ozone and $PM_{2.5}$, as well as non-attainment for state air quality standards for PM_{10}. Therefore, implementation of the Project could potentially contribute to air quality impacts, which could cause a cumulative impact when combined with other existing and future emissions sources in the area. As such, the EIR will provide further analysis of cumulative air pollutant emissions associated with the Project.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐

Potentially Significant Impact. As discussed above, the Project would contribute to regional and localized air pollutant emissions from the Project Site during construction (short-term) and operation (long-term). Some population groups, including children, the elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases) are considered more sensitive to air pollution than others. The SCAQMD *CEQA Air Quality Handbook* provides examples of typical sensitive receptors, including long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities. Sensitive receptors in the Project vicinity include multi-family residences. Therefore, the EIR will provide further analysis of the Project's potential to result in substantial adverse impacts to sensitive receptors.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Less Than Significant Impact. No objectionable odors are anticipated as a result of either construction or operation of the Project. Specifically, Project construction would involve the use of conventional building materials typical of construction projects of similar type and size. Any odors that may be generated during construction would be localized and temporary in nature and would not be sufficient to affect a substantial number of people.

With respect to operation of the Project, according to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project would not involve these types of uses. In addition, on-site trash receptacles would be contained, located, and maintained in a manner that promotes odor control and would not result in substantially adverse odor impacts. Construction and operation of the Project would also comply with SCAQMD Rules 401 and 403 regarding visible emissions violations, as well as SCAQMD Rule 402, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable

number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.[16,17]

Based on the above, the Project would not create objectionable odors affecting a substantial number of people during either construction or operation of the Project, and impacts would be less than significant.

4. Biological Resources. Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Less Than Significant Impact with Mitigation Incorporated. The Project Site is located within an urbanized area and is currently developed with surface parking, a portion of an urban park (Victory Park), and limited ornamental landscaping. Due to the developed nature of the Project Site, species likely to occur on-site are limited to small terrestrial and avian species typically found in developed settings. While on-site vegetation is limited to ornamental shrubs and trees, some on-site mature trees could potentially be used for roosting and nesting purposes by migratory birds. In order to avoid direct impacts to migratory birds and ensure compliance with the Migratory Bird Treaty Act (MBTA) as well as California Fish and Game Code Sections 3503, 3503.5, and 3513, removal of on-site mature trees would be conducted in accordance with Mitigation Measure BIO-1 set forth below. As such, efforts would be made to schedule the removal of mature trees between September 1 and February 14 to avoid the nesting season. If activities were to occur during the nesting season, all suitable habitats would be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to removal. If any active nests were detected, the area would be flagged, along with a minimum

[16] *SCAQMD, Visible Emissions, Public Nuisance, and Fugitive Dust, www.aqmd.gov/home/regulations/compliance/inspection-process/visible-emissions-public-nuisance-fugitive-dust, accessed July 5, 2018.*

[17] *SCAQMD, Rule 402, Nuisance, www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf, accessed October 3, 2018.*

300-foot buffer (buffer may range between 300 and 500 feet as determined by the monitoring biologist), and would be avoided until the nesting cycle has completed or the monitoring biologist determines that the nest has failed. With implementation of the proposed mitigation measure and associated compliance with regulatory requirements, the Project would not have a substantial adverse direct effect on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS) and would not result in a significant direct impact.

In addition, although unlikely, the open space areas within Victory Park, both on-site and adjacent to the Project Site, could potentially provide habitat for sensitive species. Further, Rainbow Lagoon is located approximately 1,000 feet south of the Project Site. However unlikely, the Project could result in indirect impacts to sensitive species in these areas through the introduction of invasive species, changes in lighting and noise, changes to stormwater drainage and water quality, and/or the introduction of new vehicular hazards. These possible indirect impacts are discussed in detail below.

Invasive Species

The Project would introduce new landscaping that may include various ornamental (non-native) plant species. Such species could have the potential to proliferate in native habitat areas, displace native plant species, and result in adverse impacts to potentially sensitive habitats and resident species. However, Project landscaping would be compatible with the surrounding environment and could serve to support foraging or nesting of native wildlife species. Furthermore, the open space areas associated with Victory Park are not natural habitat areas, and non-native species are already present within the park. Therefore, the potential for the proliferation of invasive species into native habitats would be limited. Thus, potential indirect impacts to candidate, sensitive, or special-status species in the vicinity of the Project Site as a result of potential invasive species would be less than significant.

Lighting

Nighttime lighting on the Project Site could attract nocturnal migrating bird species to the Project Site, in particular songbirds due to their tendency to migrate at night, their low flight altitudes, and disorientation by artificial light. Nocturnal migrating birds are also attracted to sources of artificial light, particularly during periods of inclement weather. Thus, nocturnal migrating bird species could be vulnerable to collisions with obstructions.

While the Project would increase the amount of artificial lighting within the Project Site, all Project lighting would be directed and installed according to the City of Long Beach lighting standards to avoid excessive lighting and minimize off-site light spill. Specifically, lighting in landscaped areas and the accessible roof decks would be directed downward, and accent

lighting on the building exterior would be shielded to prevent light spillage. Furthermore, Project-related lighting would be similar in nature to that of surrounding development in the area in order to provide adequate visibility and safety. Proposed lighting would not include unusually bright lights or lights directed off-site. Thus, although new light sources on the Project Site would be visible, Project-related lighting would not result in substantial changes in the overall light levels in the Project area. As such, indirect impacts to biological resources associated with Project lighting would be less than significant.

Noise

Noise associated with Project construction activities may have indirect effects on wildlife. Such noise impacts are generally a function of the noise generated by construction equipment, the location of the construction equipment, the sensitivity of nearby land uses or resources, and the timing and duration of construction activities. However, Project construction noise would be temporary and intermittent in nature. Standard construction practices also would be implemented to reduce off-site construction noise to the extent feasible. Therefore, potential indirect impacts to candidate, sensitive, or special status species in the vicinity of the Project Site associated with construction noise would be less than significant.

Regarding operational noise, any new noise sources introduced by the Project would be similar to the existing types of noise and associated noise levels in the Project vicinity. Further, any wildlife in the Project vicinity are already subject to urban noise and similar disturbances. Therefore, no significant indirect impacts are expected to occur in connection with operational Project noise.

Stormwater Drainage and Water Quality

Indirect impacts to sensitive species and habitats could occur through elevated pollutant loads from stormwater flows leaving the Project Site. Pollutants typically associated with commercial development include oil, grease and vehicle-related fluids from parking areas, and pesticides or nutrients from landscaping. However, the Project would incorporate and implement best management practices (BMPs) during Project construction and operation in compliance with National Pollutant Discharge Elimination System (NPDES) permit requirements. Furthermore, water quality impacts are not anticipated as stormwater runoff would be intercepted and treated before entering the storm drain system. Overall, with compliance with regulatory requirements, including the implementation of BMPs, stormwater runoff and water quality impacts indirectly affecting candidate, sensitive or special status species or habitats would be less than significant.

Vehicular Hazards

Project-related vehicular trips along local roadways could contribute to an increase in the potential for collisions with wildlife species near natural habitat areas and could increase the occurrence of "road kills." While the Project is expected to increase the number of vehicles on local roadways, as previously described, the open space areas associated with Victory Park within and adjacent to the Project Site are not natural habitat areas. Furthermore, because of the dense urban development in the vicinity, road kills of sensitive wildlife species in areas surrounding the Project Site are not prevalent. Thus, the anticipated increase in traffic along local roadways as a result of the Project would not substantially increase vehicular collisions with sensitive species. Therefore, potential indirect impacts related to candidate, sensitive or special status species from vehicular collisions would be less than significant.

Mitigation Measures

The following mitigation measure is proposed to reduce impacts to nesting birds to a less than significant level:

Mitigation Measure BIO-1: The Applicant shall perform one or more of the following to reduce potential impacts to migratory raptor and songbird species to a less than significant level: (1) vegetation removal activities shall be scheduled outside the nesting season for raptor and songbird species (nesting season typically occurs from February 15 to August 31) to avoid potential impacts to nesting species (this will ensure that no active nests will be disturbed and that habitat removal could proceed rapidly); and/or (2) any construction activities that occur during the raptor and songbird nesting season shall require all suitable habitat to be thoroughly surveyed for the presence of nesting raptor and songbird species by a qualified biologist no earlier than seven days prior to commencement of disturbance. If any actives nests are detected, a buffer of at least 300 feet (500 feet for raptors) or as determined by the qualified biologist shall be delineated, flagged, and avoided until the nesting cycle is complete, as determined by the qualified biologist. The results of the survey(s) shall be reported to the lead agency to document compliance with applicable state and federal laws pertaining to the protection of nesting native birds.

Conclusion

With implementation of Mitigation Measure BIO-1, impacts with respect to candidate, sensitive, or special status species would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

Less Than Significant Impact. The Project would not result in direct impacts to riparian habitat or other sensitive natural communities as none are located within the Project Site. Potential indirect impacts to candidate, sensitive, or special-status species near the Project Site are discussed above in response to Question 4.a. As discussed therein, the Project would limit the use of potential invasive species and would not generate a substantial amount of off-site lighting and noise. In addition, the Project would implement BMPs including erosion controls and planters to minimize the amount of runoff and pollutants exiting the site. Thus, the Project would not result in significant impacts to riparian habitat or other sensitive natural communities, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐

Less Than Significant Impact. There are no federally protected waters or wetlands, as defined by Section 404 of the Clean Water Act, within the Project Site. The nearest waters of the United States/California and wetlands are estuarine and marine deepwater wetlands associated with Rainbow Lagoon, approximately 1,000 feet south of the Project Site.[18] Potential indirect impacts to candidate, sensitive, or special-status species, which includes species that may occur within nearby wetlands such as Rainbow Lagoon, are discussed above

[18] *USEPA, NEPAssist, https://nepassisttool.epa.gov/nepassist/nepamap.aspx?wherestr=100+East+Ocean+Boulevard+Long+Beach%2C+CA, accessed May 8, 2018.*

in response to Question 4.a. As discussed therein, the Project would implement BMPs in accordance with regulatory requirements to minimize the amount of runoff and pollutants discharged into receiving waters. Furthermore, Rainbow Lagoon is separated from the Project Site by the Long Beach Convention Center and has been impacted through previous development associated with construction of the Long Beach Arena.[19] As such, potential impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

Less Than Significant Impact. As previously discussed, the Project Site is fully developed and is surrounded by urbanized development that does not typically contain native habitat areas or habitat linkages. The Project Site does not support biologically significant wildlife movement or contain native wildlife nursery sites. The City of Long Beach is, however, located within the Pacific Flyway, which is identified as a major north-south route for travel by migratory birds in the Americas. Thus, Project development could pose a hazard to migrating bird species as they move through the area. However, there are extensive unobstructed flight paths within the City, including the Los Angeles River Channel, San Gabriel River Channel, Los Cerritos Wetlands, Los Cerritos Channel, and areas of low-scale urban development.

Additionally, while the proposed hotel would be 375.5 feet in height, the Project has been designed as a “bird-safe” building. Twenty-eight percent of the building’s vision glass exterior would include bird safe treatments to minimize the potential for bird strikes utilizing qualified fritting or acid etchings. The bulk of these treatments would be on the podium portion of the building because these lower levels are most susceptible to bird confusion through reflections of surrounding ground levels. Additionally, a consistent pattern of treatment of vision glass across the tower façade would increase the effective coverage area of bird-safe treatments. Furthermore, Project development would not funnel migrating birds into existing or proposed structures or constrain the flight paths within the extensive open air space surrounding the

[19] *City of Long Beach, Parks, Recreation and Marine, “Rainbow Lagoon,” www.longbeach.gov/park/park-and-facilities/directory/rainbow-lagoon/, accessed May 8, 2018.*

Project Site. Therefore, the Project is not expected to impact the Pacific Flyway or otherwise substantially interfere with the movement or migration of any native or migratory wildlife species. Thus, Project impacts related to wildlife corridors would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

No Impact. The vegetation on-site consists almost entirely of ornamental, non-native shrubs and trees. The removal of any street trees would occur in accordance with the City's Tree Maintenance Policy, which sets forth guidelines to administer LBMC Chapter 14.28. The Project also would provide landscaping and open space in accordance with the City's requirements for the Downtown Shoreline Plan area. Therefore, the Project would not conflict with local policies or ordinances protecting biological resources. No impacts would occur, and no mitigation measures are necessary.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
f. Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

No Impact. As indicated above, the Project Site is located in an urbanized area and does not provide habitat for sensitive biological resources. As such, the Project Site is not subject to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project would not conflict with the provisions of any habitat conservation plans, and no mitigation measures are required.

5. Cultural Resources. Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☒	☐	☐	☐

Potentially Significant Impact. CEQA Guidelines Section 15064.5 defines a historic resource as one that is: (1) listed in, or determined to be eligible for listing in the California Register of Historical Resources; (2) included in a local register of historical resources (pursuant to PRC Section 5020.1(k)); or (3) identified as significant in an historical resources survey (meeting the criteria in PRC Section 5024.1(g)). Additionally, any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered "historically significant" by the lead agency if the resource meets the criteria for listing on the California Register of Historical Resources.

As previously described, the Project Site was the former location of the Jergins Trust Building, a Long Beach Historic Landmark. Construction on the building began in 1916 and was complete by 1928.[20] Reaching 10 stories in height, the Jergins Trust Building contained offices, stores, restaurants, a theater, and an arcade containing small shops on the lower three floors. Other tenants included a post office, barber shop, news and magazine businesses, and a school. An underground arcade and tunnel (the Jergins Tunnel) extended from below the building to the northern side of Ocean Boulevard.[21] The northern entrance to the Jergins Tunnel was closed in 1967, and the Jergins Trust Building itself was demolished in 1988. However, the Jergins Tunnel remains in place and is considered a historic resource. In addition, two other historic resources are located in the vicinity: the Ocean Center Building and the Breakers. Given the proximity of the Project to these off-site historic resources and the Project's physical connection to the Jergins Tunnel, further analysis of this issue in an EIR is required.

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[20] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. See Appendix IS-6 of this Initial Study.*

[21] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. See Appendix IS-6 of this Initial Study.*

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐

Less Than Significant with Mitigation Incorporated. CEQA Guidelines Section 15064.5(a)(3)(D) defines archaeological resources as any resource that "has yielded, or may be likely to yield, information important to prehistory or history." Archaeological resources are features, such as tools, utensils, carvings, fabric, building foundations, etc., that document evidence of past human endeavors and that may be historically or culturally important to a significant earlier community.

Based on a records search conducted by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, included as Appendix IS-1 of this Initial Study, the Project Site has been developed since the early 20th century and may be sensitive to archaeological resources, although none were identified on-site. Accordingly, although the surface and subsurface areas of the Project Site have been previously disturbed, there is a potential for the discovery of prehistoric cultural or archaeological resources. Such a find would constitute a potentially significant impact. This impact would be mitigated to a less than significant level with implementation Mitigation Measure CUL-1, detailed below.

In addition, the SCCIC records search results list one built-environment resource, one Office of Historic Preservation Historic Properties Directory resource, and one California Register resource located on-site, all of which refer to the Jergins Trust Building which was previously demolished. As discussed above, a below ground portion of the arcade (i.e., the Jergins Tunnel) still remains on-site and is considered a historic resource. As such, potential impacts to this historic resource will be evaluated in an EIR, as indicated above.

Mitigation Measures

The following mitigation measure is proposed to reduce potential impacts to archaeological resources to a less than significant level:

Mitigation Measure CUL-1: The qualified archaeological monitor shall monitor excavation and grading activities within native soils on the Project Site that have not been previously disturbed. In the event cultural resource(s) are unearthed during ground-disturbing activities, the archaeological monitor shall halt or redirect such activities away from the area of the find to allow evaluation, and work may continue outside the vicinity of the find.

Deposits shall be treated in accordance with applicable federal, state, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. In addition, if it is determined that an archaeological site is a historical resource, the provisions of Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5 shall be implemented.

An Archaeologist meeting the Secretary of the Interior's Professional Qualification Standards shall evaluate the discovered resource(s) and if significant, notify the Project Applicant, the City, and an appropriate Native American representative (if prehistoric or Native American in nature), and then develop an appropriate treatment plan. Treatment plans shall consider preservation of the resource(s) in place as a preferred option. The Archaeologist shall then prepare a report to be reviewed and approved by the City and file it with the Project Applicant, the City, and the South Central Coastal Information Center located at the California State University, Fullerton. The report shall describe any resource(s) unearthed, the treatment of such resource(s), and the evaluation of the resource(s) with respect to the California Register of Historic Resources and the National Register of Historic Places. If the resource(s) are found to be significant, a separate report detailing the results of the recovery and evaluation process shall be prepared. The City shall designate one or more appropriate repositories for any cultural resource(s) that are uncovered.

Conclusion

With implementation of Mitigation Measure CUL-1, impacts to archaeological resources would be less than significant.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Less Than Significant with Mitigation Incorporated. Paleontological resources are the fossilized remains of organisms that have lived in a region in the geologic past and whose remains are found in the accompanying geologic strata. This type of fossil record represents the primary source of information on ancient life forms, since the majority of species that have existed on earth from this era are extinct. PRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor. Furthermore, California Penal Code Section 622.5 includes penalties for damage or removal of paleontological resources.

Based on a records search conducted by the Los Angeles County Natural History Museum (LACM), included as Appendix IS-2 of this Initial Study, there are no vertebrate fossil localities that lie directly within the boundaries of the Project Site. However, the records search indicates that within the greater Project vicinity, there are fossil localities from the same sedimentary deposits that occur on-site. The surficial sediments in the vicinity consist of older Quaternary Alluvium, derived primarily as fluvial deposits from the Los Angeles River to the west, but possibly estuarine or beach deposits. These deposits may contain significant vertebrate fossils, as they are known in the area to be fossiliferous.

The nearest fossil locality from these deposits is from LACM 6896, located near the intersection of Magnolia Avenue and Ocean Boulevard, approximately 0.33 mile northwest of the Project Site. This location produced a specimen of a fossil whale, *Cetacea*, from pile driving activities at a depth of less than 100 feet below ground surface (bgs). The next closest fossil locality, LACM 1005, located near Bixby Park approximately 1.4 miles east of the Project Site, produced fossil specimens of mammoth, *Mammuthus columbi*, and ground sloth, *Northrotheriops shastensis*, at depths of approximately 60 feet bgs. Further to the east, near Bluff Park approximately 1.6 miles east of the Project Site, LACM 7739 produced a rich suite of fossil invertebrates including snails, clams, tusk shells, barnacles, crabs, and sea urchins at a depth of 25 feet bgs.

Shallow excavations in the Quaternary Alluvium on the Project Site are unlikely to uncover any significant vertebrate fossils. Deeper excavations, however, could potentially encounter significant fossil vertebrate remains. The Project may, therefore, result in a potentially significant impact. Implementation of Mitigation Measure CUL-2 below would mitigate this potential impact to a less than significant level.

Mitigation Measures

The following mitigation measure is proposed to reduce potential impacts to paleontological resources to a less than significant level:

Mitigation Measure CUL-2: If evidence of subsurface paleontological resources is found during excavation and other ground disturbing activities, all work within 50 feet of the discovery shall cease and the construction contractor shall contact the City of Long Beach Development Services Department. With direction from the Development Services Department, a paleontologist certified by the County of Los Angeles shall evaluate the find. If warranted, the paleontologist shall prepare a complete a standard Paleontological Resources Mitigation Program for the salvage and curation of identified resources.

Conclusion

With implementation of Mitigation Measure CUL-2, impacts to paleontological resources would be less than significant.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Less Than Significant Impact with Mitigation Incorporated. As noted above, the Project would require excavation to a maximum depth of 22 feet and grading of an estimated 23,500 cubic yards for placement of building footings and foundations. Thus, there is a possibility of encountering human remains within native soils. Accordingly, impacts with regard to archaeological resources and the discovery of human remains would be potentially significant. However, this impact would be mitigated to a less than significant level with implementation of Mitigation Measure CUL-3 set forth below.

Mitigation Measures

The following mitigation measure is proposed to reduce potential impacts to human remains to a less than significant level:

Mitigation Measure CUL-3: If human remains are encountered unexpectedly during ground-disturbing activities, work in the affected area and the immediate vicinity shall be halted immediately. The construction manager at the Project Site shall be contacted and shall notify the County Coroner. If the County Coroner determines the remains to be Native American, the Archaeologist and Native American monitor shall then be contacted, if they are not on-site at the time, as well as the responsible lead agency of the discovery, who in turn shall notify the Native American Heritage Commission. Disposition of the human remains and any associated grave goods shall be in accordance with California Health and Safety Code Section 7050.5 and Public Resources Code Sections 5097.91 and 5097.98. The Archaeologist and the Native American monitor, with the concurrence of the City, shall determine the area of potential impact and the timing when construction activities can resume. Preservation of the remains in place shall be considered as a possible course of action by the Project Applicant, the City, and the Most Likely Descendent.

Conclusion

With implementation of Mitigation Measure CUL-3, impacts to human remains would be less than significant.

6. Geology and Soils.

The following discussion is based, in part, on the Report of Geotechnical Engineering Services (Geotechnical Report) and the Responses to California Environmental Quality Act Items Memorandum (Geotechnical Memo) prepared for the Project by GeoDesign, Inc. in January 2017 and June 2018, respectively. These documents are included in Appendix IS-3 of this Initial Study.

Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

Less Than Significant Impact. Faults in Southern California are considered active, potentially active, and inactive based on criteria developed by the California Geological Survey (CGS) for the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo). By definition, an active fault is one that has had surface displacement within Holocene time (approximately the last 11,000 years), a potentially active fault is one that has demonstrated surface displacement within the last 1.6 million years, and inactive faults have not moved within the last 1.6 million years. The primary purpose of Alquist-Priolo is to identify sites that have a potential for surface rupture due to active faults in close proximity to the site. In such cases, a building setback zone is established to mitigate the potential for surface rupture.

The Project Site is not within a currently established Alquist–Priolo Earthquake Fault Zone as identified by the CGS or within the City's General Plan Seismic Safety Element.[22,23] No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the Project Site. The nearest active fault to the Project Site is the Newport Inglewood Fault Zone, which is located approximately 2 miles northeast of the Project Site.[24] Therefore, the potential for surface rupture to occur on the Project Site is considered low. Furthermore, the Project would comply with the recommendations of the geotechnical engineer included in the Geotechnical Report and Memo, included in Appendix IS-3 of this Initial Study, as well as the design-level geotechnical report to be prepared for the Project during the design phase. Impacts related to the rupture of a known earthquake fault would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
ii. Strong seismic ground shaking?	☐	☐	☒	☐

Less Than Significant Impact. The Project Site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. As previously stated, the closest active fault is the Newport-Inglewood Fault Zone, which is located approximately 2 miles north of the Project Site.

The Project would increase the amount of development on-site, thereby increasing the number of employees and visitors on-site. However, as with any new development in the State of California, building design and construction for the Project would be required to conform to the current seismic design provisions of the California Building Code. The 2016 California Building Code incorporates the latest seismic design standards for structural loads and materials as well as provisions from the National Earthquake Hazards Reduction Program to mitigate losses from an earthquake and provide for the latest in earthquake safety. Additionally, construction of the Project would be required to adhere to the seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City to minimize seismic-related hazards. Adherence to current building codes and engineering practices would ensure that the Project would not expose people, property or infrastructure to

[22] *California Geological Survey, Earthquake Zones of Required Investigation Long Beach Quadrangle, 2016.*

[23] *City of Long Beach General Plan, Seismic Safety Element, Plate 2, October 1988.*

[24] *City of Long Beach General Plan, Seismic Safety Element, Plate 2, October 1988.*

seismically induced ground shaking hazards that are greater than the average risk associated with locations in the Southern California region, and would minimize the potential to expose people or structures to substantial risk, loss, or injury. Furthermore, the Project would comply with the recommendations of the geotechnical engineer included in the Geotechnical Report and Memo, included in Appendix IS-3 of this Initial Study, as well as the design-level geotechnical report to be prepared for the Project during the design phase. Based on the above, development of the Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Thus, with compliance with regulatory requirements and the geotechnical engineer's recommendations, impacts associated would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

Less Than Significant Impact. Liquefaction involves a sudden loss in strength of saturated, cohesionless soils that are subject to ground vibration and results in temporary transformation of the soil to a fluid mass. If the liquefying layer is near the surface, the effects are much like that of quicksand for any structure located on it. If the layer is deeper in the subsurface, it may provide a sliding surface for the material above it. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine- to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

Based on the Seismic Hazards Maps of the State of California, the Project Site is located within a potentially liquefiable area.[25] In addition, the Project Site is located in an area with a significant liquefaction potential as mapped by the City.[26] Accordingly, the Geotechnical Report evaluated the potential for liquefaction to occur on-site. The procedure used, which is outlined in the National Center for Earthquake Engineering Research document *Proceedings of the NCEER Workshop for Liquefaction Resistance of Soils*, evaluated whether on-site soils would behave more like clay or sand. Clay-like behavior generally precludes liquefaction, while sand-like behavior indicates soils may be subject to liquefaction or should be evaluated further.

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[25] *California Geological Survey, Earthquake Zones of Required Investigation Long Beach Quadrangle, 2016.*

[26] *City of Long Beach General Plan, Seismic Safety Element, Plate 7, October 1988.*

As part of the evaluation, borings were taken from various locations on the Project Site. Fill soils ranging from approximately 4.0 to 14.5 feet in thickness were encountered in the borings. These soils generally consist of medium dense to very dense silty sand and hard sandy silt, as well as various amounts of asphalt and brick fragments. Native soils encountered beneath the fill consist of medium dense to very dense sand, sand with silt, and silty sand with intermittent layers of very stiff to hard silt and sandy silt approximately 2.5 to 8.5 feet in thickness. Groundwater was encountered at depths ranging from 7.0 to 12.5 feet bgs, which is consistent with the historic high groundwater level reported at the site.

The subsequent liquefaction analysis, which was based on a predominant earthquake magnitude of 6.86 and a peak ground acceleration of 0.628 g, indicates that the soils below the planned foundation levels are sufficiently dense and stiff to preclude liquefaction. In addition, the Project's design and construction would comply with California Building Code Title 24, Chapter 18 to minimize risks associated with liquefaction potential. Therefore, the Project would not expose people or structures to substantial adverse effects associated with liquefaction. Impacts would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
iv. Landslides?	☐	☐	☒	☐

Less Than Significant Impact. While the Project Site slopes from Ocean Boulevard down to Seaside Way, the area is characterized by a relatively flat topography. As such, the Project Site is not identified by the City within an area of steep slopes.[27] Additionally, the Project Site and surrounding area are not designated as an earthquake-induced landslide area by the CGS.[28] Furthermore, the Project would not require substantial alteration to the existing topography. Therefore, no significant impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

[27] *City of Long Beach General Plan, Seismic Safety Element, Plate 9, October 1988.*

[28] *California Geological Survey, Earthquake Zones of Required Investigation Long Beach Quadrangle, 2016.*

Less Than Significant Impact. Development of the Project would require grading, limited excavation to support the building foundations, and other construction activities that have the potential to disturb existing soils and expose soils to rainfall and wind, thereby potentially resulting in soil erosion. However, construction activities would occur in accordance with erosion control requirements, including grading and dust control measures, imposed by the City pursuant to grading permit requirements. Specifically, Project construction would comply with the Long Beach Building Standards Code (LBMC Title 18), which requires necessary permits, plans, plan checks, and inspections to ensure that the Project would reduce erosion effects. In addition, as part of the plan check requirements, the Project would be required to have a stormwater management program, including a Storm Water Pollution Prevention Plan (SWPPP) pursuant to NPDES permit requirements. As part of the SWPPP, BMPs would be +implemented during construction to reduce sedimentation and erosion levels to the maximum extent possible. Based on compliance with regulatory requirements, including the implementation of BMPs, impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Less Than Significant Impact. As discussed above, in Response to Questions 6.a.iii and 6.a.iv, the Project would not be located in an area susceptible to seismic-related ground failure, including liquefaction, and the Project Site is not located in an area designated by the City or State as being prone to landslides. With respect to lateral spreading, while the ground surface level slopes gently to the south within the Project Site, as noted above, the soils on-site are not prone to liquefaction, and the potential for lateral spreading is not present on-site. Additionally, as discussed further below in Response to Question 9.b, the Project Site is not located in an aquifer recharge area, and there are no groundwater wells or pumping activities on-site. As such, the potential for subsidence is low. Impacts with regard to unstable soils would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☒	☐

Less Than Significant Impact. Expansive soils are typically associated with fine-grained clayey soils that have the potential to shrink and swell with repeated cycles of wetting and drying. As noted above, fill soils ranging from approximately 4.0 to 14.5 feet in thickness were encountered in the borings. These soils generally consist of medium dense to very dense silty sand and hard sandy silt, as well as various amounts of asphalt and brick fragments. Native soils encountered beneath the fill consist of medium dense to very dense sand, sand with silt, and silty sand with intermittent layers of very stiff to hard silt and sandy silt approximately 2.5 to 8.5 feet in thickness. None of the soils encountered exhibited the potential for expansion. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

No Impact. The Project Site is located within a community served by existing sewage infrastructure. Therefore, wastewater generated by the Project would be accommodated via connections to the existing sewage infrastructure located in the Project area. As such, the Project would not require the use of septic tanks or alternative wastewater disposal systems. The Project would not result in impacts related to the ability of soils to support septic tanks or alternative wastewater disposal systems, and no mitigation measures would be required.

7. Greenhouse Gas Emissions. Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Generate greenhouse gas (GHGs) emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b. Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

Potentially Significant Impact. Gases that trap heat in the atmosphere are referred to as greenhouse gases since they have effects that are analogous to the way in which a greenhouse retains heat. Greenhouse gases are emitted by both natural processes and human activities. The accumulation of greenhouse gases in the atmosphere regulates the earth's temperature. The State of California has undertaken initiatives designed to address the effects of greenhouse gas emissions and establish targets and emission reduction strategies for greenhouse gas emissions in California. Activities associated with the Project, including construction and operational activities, would generate human activity-related greenhouse gas emissions. Therefore, the EIR will provide further analysis of the Project's greenhouse gas emissions. The EIR will also determine whether the Project conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

8. Hazards and Hazardous Materials.

The following discussion is based, in part, on the Phase I Environmental Site Assessment (Phase I) prepared for the Project by SCS Engineers in June 2018. This report is included as Appendix IS-4 of this Initial Study.

Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Less Than Significant Impact. The types and amounts of hazardous materials that would be used in connection with the Project would be typical of those used during construction of commercial developments, including vehicle fuels, paints, oils, and transmission fluids. Similarly, the types and amounts of hazardous materials used during operation of the proposed hotel and restaurant uses would be typical of such developments and would include cleaning solvents, pesticides for landscaping, painting supplies, and petroleum products. However, all potentially hazardous materials to be used during construction and operation of the Project would be contained, stored, and used in accordance with manufacturers' instructions and handled in accordance with all applicable standards and regulations, including but not limited to, those set forth by the federal and State Occupational Safety and Health Acts. Such requirements include obtaining material safety data sheets from chemical manufacturers, making these data sheets available to employees, labeling chemical containers in the workplace, developing and maintaining a written hazard communication program, and developing and implementing programs to train employees about hazardous materials. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations. Impacts would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Less Than Significant Impact. The Phase I included a review of environmental records for the Project Site and a site reconnaissance to identify potential on-site hazards. As discussed therein, the Project Site consistent of undeveloped beach land and a bluff from at least 1896 through 1906. By 1908, a small building was constructed on the northwestern corner of the site. Between 1912 and 1914, several small stores were constructed on the southern portion of the Project Site, and a public toilet was built on the northeastern portion. Construction of the Jergins Trust Building, discussed in detail above, began in 1916 and was complete by 1928. This building was a multi-story office building with a theater, stores, restaurants, and an arcade containing small shops on the lower three floors. Other tenants included a post office, barber shop, news and magazine businesses, and a school. An underground arcade and tunnel extended below the center of the building to the northern side of Ocean Boulevard. The

northern entrance to the Jergins Tunnel was closed in 1964.[29] The Jergins Trust Building was demolished in 1988, leaving behind the concrete retaining wall separating the northern and southern portions of the Project Site. The southern portion remained a vacant lot until 2005 when it was redeveloped as a surface parking lot. The northern portion of the site has been developed as a City park since at least 1949 and remains so today (i.e., part of Victory Park). These historic site operations are not commonly associated with elevated environmental risk.

As noted above, site reconnaissance was completed as part of the Phase I. No hazards or hazardous materials were observed on-site and no notable issues including evidence of elevators and electrical equipment that could potentially contain fluids were observed. No evidence of underground storage tanks (USTs) or aboveground storage tanks (ASTs) were observed on the Project Site. Two groundwater monitoring wells are located on the southern portion of the Project Site. These wells are associated with a previous geotechnical investigation conducted on the Project Site in 2004, but their purpose is not known.

Local regulatory agencies and other sources were also contacted as part of the Phase I. This process is to identify any known or suspected contamination sites or incidents of hazardous waste storage or disposal which might have resulted in soil and/or groundwater contamination, or vapor intrusion to the Project Site. As detailed in the Phase I, searches with the California Environmental Protection Agency (CalEPA), Los Angeles Regional Water Quality Control Board (LARWQCB), Long Beach Fire Department (LBFD), and Department of Toxic Substances Control (DTSC) found no record of the Project Site. The Project Site is listed in a SCAQMD database as the location of a real estate agent/manager known as Ocean Properties, but no air emissions equipment was listed and no violations were noted. Based on this information, this listing does not indicate a past source of air emissions that would represent a hazard to the Project Site.

According to the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR), the Project Site is located in the Wilmington Oil and Gas Field. No oil wells are located on or adjacent to the Project Site or within 0.25 mile of the Project Site. A cluster of 4 production wells and 11 water injection wells is located approximately 0.25 mile west-southwest of the Project Site, and the major oil producing platform, Island Grissom, is located approximately 0.75 mile southeast of the Project Site. Based on this information, no impacts are anticipated from oil and gas wells.

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[29] *The Phase I prepared for the Project states the tunnel was closed in 1964. However, a historic resources memo prepared for a previous iteration of the Project stated it was closed in 1967. This difference in dates does not affect the analysis of hazards and hazardous materials provided herein. Further, as previously discussed, potential historic impacts related to the Jergins Tunnel will be evaluated further in the in an EIR.*

Overall, the Phase I did not identify any areas of environmental concern with respect to the Project Site and recommended no further actions or investigations.

Based on the above, with compliance with regulatory requirements, the Project would not result in a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

No Impact. The nearest school to the Project Site is Cesar Chavez Elementary School, located approximately 0.5 mile to the northwest. Therefore, the Project Site would not emit hazardous emissions or handle hazardous materials within 0.25 mile of a school. No impacts would occur, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐

Less Than Significant Impact. California Government Code Section 65962.5 requires the CalEPA to develop and update annually the Cortese List, which lists hazardous waste sites and other contaminated sites. While Section 65962.5 makes reference to the preparation of a list, many changes have occurred related to web-based information access since 1992 and information regarding the Cortese List is now compiled on the websites of the DTSC, the State Water Resources Control Board, and CalEPA. The DTSC maintains the EnviroStor database, which includes sites on the Cortese List and also identifies potentially hazardous sites where cleanup actions or extensive investigations are planned or have occurred. The database

provides a listing of federal Superfund sites, state response sites, voluntary cleanup sites, and school cleanup sites.

The Project Site is identified in three listings. The Edgewater on Ocean Condominium Project is listed at 100 Ocean on the EPA's FINDS list. That applicant proposed to construct a condominium tower with subterranean parking that would have required dewatering of up to 1.4 million gallons of groundwater per day during construction. The permit issued for this dewatering required the submission of monitoring reports on a quarterly basis during construction.[30] The project was never started, a historic Notice of Violation was given to 100 East Ocean Partners LLC on August 10, 2008. This is likely because the required monitoring reports were not filed. The LARWQCB inspected the site on December 23, 2008 and verified no discharge of groundwater was occurring. The permit was terminated on January 6, 2009. Since the Notice of Violation was not due to a discharge, this listing does not constitute a hazard on the Project Site.

The Project Site is also listed as a historic gas station in 1952. In this particular case, a review of City directories indicated that Standard Oil Company occupied multiple offices in the Jergins Trust Building from roughly 1945 to 1958. There is no indication that Standard Oil ever operated a service station on the Project Site.

Finally, a historic cleaner, Mehesey Fur Company, is listed at 115 East Seaside Way in 1920. According to 1914 Sanborn maps, this would place the address roughly 200 feet east of the Project Site. However, by 1949, 115 Seaside was listed as a store within the Jergins Trust Building. It is therefore unclear if Mehesey Fur Company ever operated on the Project Site, or if it actually conducted cleaning as part of its services. Regardless, during this period, gasoline was the main dry cleaning fluid in the United States. By 1928, the Department of Commerce had issued a standard for the use of Stoddard solvent (a petroleum distillate) for dry cleaning. As late as 1955, Stoddard solvent use still dominated the industry, with its use exceeding the use of perchloroethylene (PCE) by a factor of 18 to 1. The use of PCE as a dry cleaning fluid began around 1934, primarily to replace carbon tetrachloride, which had been the principal competitor to Stoddard solvent. In summary, it is likely that Stoddard and not a chlorinated solvent like PCE was used for dry cleaning operations, if they did occur on the Project Site. Stoddard has much less potential for contamination of subsurface soils than chlorinated solvents. Furthermore, Stoddard is much less toxic, has a much higher degradation rate, and cleanup levels for Stoddard would be much higher than for solvents such as PCE. Based on this information, the potential for contamination from this operation is minimal.

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[30] *Supplemental information provided for this listing was provided by Justin Rauzon of SCS Engineers via email on June 11, 2018.*

Adjacent sites are also listed in various databases, including historic dry cleaners and UST sites. The majority of these sites are not listed due to a release, and none of those that indicate a release are located upgradient of the Project Site. In addition, the dry cleaners that may have used chlorinated solvents are located at distances that make it unlikely that these impacted the Project Site. Only one site, Landmark Square/Island Freeman, located at 125 West Ocean Boulevard, approximately 300 feet northwest of the Project Site, was identified as a potential concern. That site is listed as a leaking UST case with affected soil and was closed on March 7, 2011. Based on its case status and location cross-gradient from the Project Site, that site is not anticipated to pose a threat to the Project Site. No other sites that have the potential to negatively impact the Project Site were identified within 0.25 mile.

Based on the above, the Project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. Impacts would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No Impact. The Project Site is not located within an airport land use plan or within two miles of a public or public use airport. The nearest airport is the Long Beach Airport, which is located approximately 3.5 miles northeast of the Project Site. Therefore, no impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No Impact. There are no private airstrips in the vicinity of the Project Site. Therefore, no impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Less Than Significant Impact. As provided in the City's General Plan Public Safety Element, emergency response and emergency evacuation in the City is based on the availability of through streets, multiple access routes, and bridges. During Project construction, the majority of construction activities would be confined to the Project Site itself; however, limited off-site infrastructure improvements may require some construction activities in adjacent street rights-of-way. As such, some partial lane closures adjacent to the Project Site, including on Ocean Boulevard, Pine Avenue, and Seaside Way, may occur. However, these closures would be temporary in nature and both directions of travel on area roadways would be maintained so as not to physically impair access to and around the Project Site. Additionally, the Project would not place any permanent physical barriers on any of the surrounding streets, and access along and through streets and highways in the area would be maintained. Therefore, the Project would not cause an impediment along surrounding streets, which may be used as evacuation routes in the event of an emergency, or otherwise impair implementation of an emergency response plan or emergency evacuation plan. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

No Impact. The Project Site is surrounded by urban development and is not adjacent to any wildlands. Therefore, the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. No impacts would occur, and no mitigation measures would be required.

9. Hydrology and Water Quality.

The following discussion is based in part on the Preliminary Drainage Study (Drainage Study) prepared for the Project by KPFF Consulting Engineers in May 2018. This report is included as Appendix IS-5 of this Initial Study.

Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Less Than Significant Impact.

Construction

During construction of the Project, particularly during the grading and excavation phases, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. Therefore, Project-related construction activities could potentially result in adverse effects on water quality. However, as Project construction would disturb more than one acre of soil, the Project would be required to obtain coverage under the NPDES Construction General Permit (Order No. 2009-0009-DWQ, as well as its subsequent amendments 2010-0014-DWQ and 2012-0006-DWQ) pursuant to NPDES requirements. In accordance with the permit requirements, a SWPPP would be developed and implemented during construction of the Project. The SWPPP would set forth BMPs, including erosion control, sediment control, non-stormwater management, and materials management measures, to minimize the discharge of pollutants in stormwater runoff. In addition, the Applicant would be required to comply with all applicable City grading permit regulations, including implementation of appropriate measures, plans, and inspections to reduce sedimentation and erosion. Furthermore, BMPs such as sandbag barriers, earthen drainage dikes, swales, and/or sediment traps during construction would help ensure that existing drainage patterns are maintained.

Construction activities such as earth moving, maintenance/operation of construction equipment, and the handling, storage, and disposal of construction materials could contribute to pollutant loading in stormwater runoff. On-site watering activities to reduce airborne dust also could contribute to pollutant loading in runoff. The main pollutant of concern during

construction would be sediment or soil particles that could become detached by water and wind. However, as noted above, the Project Applicant would prepare and implement a SWPPP that would specify BMPs to target pollutants of concern and reduce or eliminate pollutants in stormwater discharges. In addition, as discussed further below, any temporary dewatering system(s) would treat groundwater prior to discharge to the public storm drain system, as authorized by a NPDES General Permit issued by the LARWQCB and a storm drain connection permit issued by the City of Long Beach Department of Public Works.

Through compliance with NPDES requirements and local regulations, including the implementation of BMPs, construction of the Project would not result in discharges that would violate any water quality standards or waste discharge requirements. As such, construction-related impacts to surface water quality would be less than significant.

Operation

Operation of the Project would introduce sources of potential stormwater pollution that are typical of commercial uses (e.g., cleaning solvents, pesticides for landscaping, and petroleum products associated with circulation areas). Stormwater runoff from precipitation events could potentially carry urban pollutants into municipal storm drains. However, the Project would implement BMPs for managing stormwater runoff in accordance with the City of Long Beach Low Impact Development (LID) BMP Design Manual. Due to its size, the Project would also implement BMPs required by the Los Angeles County Standard Urban Stormwater Mitigation Plan (SUSMP) Manual.

Based on various site factors including area, soil type, percent imperviousness, and longest flow path, the Project would be required to accommodate a volume of 3,102 cubic feet or a runoff flow rate of 0.28 cubic feet per second (cfs). Infiltration is considered infeasible at the Project Site due to subsurface conditions, so the Project would handle runoff through stormwater capture and reuse, as detailed above in the Project Description. Specifically, the Project would include underground steel reinforced polyethylene (SRPE) detention tanks with an irrigation reuse pump. The detention system would retain stormwater until it reaches the overflow pipe that connects to the existing storm drain system. Storm events beyond a 10-year event would overflow via the drive aisle trench drains and sheet flow to the existing curb and gutters that eventually lead to an existing catch basin connecting to the storm drain system within Pine Avenue. The detention system would capture 3,102 cubic feet of runoff volume, thereby exceeding the Project-related increase in stormwater flows of 2,936 cubic feet (based on a 10-year storm) and meeting SUSMP requirements. Furthermore, the detention system would provide stormwater treatment such that the water could be used for on-site irrigation. Therefore, impacts on water quality during operation would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

Less Than Significant Impact.

Construction

Groundwater was encountered at depths of 7.0 and 12.5 feet bgs in borings completed as part of the Project's Geotechnical Report. While this is consistent with historic levels, as noted above, groundwater under the Project Site is subject to rainfall and tidal influences, so the level can be variable. As the Project would include excavations to a maximum depth of approximately 22 feet below Seaside Way for building footings and foundations, temporary dewatering would likely be required within the Project Site in the event excavation for building footings encounters groundwater, as well as for on-site mainline storm drain relocation. Any temporary dewatering system(s) would extract, treat, and discharge groundwater to the public storm drain system, as authorized by a NPDES General Permit for dewatering issued by the LARWQCB and a storm drain connection permit issued by the City of Long Beach Department of Public Works. Therefore, if dewatering is necessary, operation of the temporary system would not be anticipated to adversely impact the flow rate or direction of groundwater. Furthermore, the Project Site is not located within an aquifer recharge area, and there are no groundwater wells or pumping activities within the Project Site. Therefore, Project construction would not change potable water levels sufficiently to reduce the ability of a water utility to use the groundwater basin for public water supplies, reduce yields in adjacent wells, deplete groundwater supplies, result in a demonstrable and sustained reduction of groundwater recharge capacity, or interfere with groundwater recharge. As such, impacts would be less than significant, and no mitigation measures are required.

Operation

The Project Site is comprised of 75 percent impervious surfaces under existing conditions, which would increase to 93 percent under the Project. However, as noted above, the Project

Site is not located in an aquifer recharge area, and there are no groundwater wells or pumping activities within the Project Site. Therefore, the Project would not affect production levels of groundwater supply wells or groundwater recharge in the vicinity.

Given the depth to groundwater, the Project's foundations would be designed in a manner to support the proposed structure in saturated soil conditions, in accordance with the geotechnical engineer's recommendations set forth in the Geotechnical Report and Memo, included in Appendix IS-3 of this Initial Study, as well as the design-level geotechnical report to be prepared for the Project during the design phase. This foundation design would result in only minor impacts to the top of the groundwater table, but in any case would not affect any supply wells. Therefore, operation of the Project would result in less than significant impacts to groundwater hydrology.

Surface contaminants have the potential to adversely impact the quality of groundwater. However, as described above, the Project's proposed capture and reuse system would treat stormwater runoff to minimize, if not avoid, potential water quality impacts to groundwater.

In addition, as discussed above in Section 8, Hazards and Hazardous Materials, operation of the Project would involve the limited use of potentially hazardous materials typical of those used in commercial developments, including cleaning agents, paints, pesticides, and other materials used for landscaping. The management of any resultant hazardous wastes could increase the opportunity for hazardous materials to be released into the groundwater. However, all potentially hazardous materials would be used, stored, and disposed of in accordance with manufacturers' specifications and handled in compliance with applicable standards and regulations. Compliance with all applicable federal, state, and local requirements concerning the handling, storage, and disposal of hazardous waste would reduce the potential for Project operations to release contaminants into the groundwater, expand the area or increase the level of groundwater contamination, cause a violation of regulatory water quality standards at an existing production well, or otherwise substantially degrade groundwater quality. Accordingly, Project impacts on groundwater quality would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

Less Than Significant Impact. As discussed above, under existing conditions, the Project Site is 75 percent impervious. The Project Site is not crossed by any natural waterways, and stormwater flows over land (i.e., as sheet flow) to the surrounding streets.[31]

Construction activities associated with the Project, which would involve removal of the existing parking lot and grading/excavation, have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. However, as discussed above in Response to Question 9.a, the Project includes the implementation of a SWPPP that would specify BMPs and erosion control measures to be used during construction to manage runoff flows so that runoff would not impact off-site drainage facilities and receiving waters. In addition, the Project would be required to comply with all applicable City grading permit regulations that require necessary measures, plans, and inspections to reduce sedimentation and erosion.

With implementation of the Project, impervious surfaces on the Project Site would increase to 93 percent. The on-site drainage patterns would be modified through the introduction of drainage infrastructure, although these improvements would reduce the potential for erosion or siltation. More specifically, stormwater would be conveyed via roof drains and drive aisle trench drains to the proposed capture and reuse system, which would ultimately connect to the existing 27-inch public storm in Pine Avenue. The stormwater detention system would be designed to provide 3,102 cubic feet of underground storage. During storms greater than a 10-year event, the detention system would overflow via the drive aisle trench drains and sheet flow to the existing curb and gutters that lead to an existing catch basin, entering the public storm drain system. The Project would also implement BMPs required by the SUSMP Manual and the City.

Based on the design of the Project's drainage improvements and through compliance with all applicable NPDES requirements, including preparation of a SWPPP and implementation of BMPs, as well as compliance with applicable City grading regulations and SUSMP requirements, the Project would not substantially alter the existing drainage patterns of the Project Site or surrounding area such that substantial erosion, siltation, or on-site or off-site flooding would occur. Therefore, impacts would be less than significant, and no mitigation measures would be required.

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[31] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. See Appendix IS-4 of this Initial Study.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

Less Than Significant Impact. Please refer to Response to Questions 9.a and 9.c, above. As discussed therein, while changes in on-site drainage patterns would occur, the proposed capture and reuse system would represent an improvement over existing conditions. The detention system would capture 3,102 cubic feet of runoff volume, thereby exceeding the Project-related increase in stormwater flows of 2,936 cubic feet (based on a 10-year storm) and meeting SUSMP requirements. Accordingly, the Project would not substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

Less Than Significant Impact. Please refer to Responses to Questions 9.a, 9.c, and 9.d, above. As discussed therein, the proposed capture and reuse system would represent an improvement over existing conditions both in terms of flow management and stormwater treatment. The detention system would capture 3,102 cubic feet of runoff volume, thereby exceeding the Project-related increase in stormwater flows of 2,936 cubic feet (based on a 10-year storm) and meeting SUSMP requirements. Accordingly, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐

Less Than Significant Impact. Please refer to Response to Question 9.a, above.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

No Impact. The Project Site is not located within a 100-year floodplain as mapped by the Federal Emergency Management Agency (FEMA).[32] The Project Site is located in FEMA's Flood Zone X, which is defined as an area of moderate flood hazard or within the limits of one percent and 0.2 percent annual chance floodplain. Similarly, according to the City of Long Beach Flood Zones Map, the Project Site is located within a 0.2 percent annual chance flood hazard zone.[33] Furthermore, the Project does not propose the development of residential uses. Therefore, the Project would not place development within a 100-year floodplain, and in any event, housing is not proposed. No impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒

No Impact. As discussed above in Response to Question 9.g, the Project Site is not located within a designated 100-year floodplain area. Thus, the Project would not place structures that

[32] *Federal Emergency Management Agency, Flood Insurance Rate Map, Map Number 06037C1964F, September 26, 2008.*

[33] *City of Long Beach, Federal Emergency Management Agency Flood Zones, September 26, 2008.*

would impede or redirect flood flows within a 100-year floodplain. No impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐

Less Than Significant Impact. As stated above, the Project Site is not located within a designated 100-year floodplain. Based on the City's General Plan Public Safety Element, three flood control dams lie upstream from the City, including the Sepulveda Basin, Hansen Basin, and Whittier Narrows Basin. As provided in Public Safety Element, due to the intervening low and flat topography and the distance of the Sepulveda Basin and the Hansen Basin more than 30 miles upstream from where the Los Angeles River passes through the City, any flooding resulting from a dam failure at either of these locations would be expected to dissipate prior to reaching the City. In addition, any flooding from the Whittier Narrows Basin would occur along the San Gabriel River, which is located 5.4 miles east of the Project Site. Furthermore, dams in California are continually monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. Current design and construction practices and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum considered earthquake for the site. Given the distance of the Sepulveda Basin, Hansen Basin, and Whittier Narrows Basin to the Project Site and the oversight by the Division of Safety of Dams, including regular inspections, the potential for substantial adverse impacts related to inundation at the Project Site as a result of dam failure would be less than significant.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Less Than Significant Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement associated with large, shallow earthquakes.

Mudflows result from the downslope movement of soil and/or rock under the influence of gravity.

The Project Site is located in the low-lying shoreline area of Downtown Long Beach, approximately 0.3 mile north of Queensway Bay and approximately 1,000 feet north of Rainbow Lagoon. As such, the Project Site is located within an area potentially affected by a tsunami or seiche as mapped in the City's General Plan Seismic Safety Element.[34] However, tsunami warning systems are in place, such as the seismic Sea-Wave Warning System for the Pacific Ocean operated by a cooperative program of nations around the Pacific Rim, and the Alaska Tsunami Warning Center operated by the National Weather Service, and evacuation plans are in place to minimize hazards from tsunamis. In addition, the presence of the harbor breakwater and intervening urban development would limit potential effects from a seiche or tsunami on the Project Site. Therefore, impacts related to a potential seiche or tsunami would be less than significant.

As previously described, while the Project Site slopes southward from Ocean Boulevard to Seaside Way, and the surrounding area is not identified by the City as an area of steep slopes.[35] Therefore, the Project Site is not positioned downslope from an area of potential mudflow, and impacts with respect to mudflows would not occur.

10. Land Use and Planning. Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Physically divide an established community?	☐	☐	☒	☐

Less Than Significant Impact. As previously discussed, the Project Site is located in Downtown Long Beach and is surrounding by a variety of urban land uses. To the west, across Pine Avenue is the Ocean Center Building, a Long Beach Historic Landmark, with surface parking, commercial, and residential uses further west along Ocean Boulevard. Commercial and office uses are located northwest of the Project Site, with the Metro Blue Line Downtown Long Beach station immediately behind on 1st Street. To the north, across Ocean Boulevard, is the hotel Renaissance Long Beach and restaurants. Immediately to the east of the Project Site, separated by a retaining wall, are the Convention Center Walkway and an office building. Further to the east, across Locust Avenue, is the Breakers Hotel building, a

[34] *City of Long Beach General Plan, Seismic Safety Element, Plate 11, October 1988.*

[35] *City of Long Beach General Plan, Seismic Safety Element, Plate 9, October 1988.*

Long Beach Historic Landmark, which is largely vacant at the present time. To the south and southeast, across Seaside Way, is the Long Beach Convention and Entertainment Center. Various commercial uses including restaurant and retail uses are located to the southwest.

The Project includes the development of a new hotel up to approximately 375.5 feet in height, with 429 hotel rooms, 23,512 square feet of restaurant space, and 26,847 square feet of meeting rooms, ballrooms, and pre-function space. The proposed uses would be consistent with other uses in the surrounding area and would be compatible in terms of building heights and massing with surrounding development. In addition, the Project would provide greater connectivity in the community by completing the walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site. Furthermore, all proposed development would occur within the boundaries of the Project Site as it currently exists and would not physically alter surrounding parcels or properties. Therefore, the Project would not physically divide, disrupt, or isolate an established community. Rather, implementation of the Project would result in further infill of an already developed community with similar and compatible land uses. No significant impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Less Than Significant Impact.

At the local level, several plans and regulatory documents guide development within the Project Site. These include the City of Long Beach General Plan, the Local Coastal Program, the City of Long Beach Municipal Code, and the former Downtown Long Beach Redevelopment Plan. In addition, the 2010 Long Beach Strategic Plan (Strategic Plan) sets forth goals for the City of Long Beach as a whole. Applicable plans and associated regulatory documents/requirements are discussed below.

City of Long Beach General Plan

As noted above in the Project Description, the Project Site is designated as LUD No. 7, Mixed Use District, and LUD No. 11, Open Space and Park District, by the City's General Plan. As set forth in the General Plan, uses intended for LUD No. 7 include employment centers, such as retail uses, offices, and medical facilities; higher density residences; visitor-serving facilities; personal and professional services; and recreational facilities. LUD No. 11 includes open space and park areas which are intended to remain in or be redeveloped in the future in (essentially) an open condition. The Project would develop hotel and restaurant uses on the southern portion of the Project Site which is designated LUD No. 7 and would provide improvements to the portion of Victory Park located on the northern portion of the Project Site, which is designated LUD No. 11. These proposed uses are permitted by their respective LUD designations, and the Project would not require a General Plan amendment. Therefore, the Project would be consistent with the General Plan land use designations for the site.

In general, the Project also would be consistent with relevant goals and policies of the General Plan Land Use Element. Relevant goals found within the Land Use Element and promoted by the Project include: managed growth, economic development, Downtown revitalization, quality services, facilities maintenance, arts and culture support, and financial stability.[36] The Project represents managed growth, as contemplated in the PD-6 zoning document, previous Redevelopment Agency-era planning, as well as the Successor Agency Long Range Management Plan. The Project includes hotel uses that would promote tourism and create employment, consistent with the City's overall economic development plan; would develop a currently vacant and underutilized site into active uses, consistent with greater Downtown revitalization efforts; would provide improved services and facilities, maintenance through upgrades, and active management of Victory Park; and would support arts and culture within the design and programming of the restored Jergins Tunnel element of the Project. The economic activity generated by the Project also would promote increased tax revenue and financial stability for the City.

Furthermore, the Project would involve redevelopment of an underutilized site with high-quality hotel and restaurant uses that would serve the needs of the City's population and the tourism industry while enhancing the overall quality of life. The Project would improve the aesthetic quality of the Project Site and immediate surroundings by providing a design that would complement existing development and include pedestrian amenities and landscaped park space. In addition, the Project Site is well-served by public transit and is accessible via alternative transportation modes, thus supporting a functional transportation system. The Project also would include the necessary infrastructure improvements to serve the proposed

[36] *City of Long Beach Land Use Element, 1989, pp. 18-19.*

uses and would install water-efficient plumbing fixtures and landscaping. As such, the Project would further the City's goals and policies regarding its utility infrastructure systems. Overall, the Project would support the City's land use guidelines.

The Project would also be consistent with the relevant goals and policies of the General Plan Mobility Element. Specific goals advanced by the Project include: increased mobility, reduced greenhouse gas emissions, enhanced quality of life, improved water quality, compact and transit-oriented development, and walkable neighborhoods and districts.[37] The Project includes provisions for private vehicle, bicycle, pedestrian, rideshare, and other transportation modes; would result in compact development with a limited greenhouse gas operational profile per service population; would enhance the quality of life for residents and visitors through improvements to Victory Park; and would introduce new food, beverage, and cultural amenities within the proposed hotel. The Project would be relatively compact in nature and proximate to rail, bus, bikeshare, scooter, and other transit opportunities, all within a walkable neighborhood, providing new amenities to greater Downtown residents and visitors.

The Project would implement any necessary access improvements in accordance with City design guidelines and requirements. In addition, the Project would maintain or improve the existing sidewalks and circulation system and would not disrupt existing or proposed transit and bicycle access adjacent to the Project Site. As previously described, the Project would enhance the streets surrounding the Project Site by providing new landscaping and a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site. Thus, the Project would promote the City's policies regarding maintaining roadways, paths, sidewalks, and transit stops in good repair; providing adequate access; ensuring that any improvements to the existing transportation system complement pedestrian and bicycle circulation; and improving streets. The Project would also be consistent with applicable Mobility Element policies regarding transit and reducing vehicle miles and vehicle trips, as the Project Site would be located in an area well-served by public transit with a mature network of pedestrian and bicycle facilities. Accordingly, the Project Site's location would offer a variety of alternative modes of transportation for accessing the Project Site. The mixed-use characteristics of the Project would further reduce vehicle miles travelled.

The Project would be consistent with the relevant goals of the Conservation Element, as the Project would not result in direct or indirect impacts to the nearby Rainbow Lagoon. The Project would comply with applicable water quality regulatory requirements to ensure impacts to nearby waterways are minimized. Stormwater management improvements to the Project

[37] *City of Long Beach Mobility Element, 2013, p. 13.*

Site, including Victory Park, would include an on-site storm water treatment and re-use system and represent a substantial improvement over existing conditions.

The Project would be consistent with the Noise Element by reducing the level of noise exposure during construction activities to the extent feasible and introducing land uses consistent with the existing noise environment in the surrounding area.

Additionally, the Project would be consistent with the relevant policies of the Open Space Element. While no open space is required for the proposed uses, the Project would provide 37,404 square feet of open space, including improvements to Victory Park totaling 13,158 square feet, new landscaping, and a variety of amenities for hotel guests and visitors including an 11,288-square-foot pool deck and bar. The Project would also incorporate features to support and promote environmental sustainability, including measures aimed at transportation, energy and water conservation, construction, and indoor air quality.

The Project would be consistent with the relevant goals of the Public Safety Element. The Project would implement public safety features throughout the Project Site and provide adequate emergency access. In addition, the Project would not introduce uses that would create safety hazards. The Project would comply with applicable regulations aimed at reducing natural hazards and would include mitigation measures, if warranted, to reduce any potential impacts. Project operations would include 24-hour security personnel as well as improved lighting and activity to deter crime on and adjacent to the Project Site.

With respect to the Air Quality Element, the Project Site's location would offer a variety of transportation options for accessing the Project Site, which would serve to reduce vehicle trips, vehicle miles, and associated air emissions. The mixed-use characteristics of the Project would further reduce vehicle miles travelled. In addition, the Project would incorporate features to support and promote environmental sustainability, including energy conservation, water conservation, and waste reduction features, which would further reduce air emissions. Therefore, the Project would not be in conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions, including the goals of California Global Warming Solutions Act of 2006 (AB 32) and SCAQMD Rule 403, which aims to minimize particular emissions and control dust during construction. As such, the Project would be consistent with the applicable goals and policies of the City's Air Quality Element.

The Project would also be consistent with the relevant goals of the Seismic Safety Element. Specifically, the Project would comply with applicable regulations and geotechnical recommendations aimed at reducing impacts with regard to strong seismic ground shaking and other seismic hazards. With respect to the Scenic Routes Element, as previously discussed, the Project would not result in the removal or demotion of visual resources within or visible from a scenic route. The proposed improvements along Ocean Boulevard would represent a

visual enhancement when compared to existing conditions. Furthermore, the Project would comply with all applicable regulations and standards related to aesthetics, views, and visual resources.

In summary, based on the above, the Project would be consistent with relevant goals and policies of the Long Beach General Plan.

Long Beach Local Coastal Program

The Project Site is also located within the Long Beach Coastal Zone and subject to the requirements of the Local Coastal Program of the City's General Plan. Accordingly, the Project would require a Local Coastal Development Permit.[38] The Project does not require a General Plan amendment or zoning change, and would, therefore, be consistent with the land use and zoning guidelines set forth by the City. Furthermore, due to the Project Site's location, the Project would support the City's goal to prevent the disruption of existing neighborhoods. The Project would also be consistent with the Local Coastal Program's transportation and access policies, which focus on increasing the use of public transit, walking, and bicycling opportunities[39]. Specifically, as noted above, the Project would provide a mix of uses in an area well served by public transit and enhance pedestrian and bicycle facilities through the construction of a new walkway connecting Pine Avenue and Ocean Avenue with the existing Convention Center Walkway, as well as the provision of bicycle parking. The Project would also provide recreation and visitor-serving facilities, specifically the proposed hotel uses, which would complement the existing uses in the area. In addition to forwarding Local Coastal Program policies, the provision of recreational and visitor-serving amenities both in the hotel and Victory Park would promote Coastal Act policies including those set forth in Sections 30213, 30222, 30250, 30252, and 30253, among other Coastal Act provisions. Therefore, with approval of a Local Coastal Development Permit, the Project would be consistent with the Local Coastal Program.

Long Beach Municipal Code

The Project Site is zoned by the LBMC as Subarea 7 of PD-6, the Downtown Shoreline Planned Development District. As described in the Shoreline Plan, PD-6 provides for a community of residential, business, and light industrial uses integrated by an extensive system

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[38] *Pursuant to LBMC Section 21.25.902, "The coastal zone boundaries are indicated on the official zoning map." The City's Coastal Zone Map shows that the Project Site falls within the Coastal Appealable Area of the City's permit jurisdiction, which gives the Planning Commission (or City Council, upon appeal) the authority to issue coastal development permit approval. Local approval of a coastal development permit may be appealed to the California Coastal Commission pursuant to LBMC Section 21.25.908.*

[39] *City of Long Beach Local Coastal Program, 1980, p. II-2.*

of parks, open space, and trails. The Project would further the six goals of PD-6, including: a mixture of public and private uses of a variety of land use types; significant public access through and around uses, whether public or private, and to coastal resources; an emphasis on uses of a recreational or recreational access nature; strong land use interaction and access connections with Downtown; an urban park-like setting with a variety of strolling, bicycling, and active and passive recreational areas, interesting water features, and abundant landscaping; and the highest quality of development.[40] While these goals relate to the whole PD-6 zoning area, they can be fulfilled in part on an individual basis by projects such as the proposed Project. The Project involves a mix of private hotel uses with public enhancements to Victory Park, as well as walking paseos to and from the Long Beach Convention Center through and adjacent to the Project Site. The Project would enhance public access through new vehicular, pedestrian, bicycle, and other transportation modes and amenities, focusing on access to the recreational amenities of Victory Park while connecting the greater Downtown area to the Convention Center and shoreline beyond. The Project also involves the infill of an underutilized site, physically creating greater interaction with Downtown, while also enhancing the cultural and historic connection to Downtown through the restoration of and new public access to the Jergins Tunnel. The Project's high-quality design would improve and complement the site's urban park-like setting.

The Downtown Shoreline Plan specifically identifies residential, hotel, and office uses within Subarea 7 and includes specific requirements pertaining to ancillary uses such as retail uses, restaurants, and art galleries, as well as access, building design, and setbacks. In addition, as the former site of the Jergins Trust Building, Subarea 7's requirement to provide a corner cut-off at the northeast corner of the site to create a cohesive entry feature to the Promenade South from Pine Avenue applies to the Project. The Project would provide new hotel and restaurant uses, which is consistent with the uses intended for Subarea 7, and consistent with Subarea 7 Subsection (a), the proposed restaurants would be located on the promenade (Level 3) and rooftop levels of the proposed building. In addition, at the northeastern corner of the building, the lower floors would have an indented, angled footprint to create a corner cut-off in accordance with the Subarea 7 requirements. In accordance with Subarea 7 Requirement (b)1, the driveways on Ocean Boulevard would be used for passenger loading and unloading only, with access to the on-site parking garage provided from Pine Avenue and Seaside Way. The Project would also include the completion of the walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site, consistent with Subarea 7 Subsection (c). Building design would also comply with the requirements of Subarea 7 Subsection (c), which pertain to height, design features, and site coverage. Open space areas shall be landscaped in accordance with the requirements of

[40] *City of Long Beach Ordinance 11-0017, p.3.*

PD-6. The Project is, therefore, consistent with the existing zoning for the Project Site, and no zone change would be needed.

Long Beach Strategic Plan

The Long Beach Strategic Plan 2010 sets goals to address key issues that concern the City, including population growth, housing demand, education, youth services, economic well-being, and the environment.[41] The Project would support applicable goals of the Long Beach Strategic Plan regarding neighborhood community, economic opportunity, and the environment. Specifically, the Project's commercial uses would complement the existing land uses in the area and serve the needs of the local tourism industry. In addition, the Project would incorporate energy conservation, water conservation, and waste reduction features to promote the City's Green Building Ordinance and meet the requirements of LEED® Silver certification. Furthermore, the Project would provide landscaped and open space areas within and around the Project Site to beautify the area and enhance open space. Accordingly, the Project would promote the Strategic Plan's goals.

Redevelopment Plans

As discussed above, the Project Site was formerly owned by the Redevelopment Agency. Prior to the dissolution of the Redevelopment Agency, the Project Site was identified for future development within the Downtown Long Beach Project Area.[42] The Project Site is identified in the approved Successor Agency Long Range Management Plan for "high-density development to maximize overall economic benefit to downtown and in accordance with the use of eminent domain."[43] The Project would be consistent with this goal by providing new hotel and restaurant uses, which would provide jobs and complement existing uses in the area such as the Convention Center.

Conclusion

Overall, the Project would be consistent with the General Plan, Local Coastal Program, Strategic Plan, the applicable zoning from the LBMC, and the City's former Downtown

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[41] *City of Long Beach, 2010 Strategic Plan Goals and Strategic Actions, www.longbeach.gov/globalassets/finance/media-library/documents/city-budget-and-finances/budget/budget-documents/fy-06-adopted-budget-webpage/appendices, accessed November 30, 2018.*

[42] *Long Beach Redevelopment Agency, "Downtown Long Beach," www.longbeachrda.org/civica/filebank/blobdload.asp?BlobID=2456, accessed November 26, 2018.*

[43] *City of Long Beach, Revised Long Range Property Management Plan, www.lbds.info/documents/LongRangePropMgtPlan/LRPMP.pdf, p.42, property 113, accessed November 26, 2018.*

Redevelopment Plan. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

No Impact. The Project Site is located in an urbanized area and does not provide habitat for sensitive biological resources. As such, the Project Site is not subject to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, the Project would not result in impacts associated with or conflict with the provisions of any habitat conservation plans, and no mitigation measures are required.

11. Mineral Resources. Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐

Less Than Significant Impact. The Project Site is located within an urbanized area and has been previously disturbed by development. Although the Project Site is mapped within the Wilmington Oil Field, there are no indications of any production or exploratory wells being drilled on or in the immediate vicinity of the site.[44] The nearest production wells are located 0.25 west-southwest of the Project Site, and the major oil producing platform Island Grissom is located 0.75 mile to the southeast.[45] Based on the lack of historic and/or active mineral extraction activities, the Project would not result in the loss of availability of a mineral resource or a mineral resource recovery site. No significant impacts would occur, and no mitigation measures would be required.

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[44] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. See Appendix IS-6 of this Initial Study.*

[45] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. See Appendix IS-6 of this Initial Study.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐

Less Than Significant Impact. As noted above, the Project Site is mapped within the Wilmington Oil Field, but there are no active oil wells on-site and no evidence of historic wells.[46] In addition, the Project Site is not classified by the City as an area containing significant mineral deposits nor is the Project Site located in an aggregate producing area as classified by the California Geological Survey.[47] Therefore, the Project would not result in the loss of availability of a locally important mineral resource recovery site. Impacts would be less than significant and no mitigation measures would be required.

12. Noise. Would the project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐

Potentially Significant Impact. The Project Site is located within an urbanized area that contains various sources of noise. The most predominate noise source in the vicinity is associated with vehicular traffic. Existing on-site noise sources primarily include vehicles, stationary mechanical equipment, and human activity. During Project construction, the use of heavy equipment (e.g., bulldozers, backhoes, cranes, loaders, etc.) would generate noise on a short-term basis. In addition, because the Project would introduce new permanent commercial uses to the Project Site, noise levels from on-site sources may also increase during operation. Furthermore, traffic attributable to the Project has the potential to increase noise levels along adjacent roadways. Therefore, further evaluation of this topic will be provided in the EIR.

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[46] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. See Appendix IS-6 of this Initial Study.*

[47] *State of California Department of Conservation, California Geologic Survey, Aggregate Sustainability in California, 2012.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐

Potentially Significant Impact. Project construction could generate groundborne noise and vibration associated with demolition, site grading, other clearing activities, the installation of building footings, and construction truck travel. As such, the Project would have the potential to generate and expose people to excessive groundborne vibration and noise levels during short-term construction activities. Therefore, further evaluation of this topic will be provided in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐

Potentially Significant Impact. Traffic and human activity associated with the Project, described above, have the potential to increase ambient noise levels above existing levels. Therefore, further evaluation of this topic will be provided in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐

Potentially Significant Impact. As discussed in response to Questions 12.a and 12.b, above, Project construction activities have the potential to temporarily or periodically increase ambient noise levels above existing levels. Therefore, further evaluation of this topic will be provided in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

No Impact. The Project Site is not located within an airport land use plan or within 2 miles of an airport. The closest airport to the Project Site is the Long Beach Airport located approximately 3.8 miles north of the Project Site. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels associated with a public or public use airport. No impacts would occur, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

No Impact. The Project Site is not located within the vicinity of a private airstrip. Therefore, the Project would not expose people to excessive noise levels associated with such operations. No impacts would occur, and no mitigation measures are required.

13. Population and Housing. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Less Than Significant Impact. The Project does not involve the development of residential uses and thus would not directly contribute to population growth. While Project construction

would create temporary construction-related jobs, the work requirements of most construction projects are highly specialized such that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Thus, Project-related construction workers would not be anticipated to relocate their household's place of residence as a consequence of working on the Project and, therefore, new permanent residents generally would not be generated during Project construction.

With respect to Project operation, the proposed hotel and restaurant uses would include a range of full-time and part-time positions that would typically be filled by persons already residing in the vicinity of the workplace and who generally would not relocate their households for such employment opportunities, thus benefiting the local economy and workforce. As such, the Project would be unlikely to create new households in the area or generate an indirect demand for additional housing. Therefore, potential growth impacts would not be substantial. As such, the Project would not result in a notable increase in demand for new housing, and any new demand, should it occur, would be minor in the context of forecasted growth for the City. Furthermore, as the Project is located in a highly developed area with an established network of roads and other urban infrastructure, it would not require the extension of such infrastructure in a manner that would indirectly induce substantial population growth. Therefore, impacts would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact. The Project Site is currently developed with a surface parking lot and a portion of Victory Park and does not include any existing dwelling units. Therefore, the Project would not displace any existing housing. No impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact. The Project Site is currently developed with a surface parking lot and a portion of Victory Park and does not include any existing dwelling units. Therefore, development of the

Project would not cause the displacement of any persons or require the construction of housing elsewhere. No impacts would occur, and no mitigation measures would be required.

14. Public Services. Will the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Fire protection?	☐	☐	☒	☐

Less Than Significant Impact. The Long Beach Fire Department (LBFD) provides fire protection throughout the City. The LBFD has 23 fire stations, fire headquarters, and a beach operations facility within the City.[48] The nearest fire station to the Project Site is Fire Station No. 1, located at 100 Magnolia Avenue, approximately 0.6 mile northwest of the Project Site.

While the Project would introduce a new service population to the Project Site, the Project does not include uses that pose a significant fire hazard. Project design would be subject to the requirements set forth in the California Fire Code, California Building Code, the LBMC, and LBFD requirements for fire access. The Project plans would be subject to LBFD site/building plan review, which would ensure adequate emergency access, fire hydrant availability, and compliance with all applicable codes. In addition, Project traffic would result in less than significant impacts at all study intersections, so LBFD access and response times would not be significantly impacted by the addition of Project traffic.

Nevertheless, the increase in development on the Project Site could increase the demand for fire protection services in the area. LBMC Chapter 18.23, Fire Facilities Impact Fee, was adopted to ensure development projects pay their fair share of the costs required to support needed fire facilities and related costs necessary to accommodate such development. Compliance with LBMC Chapter 18.23, which requires payment of the fire facilities impact fee, would ensure that Project implementation would result in a less than significant impact on fire protection services. Therefore, with compliance with existing California Fire Code, California Building Code, LBMC, and LBFD requirements, including payment of the fire facilities impact

[48] *Long Beach Fire Department, Station Locations, www.longbeach.gov/fire/about-us/station-locations/, accessed July 2, 2018.*

fee, impacts with respect to fire protection services would be less than significant, and no mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Police protection?	☐	☐	☒	☐

The following discussion is based, in part, on information provided by the Long Beach Police Department (LBPD). This information is included as Appendix IS-6 of this Initial Study.

Less Than Significant Impact. The LBPD provides police protection throughout the City. The LBPD is the second largest municipal police agency in Los Angeles County, with over 800 sworn officers and a total staff of over 1,200 personnel.[49] LBPD has many specialized service units to fulfill a variety of public safety functions and responsibilities. These specialized teams include, but are not limited to, the Special Weapons and Tactics (SWAT) team, Police Service Dog Unit, Motor Patrol Officers, Mental Evaluation Team (MET), Hostage Negotiators, Air Support Unit, and Detectives. The current citywide officer to resident ratio is 1.58 officers per 1,000 residents, which meets the service standards set forth by the LBPD.

The Project Site is located in LBPD's South Patrol Division, which is headquartered at 400 West Broadway, approximately 0.5 mile northwest of the Project Site. The South Patrol Division, with an estimated population of 73,823, is bounded by Anaheim Street on the north, Cherry Avenue on the east, Harbor Scenic Drive on the south, and the Long Beach Freeway to the west. The South Patrol Division consists of 105 sworn officers, three full-time civilian employees, and one part-time civilian employee. There are 38 patrol vehicles and six supervisor vehicles assigned and available for use in the division. On any given day and time, the number of officers working the South Patrol Division ranges from 10 to 30 officers, sergeants, and lieutenants. The officer-to-resident ratio in the South Patrol Division is 1.4 officers per 1,000 residents, which meets the service standards set forth by the LBPD.

The Project does not include the development of residential units, thus the residential population in the South Patrol Division service area would not increase. Nevertheless, the Project would result in an increase in development and would introduce new land uses that are not currently found on-site. As such, the Project would increase the employee and visitor population in the area and, accordingly, the demand for police protection services provided by the LBPD could increase.

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[49] *Long Beach Police Department, "About the LBPD," www.longbeach.gov/police/about-the-lbpd/, accessed July 16, 2018.*

The proposed hotel and restaurant uses would generate a range of full- and part-time positions typical of commercial uses. These positions are generally filled by persons already residing in the vicinity of the workplace who generally do not relocate their households due to such employment opportunities. As such, the Project is not anticipated to indirectly result in residential population growth in the area which would change the existing Citywide officer-to-resident ratio of 1.58 officers per 1,000 residents. Additionally, in accordance with LBMC Chapter 18.22, the Project Applicant would pay the appropriate police facilities impact fee. The Project also would generate revenues to the City's general fund (in the form of property taxes, sales revenue, etc.) that could be applied toward the provision of new police facilities and related staffing, as deemed appropriate or necessary. The Project would also include Project Design Features POL-1 and POL-2 to further minimize impacts on police protection services.

Based on the above, the Project would not generate an additional demand for police protection services that would substantially exceed the capability of the LBPD to serve the Project Site. Impacts to police protection services during operation of the Project would be less than significant, and no mitigation measures are necessary.

Project Design Features

The following project design features are proposed with respect to police protection services:

Project Design Feature POL-1: During construction, the Project Applicant shall implement temporary security measures including perimeter security fencing, lighting, and locked entry.

Project Design Feature POL-2: The Project shall incorporate permanent security features, including a private on-site security patrol, security cameras, and appropriate night lighting in parking, circulation, and common areas.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Schools?	☐	☐	☒	☐

Less Than Significant Impact. The Project includes the development of a hotel and restaurant uses. Development of new residential land uses, which directly generate school-aged children and a demand for school services, is not proposed. Thus, implementation of the Project would not result in a direct increase in the number of students within the service area of the Long Beach Unified School District (LBUSD). In addition, the number of new students that could be indirectly generated by the Project and that could attend LBUSD schools serving the Project Site is not anticipated to be substantial since, as discussed above, the Project is not

expected to induce a substantial number of persons to change their residence as a result of employment at the Project Site. Furthermore, pursuant to SB 50, the Applicant would be required to pay development fees to the LBUSD prior to the issuance of building permits. Pursuant to Government Code Section 65995, the payment of these fees is considered mitigation of any Project-related school impacts. Therefore, impacts on schools would be less than significant, and mitigation measures would not be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Parks?	☐	☐	☒	☐

Less Than Significant Impact. As previously described, the Project involves the development of a hotel and restaurant uses. Development of new residential land uses, which typically create the greatest demand for parks and recreational facilities, is not proposed. Thus, implementation of the Project would not result in on-site residents who would utilize nearby parks and/or recreational facilities. The Project would nevertheless include 37,404 square feet of open space, including improvements to Victory Park, new landscaping, and a variety of amenities for hotel guests and visitors, including an 11,288-square-foot pool deck and bar. While it is possible that some new employees associated with the Project may utilize local parks and recreational facilities, this increased demand likely would be negligible (the closest recreational uses are Victory Park, a portion of which is within the Project Site, and Rainbow Lagoon Park located approximately 1,000 feet south of the Project Site). Additionally, the new employment opportunities generated by the Project are not anticipated to result a substantial number of persons relocating to the Project vicinity. Therefore, new demand for public parks and recreational facilities associated with Project development would be limited. In addition, the proposed renovations to Victory Park, which would include new landscaping and completion of a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site, would improve the facility and would further the Local Coastal Program's goal of re-establishing Victory Park as a unified park throughout Downtown. Thus, impacts on parks and recreational facilities would be less than significant, and mitigation measures would not be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e. Other public facilities?	☐	☐	☒	☐

Less Than Significant Impact. Other public facilities available to future Project employees include library services, roads, transit, utility systems including water and sewer infrastructure, as well as other general public facilities.

With respect to library services, the Project involves the development of a hotel and restaurant uses. As no residential uses would be developed as part of the Project, no new residents would be generated on-site. Thus, implementation of the Project would not result in a direct increase in the number of residents within the service population of the Main Library, located approximately 500 feet northwest of the Project Site. In addition, as Project employees would be more likely to use library facilities near their homes during non-work hours and given that the Project is not anticipated to result in a substantial number of persons relocating to the Project vicinity, Project employees and any potential indirect population increase would generate minimal demand for library services. As such, demand for library services generated by Project employees would be negligible. Therefore, impacts on library facilities would be less than significant, and mitigation measures would not be required.

Please refer to Section 16, Transportation/Traffic, for a discussion of impacts associated with Project traffic and Section 18, Utilities and Service Systems, for a discussion of impacts on the City's public utility infrastructure. No other public services would be notably impacted by the Project. Impacts would be less than significant, and no mitigation measures would be required.

15. Recreation.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Less Than Significant Impact. As discussed previously, the Project involves the development of a hotel and restaurant uses. New residential land uses, which typically create the greatest demand for parks and recreational services, are not proposed. Thus, implementation of the Project would not result in on-site residents who would utilize nearby neighborhood and regional parks or other recreational facilities. The Project would nevertheless include 37,404 square feet of open space, including improvements to Victory Park, new landscaping, and a variety of amenities for hotel guests and visitors, including an 11,288-square-foot pool deck and bar. In addition, while it is possible that some of the

Project's employees may utilize local parks and recreational facilities, this increased demand would be negligible as people are most likely to utilize facilities close to their place of residence. Furthermore, the new employment opportunities generated by the Project are not expected to result in a substantial number of persons relocating their residence. Therefore, new demand for public parks and recreational facilities associated with Project development would be limited. As such, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that a substantial physical deterioration of the facility would occur or be accelerated. Thus, impacts on parks and recreational facilities would be less than significant, and mitigation measures would not be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Less Than Significant Impact. The Project includes improvements to a portion of Victory Park, including new walkways and new landscaping. As the portion of the park where these changes would occur is within the boundaries of the Project Site, impacts associated with such improvements are included in the Project impacts evaluated throughout this Initial Study. As discussed herein, all impacts would be less than significant, either with or without mitigation. No impacts beyond those discussed throughout this Initial Study would occur.

16. Transportation/Traffic.

Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐

Potentially Significant Impact: Project development has the potential to result in an increase in daily and peak-hour traffic within the Project vicinity. In particular, Project construction has the potential to affect the transportation system through the hauling of excavated materials and debris, the transport of construction equipment, the delivery of construction materials, and travel by construction workers to and from the Project Site. Once construction is completed, the Project's employees and visitors would generate vehicle and transit trips on a daily basis throughout the local and regional roadway and transit networks. The resulting increase in the use of the area's transportation facilities could potentially exceed roadway and transit system capacities. Therefore, further analysis of this issue in an EIR is required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐

Potentially Significant Impact. The Los Angeles County Metropolitan Transportation Authority administers the Congestion Management Program (CMP), a State-mandated program designed to address the impacts urban congestion has on local communities and the region as a whole. The CMP provides an analytical basis for the transportation decisions contained in the State Transportation Improvement Project. The CMP for Los Angeles County requires an analysis of any Project that could add 50 or more trips to any CMP intersection or more than 150 trips to a CMP mainline freeway location in either direction during either the A.M. or P.M. weekday peak hours. Implementation of the Project would generate additional vehicle trips, which could potentially add more than 50 trips to a CMP roadway intersection or more than 150 trips to a CMP freeway segment. Therefore, further analysis of this issue in an EIR is required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐

Less Than Significant Impact. As previously described, the Project Site is not located within the vicinity of a public or private airport or planning boundary of any airport land use plan. In addition, the approximately 375.5-foot tall building proposed by the Project would be similar to nearby buildings in downtown, and would not increase or change air traffic patterns, or increase levels of risk with respect to air traffic. Therefore, impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

No Impact. The roadways adjacent to the Project Site are part of the urban roadway network and contain no sharp curves or dangerous intersections. The Project does not include any major modifications to the street system or any dangerous design features. In addition, the Project would not result in incompatible uses, as the proposed uses are consistent with other commercial uses in the Project vicinity. Thus, no impacts related to increased hazards due to

a design feature or incompatible use would occur, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e. Result in inadequate emergency access?	☐	☐	☒	☐

Less Than Significant Impact. While it is expected that the majority of Project construction activities would be confined on-site, the Project may require some construction activities to occur in adjacent street rights-of-way. As such, some partial lane closures adjacent to the Project Site, including on Ocean Boulevard, Pine Avenue, and Seaside Way, may occur. However, these closures would be temporary in nature and both directions of travel on area roadways would be maintained so as not to physically impair access to and around the Project Site. The Project would also prepare a Construction Traffic Management Plan to facilitate traffic and pedestrian movement and minimize potential conflicts between construction activities, street traffic, bicyclists, and pedestrians. Additionally, the Project would not place any permanent physical barriers on any of the existing surrounding streets, and access along and through streets and highways in the area would be maintained. Therefore, the Project would not result in inadequate emergency access. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☒	☐	☐	☐

Potentially Significant Impact. The Project Site is well served by public transit, including 11 local routes and 1 circulator operated by Long Beach Transit, 2 local routes and 1 light rail line operated by Metro, and 1 commuter rapid line operated by Torrance Transit within 0.25 mile of the Project Site. One bus stop is located directly in front of the Project Site along Ocean Boulevard. Project development would increase the demand for alternative transportation modes. In addition, during Project construction, infrastructure improvements on streets rights-of-way may require the temporary closure of single through lanes or temporary relocation of existing bus stops. Therefore, further analysis of the Project's potential to conflict with adopted policies, plans, or programs regarding public transit, bicycle facilities, or pedestrian facilities is required in and EIR.

17. Tribal Cultural Resources. Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Less Than Significant Impact with Mitigation Incorporated. Approved by Governor Brown on September 25, 2014, AB 52 establishes a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources, as defined in Public Resources Code Section 21074, as part of CEQA. Effective July 1, 2015, AB 52 applies to projects that file a Notice of Preparation or Notice of Negative Declaration/ Mitigated Negative Declaration on or after July 1, 2015. As specified in AB 52, lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the geographic

area of a proposed project if the tribe has submitted a written request to be notified. The tribe must respond to the lead agency within 30 days of receipt of the notification if it wishes to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation.

AB 52 consultation letters were sent on June 20, 2018 to local tribal councils based on a list provided by the Native American Heritage Commission. Copies of the letters are provided in Appendix IS-7 of this Initial Study. No response was received from any of the tribes contacted during or following the mandated 30-day response period, which concluded on July 20, 2018. However, on October 12, 2018, the City received a request for consultation from the Gabrieleño Band of Mission Indians—Kizh Nation. On November 1, 2018, the City had a conference call with tribal Chairman Andrew Salas. Chairman Salas agreed that a mitigation measure requiring tribal monitoring during all earth disturbance activities would satisfy his concerns and no further consultation would be needed. Therefore, Mitigation Measures TCR-1 and TCR-2, provided below, will be included as part of the Project. With implementation of these mitigation measures, impacts would be less than significant.

Mitigation Measure TCR-1: Prior to the issuance of any grading permit for the Project, the City of Long Beach Development Services Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on Project plans and specifications. The Project Site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall be approved by a local tribal representative and shall be present on-site during the construction phases that involve any ground disturbing activities. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the California Environmental Quality Act, California Public Resources Code Division 13, Section 21083.2 (a) through (k). Neither the City of Long Beach, Project Applicant, or construction contractor shall be financially obligated for any monitoring activities. If evidence of any tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capability to halt construction in the immediate vicinity of the find in order to recover and/or determine the appropriate plan of recovery for the resource. The recovery process shall not unreasonably delay the construction process. On-site monitoring shall end when the Project grading and excavation activities are completed or when the monitor has indicated that the site has a low potential for tribal cultural resources and monitoring is no longer necessary.

Mitigation Measure TCR-2: Any archaeological resource(s) unearthed during Project construction activities shall be evaluated by the qualified archaeologist and Native American monitor. If the resource(s) are Native American in origin, the relevant tribe shall coordinate with the landowner regarding treatment and curation of the resources. The treatment plan established for the resource(s) shall comply with California Environmental Quality Act Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) shall be the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis.

18. Utilities and Service Systems.

Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

Less Than Significant Impact. The City of Long Beach Water Department provides wastewater collection and treatment services for the Project Site. Wastewater generated during Project operation would be collected and discharged into existing sewer mains and conveyed to the Joint Water Pollution Control Plant (JWPCP) in the City of Carson or the Long Beach Water Reclamation Plant (LBWRP). The JWPCP provides primary and secondary treatment for approximately 260 million gallons of wastewater per day (mgd) and has a total permitted capacity of 400 mgd.[50] The Long Beach Water Reclamation Plant provides primary, secondary, and tertiary treatment for 25 million gallons of wastewater per day.[51] The wastewater treatment facilities serving the City have a combined treatment capacity of 425 mgd. Based on annual performance data reported by the Sanitation Districts of Los

[50] *Sanitation Districts of Los Angeles County, Joint Water Pollution Control Plant, www.lacsd.org/wastewater/wwfacilities/jwpcp/, accessed May 8, 2018.*

[51] *Sanitation Districts of Los Angeles County., Long Beach Water Reclamation Plant, www.lacsd.org/wastewater/wwfacilities/joint_outfall_system_wrp/long_beach.asp, accessed May 8, 2018.*

Angeles County for the year 2017, the JWPCP processes an average flow of approximately 257 mgd. As such, the JWPCP has an available treatment capacity of 143 mgd.[52]

Incoming wastewater to the JWPCP and the LBWRP initially passes through screens and basins to remove coarse debris and grit. This is followed by primary treatment, which is a physical separation process where solids are allowed to either settle to the bottom of tanks or float on the surface. These solids, called sludge, are collected, treated, and recycled. The portion of water that remains, called primary effluent, is treated through secondary treatment using a natural, biological approach. Living micro-organisms are added to the primary effluent to consume organic pollutants. These micro-organisms are later harvested and removed as sludge. After secondary treatment is complete at the JWPCP, the water is disinfected and dispersed to the Pacific Ocean through networks of outfalls that extend two miles off the Palos Verdes Peninsula to a depth of 200 feet. After secondary treatment is complete at the LBWRP, the water is filtered to remove any remaining suspended materials (tertiary treatment), and the reclaimed water is reused. Any discharge of effluent from the JWPCP into the Pacific Ocean is regulated by the JWPCP NPDES Permit issued under the Clean Water Act and is required to meet the requirements set forth by Regional Water Quality Control Board (RWQCB). Accordingly, the JWPCP's effluent to the Pacific Ocean is continually monitored to ensure that it meets or exceeds prescribed standards.

The wastewater generated by the Project would be typical of hotel and restaurant uses. No industrial discharge into the wastewater system would occur. Additionally, restaurant kitchens would be equipped with grease traps as required. As the JWPCP is in compliance with the State's wastewater treatment requirements, the Project would not exceed the wastewater treatment requirements of RWQCB. Therefore, impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

[52] *Sanitation Districts of Los Angeles County, Joint Water Pollution Control Plant, Plant Performance, www.lacsd.org/wastewater/wwfacilities/jwpcp/performance/default.asp, accessed May 8, 2018.*

Less Than Significant Impact. Water and wastewater systems consist of two components: the source of the water supply or place of sewage treatment and the conveyance systems (i.e., distribution lines and mains) that link these facilities to an individual development site. The following analysis is based in part on the Water and Sewer Technical Memo (Water and Sewer Memo) prepared for the Project Site in May 2015 and updated in August 2018 by KPFF Consulting Engineers, as well as the Sanitary Sewer Study prepared by KPFF Consulting Engineers in September 2018. These memos are included as Appendix IS-8 and Appendix IS-9 of this Initial Study, respectively.

Water

Water services for the City of Long Beach are provided by the Long Beach Water Department (LBWD) through an underground water distribution pipe network. The LBWD distribution network includes 912 miles of water mains and approximately 90,000 service connections. Near the Project Site, existing water mains are located within Ocean Boulevard, Pine Avenue, and Seaside Way, with several laterals within the Project Site. The water mains consist of a 12-inch pipe within Ocean Boulevard, a 12-inch pipe within Pine Avenue, and a 12-inch pipe within Seaside Way. Existing laterals within the Project Site range from 2- to 6-inch pipes.

New connection points would be required for the Project, but no upgrades to the mainlines serving the Project Site would be required. Proposed laterals would include 1- to 8-inch pipes and would provide service for domestic, fire, and irrigation systems. As set forth in Response to Question 18.d, below, the City's existing potable water conveyance infrastructure is sufficient to meet the Project's water demand. Upon connection, booster pumps would be utilized to achieve the required water pressure for the building. The design and installation of new water connections would meet applicable City standards. Most construction impacts associated with the installation of the water distribution lines are expected to be confined to trenching in order to place the lines below surface and would be limited to the Project Site and its immediate vicinity. Minor off-site construction activities associated with connections to the public water mains would occur. Vehicular and pedestrian access immediately surrounding the Project Site could be affected during construction of new water connections to the public water mains. However, as discussed above, a Construction Traffic Management Plan would be implemented during Project construction to ensure that adequate and safe access remains available within and near the Project Site during construction activities. Features of the construction management plan, which would be developed in consultation with the City Engineer, may include limiting potential lane closures to off-peak travel periods, to the extent feasible, and employing flag persons to control traffic movement during temporary traffic flow disruptions. In addition, prior to conducting any ground disturbing activities, Project contractors would coordinate with the LBWD to identify the locations and depths of existing water lines in the Project Site vicinity to avoid disruption of water service.

With respect to fire flow, per the California Fire Code, fire flow requirements are based on building types and floor area and range from 1,500 to 8,000 gallons per minute at 20 pounds per square inch. In accordance with Section 18.48.420 of the Long Beach Fire Code, all new commercial, industrial, and non-residential buildings that require two or more exits or that are greater than 3,000 square feet shall be protected by an automatic sprinkler system, which would be included in the Project. Per the Long Beach Fire Code, fire flows can be reduced by up to 50 percent when fire sprinklers are installed. Prior to the issuance of building permits, the LBFD would be required to grant approval of the final building design, including all fire prevention and suppression systems, which would ensure the Project is developed pursuant to Fire Code requirements. In addition, on-site water connections would be constructed, as necessary, to comply with the fire flow set for the Project by the LBFD during the plan check process.

Based on the above, Project impacts associated with water supply infrastructure would be less than significant, and no mitigation measures would be required.

Wastewater

LBWD is also responsible for operation and maintenance of the City's sewer system. As described in Response to Question 18.a, above, wastewater generated during Project operation would be collected and discharged into existing sewer mains and conveyed to the JWPCP or the LBWRP, which have a combined treatment capacity of 425 mgd. Existing 10-inch sewer mains are located within Ocean Boulevard and Seaside Way. There is also an existing 8-inch sewer lateral that is currently cut and capped near the southeastern edge of the Project Site. This existing lateral was likely the main connection point for the Jergins Trust Building which previously occupied the site.

The Project would either utilize the existing lateral or install a new lateral near it, which would connect to the existing 10-inch sewer main within Seaside Way. However, from the existing manhole located at the southeastern corner of the Project Site, the sewer main constricts to an 8-inch segment stretching to Locust Avenue, which is not adequately sized to serve the Project. The 8-inch line would be replaced with a 10-inch line as part of the Project, and the replacement line would follow the same alignment and utilize the same connection points as the existing line. Off-site work to install the replacement line could potentially affect vehicular and pedestrian traffic near the Project Site. However, as discussed above, a Construction Traffic Management Plan would be implemented during Project construction to ensure that adequate and safe access remains available within and near the Project Site during construction activities. Features of the construction management plan, which would be developed in consultation with the City Engineer, may include limiting potential lane closures to off-peak travel periods, to the extent feasible, and employing flag persons to control traffic movement during temporary traffic flow disruptions. In addition, prior to conducting any ground disturbing activities, Project contractors would coordinate with the LBWD to identify the

locations and depths of existing sewer lines in the Project Site vicinity to avoid disruption of sewer service. LBWD has issued a “will-serve” letter indicating sewer service is available to serve the Project. Therefore, with installation of the 10-inch replacement line, impacts would be less than significant, and no mitigation measures would be required.

With respect to wastewater treatment capacity, as discussed in Response to Question 18.a, above, wastewater from the Project Site is conveyed via municipal sewage infrastructure to the JWPCP or LBWRP. The JWPCP has an available capacity of approximately 143 mgd. As detailed in the Sanitary Sewer Study included as Appendix IS-9 of this Initial Study, based on wastewater generation rates published by Los Angeles County Sanitation Districts (LASAN), the Project would generate an estimated average flow of 77,137 gpd of wastewater and a peak flow of 154,710 gpd of wastewater, which would represent 0.05 and 0.11 percent of the available capacity at the JWPCP, respectively. Therefore, given the amount of wastewater expected to be generated by the Project, adequate wastewater treatment capacity would be available to serve the Project Site. As such, the Project would have a less than significant impact with respect to wastewater treatment and infrastructure, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Less Than Significant Impact. As discussed above in Response to Questions 9.a and 9.c above, while the Project would increase the amount of stormwater runoff from the Project Site, the capture and reuse system would provide 3,102 cubic feet of underground storage to accommodate 10-year flows, prior to flowing to the existing 27-inch public storm drain in Pine Avenue. During storms greater than a 10-year event, the detention system would overflow via the drive aisle trench drains and sheet flow to the existing curb and gutters that lead to an existing catch basin, entering the public storm drain system. All of the new improvements would be within the boundaries of the Project Site, and the Project would not require the construction of new off-site stormwater drainage facilities or expansion of existing facilities. Accordingly, impacts associated with the proposed improvements are included in the Project impacts evaluated throughout this Initial Study. As discussed herein, all impacts would be less than significant, either with or without mitigation. No impacts beyond those discussed throughout this Initial Study would occur. Therefore, the Project would have a less than

significant impact with respect to storm drain facilities, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

Less Than Significant Impact. LBWD receives its domestic water from three sources: imported water purchased from the Metropolitan Water District of Southern California (MWD), groundwater pumped and treated by LBWD, and recycled water. LBWD is researching other possible measures to increase or maintain water supplies, including seawater desalinization and water conservation measures to reduce demand. In its 2015 Urban Water Management Plan (UWMP), LBWD projected that water supplies will be sufficient to meet all demand through the year 2040. New UWMPs are developed every 5 years to address water demand over time.

Development of the Project would result in an increase in long-term water demand related to water consumption, building operations, maintenance, and other activities on the Project Site. Based on the proposed land uses and wastewater generation rates published by LASAN, and as detailed in the Sanitary Sewer Study included as Appendix IS-9 of this Initial Study, the Project is anticipated to result in an average water demand of approximately 77,137 gpd or 86.41 acre-feet per year (AFY).[53] It should be noted that the Project's estimated water demand is conservative as it does not account for water conservation features that would be included as part of the Project (i.e., a 20-percent reduction in water usage as required by CalGreen), or the potential use of treated stormwater for irrigation. These water saving features would reduce Project demand accordingly. As noted above, LBWD projects it can meet all water demand through 2040. In 2022, the Project's buildout year, LBWD projects 63,550 AFY of demand and 77,491 AFY of supply, for a surplus of 13,941 AFY.[54] The Project's estimated in water demand of 86.41 AFY would comprise approximately 0.11 percent of the City's water demand in 2022. Therefore, the Project would be well within the available and projected water supplies from 2022 through the year 2040 and, as such, the LBWD would

[53] *The Water and Sewer Memo included as Appendix IS-8 of this Initial Study determined water demand could be as high as 650 gpm (936,000 gpd) using the number of fixtures to convert to gpm, which is a much more conservative methodology. Regardless, Long Beach Water has provided a "will serve" letter confirming potable water will be available for the Project.*

[54] *Based on a linear interpolation of 2020 and 2025 values in the 2015 UWMP.*

be able to meet the water demand for the Project in combination with existing and planned water demand in its future service area. It is further noted that the 2015 UWMP anticipates commercial growth throughout the City, such as would occur under the Project, as evidenced in its application of a 0.33 percent annual growth rate in commercial water use to calculate the City's water demand projections through 2040.[55] LBWD has also issued a "will-serve" letter for the Project indicating they are available to serve the Project. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Less Than Significant Impact. Please refer to response to Question 18.b, above. As discussed therein, based on the amount of wastewater expected to be generated by the Project, adequate wastewater treatment capacity would be available to serve the Project Site. As such, the Project would have a less than significant impact with respect to wastewater treatment and infrastructure, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Less Than Significant Impact. The Automated Refuse Collection Division within the Department of Public Works Environmental Services Bureau provides a comprehensive range of refuse disposal and waste management planning services to residents and businesses in the City. Non-hazardous municipal solid waste is disposed of in Class III landfills, while construction waste, yard trimmings, and earth-like waste are disposed of in unclassified (inert)

[55] *As stated in the LBWD 2015 UWMP, the projections for future commercial water demands use 2014 commercial water use as a baseline and apply a 0.33-percent annual growth rate, which is the growth rate for employment between 2020 and 2035 projected by SCAG. Source: Long Beach Water Department, 2015 Urban Water Management Plan, page 26, 2016.*

landfills. In 2016, the most recent year for which data are available, 13 Class III landfills and one unclassified landfill with solid waste facility permits accepted waste from the City of Long Beach.[56] Additionally, there are two solid waste transformation facilities in Los Angeles County that convert, combust, or otherwise process solid waste for the purpose of energy recovery, the Commerce Refuse to Energy Facility and the Southeast Resource Recovery Facility, located in the City of Long Beach. Solid waste generated within the City is disposed at one of the Class III landfills open to the City, at the unclassified landfill, or processed in the transformation facilities. In 2016, the City disposed of 279,488 tons of waste in landfills and sent 196,080 tons of waste to transformation facilities, for an average daily disposal rate of 1,303 tons per day (tpd).[57]

For the Class III landfills open to the City, the remaining total disposal capacity is approximately 496 million tons.[58] In addition, the Class III landfills open to the City had a total permitted daily capacity of 90,554 tpd and an average daily disposal of 49,797 tpd, resulting in approximately 40,797 tpd of remaining daily disposal capacity.[59] Aggressive waste reduction and diversion programs throughout the State have helped reduce disposal levels at landfills.

Construction of the Project would involve demolition, site grading/preparation, and building construction activities. These activities would generate construction and demolition wastes (e.g., concrete, asphalt, brick, and metal) that would be recycled or collected by private waste haulers contracted by the Project Applicant and taken for disposal at the County's inert landfills. Based on construction and debris rates established by the United States Environmental Protection Agency, it is anticipated that construction of the Project would generate a total of approximately 2,873 tons of demolition debris and approximately 1,044 tons of construction debris, for a combined total of approximately 3,918 tons of construction-related waste generation.[60] It should be noted that soil export is not typically included in the calculation of construction waste to be landfilled since soil is not disposed of as waste, but rather is typically used as a cover material. Thus, soil export is not included in these totals. The amount of construction and debris waste generated by Project construction would represent approximately 0.007 percent of the existing remaining disposal capacity of

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[56] *CalRecycle, Disposal Reporting System (DRS), Jurisdiction Disposal by Facility, Disposal during 2016 for Long Beach.*

[57] *CalRecycle, DRS, Jurisdiction Disposal by Facility, Disposal during 2016 for Long Beach.*

[58] *Based on information from County of Los Angeles, Department of Public Works; Los Angeles County Integrated Waste Management Plan 2016 Annual Report, September 2017, CalRecycle, and County of Orange Waste and Recycling.*

[59] *Based on information from County of Los Angeles, Department of Public Works; Los Angeles County Integrated Waste Management Plan 2016 Annual Report, September 2017, CalRecycle, and County of Orange Waste and Recycling.*

[60] *Numbers may not sum exactly due to rounding.*

56.3 million tons for the unclassified landfill accepting waste from the City. Thus, the total amount of construction and demolition waste generated by the Project would represent a fraction of the remaining capacity at the unclassified landfill serving the Project Site.

Based on solid waste generation factors provided by CalRecycle, the Project would generate approximately 2,500 lbs/day of solid waste upon completion.[61] The waste generation factors utilized do not account for recycling or other waste diversion measures, and as such, the estimated solid waste generated by the Project is conservative. Specific waste reduction measures included in the Project include the provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied; use of building materials with a minimum of 10 percent recycled content for the construction of the Project, and implementation of a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris or minimize the generation of construction waste to 2.5 pounds per square foot of building floor area. The estimated solid waste generated by the Project would represent approximately 0.1 percent of the daily solid waste disposed of by the City. Furthermore, the solid waste generated by the Project would represent approximately 0.003 percent of the remaining daily disposal capacity of the Class III landfills open to the City.

Based on the above, the landfills that serve the Project Site would have adequate capacity to accept the solid waste generated by Project construction and operation. Impacts would be less than significant, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Less Than Significant Impact. Solid waste management in the State is primarily guided by AB 939, the California Integrated Waste Management Act of 1989, which emphasizes resource conservation through reduction, recycling, and reuse of solid waste. AB 939 establishes an integrated waste management hierarchy consisting of (in order of priority): (1) source reduction; (2) recycling and composting; and (3) environmentally safe transformation and land disposal. In addition, AB 1327 provided for the development of the California Solid Waste Reuse and Recycling Access Act of 1991, which requires the adoption of an ordinance by any

[61] *CalRecycle, Estimated Solid Waste Generation Rates, 2016.*

local agency governing the provision of adequate areas for the collection and loading of recyclable materials in development projects. Furthermore, AB 341, which became effective on July 1, 2012, requires businesses and public entities that generate four cubic yards or more of waste per week and multi-family dwellings with five or more units to recycle. The purpose of AB 341 is to reduce greenhouse gas emissions by diverting commercial solid waste from landfills and expand opportunities for recycling in California. More recently, in October 2014, Governor Brown signed AB 1826, which requires businesses that generate four cubic yards or more of organic waste per week to arrange for organic waste recycling services. Mandatory recycling of organic waste is the next step toward achieving California's recycling and greenhouse gas emission goals. Organic waste such as green materials and food materials are recyclable through composting, mulching, and anaerobic digestion which can produce renewable energy and fuel. Reducing the amount of organic materials sent to landfills and increasing the production of compost and mulch are part of the AB 32 (California Global Warming Solutions Act of 2006) requirements.

Additionally, the City of Long Beach Department of Public Works Environmental Services Bureau implements several waste reduction programs, including the Litter-Free Long Beach Campaign, which is designed to expand awareness of the impacts of litter, build community pride, and develop the support and participation of Long Beach residents, schools, and businesses.

The Project would be consistent with the applicable regulations associated with solid waste. Specifically, the Project would comply with AB 939, AB 341, AB 1826, and City goals, as applicable, through measures such as the provision of include the provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied; use of building materials with a minimum of 10 percent recycled content for the construction of the Project, and implementation of a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris or minimize the generation of construction waste to 2.5 pounds per square foot of building floor area, which exceeds CalGreen requirements. Based on Project compliance with federal, state, and local statutes and regulations related to solid waste, no significant impacts would occur, and no mitigation measures would be required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
h. Other utilities and service systems?	☐	☐	☒	☐

Less Than Significant Impact. An analysis of the Project's potential impacts related to energy, including electricity, natural gas, and petroleum-based or transportation-related fuels,

is provided below in Section 20, Appendix F—Energy Conservation and Infrastructure. In accordance with Appendix F of the CEQA Guidelines, the analysis estimates the Project's energy usage and evaluates whether the Project would result in the wasteful, inefficient, or unnecessary consumption of energy. Additionally, the analysis determines whether the Project's energy demands would exceed available supplies or distribution infrastructure capabilities in a manner that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. As discussed therein, impacts would be less than significant. No other utilities or service systems beyond those addressed herein are anticipated to be affected as a result of the Project.

19. Mandatory Findings of Significance.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

Potentially Significant Impact. As described in Section 4, Biological Resources, construction of the Project would occur within an urbanized and fully developed area that lacks natural resources aside from limited landscaping. The Project would not result in direct impacts to any sensitive species or wildlife habitat, and impacts to sensitive biological resources would be less than significant. However, while on-site vegetation is limited to ornamental shrubs and trees, some on-site mature trees could potentially be used for roosting and nesting purposes by migratory birds. Mitigation Measure BIO-1 has been included in order to reduce potential impacts to nesting migratory birds to a less than significant level. With regard to historic resources, however, potentially significant impacts could occur given the proximity of off-site historic resources and the Project's physical connection to the Jergins Tunnel, as discussed in Section 5, Cultural Resources. As such, an EIR will be prepared to evaluate the potential for significant impacts.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐

Potentially Significant Impact. The potential for cumulative impacts occurs when the independent impacts of the Project are combined with impacts from other development in the surrounding area to result in impacts that are greater than the impacts of the Project alone. Located within the Project vicinity are other current and reasonably foreseeable projects whose development, in conjunction with that of the Project, may contribute to potential cumulative impacts. Impacts of the Project on both an individual and cumulative basis will be addressed in an EIR for the following subject areas: air quality, historic resources, greenhouse gas emissions, noise, and transportation/traffic.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Potentially Significant Impact. As indicated in the analyses above, the Project could result in potentially significant impacts with regard to air quality, historic resources, greenhouse gas emissions, noise, and transportation/traffic. As a result, these potential effects will be analyzed further in an EIR.

20. Appendix F—Energy Conservation and Infrastructure.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a. Result in significant impacts with regard to energy use and consumption, if it would cause wasteful, inefficient, and unnecessary consumption of energy?	☐	☐	☒	☐

Less Than Significant Impact. The following analysis estimates the Project's electricity, natural gas, and transportation fuel usage and evaluates whether the Project would result in wasteful, inefficient, or unnecessary consumption of energy. In accordance with Appendix F of the CEQA Guidelines, the analysis includes relevant information to address the energy implications of the Project. The supporting energy calculations are included in Appendix IS-10 of this Initial Study.

The Project Site is located within Southern California Edison's (SCE) 50,000-square-mile planning area, which includes portions of central and southern California.[62] SCE generates electricity from a variety of sources, including hydropower, coal, nuclear sources, and renewable resources, such as wind, solar, and geothermal. In 2017, renewable resources made up 32 percent of SCE's power mix, according to their 2017 Power Content Label.[63,64] In 2016, the most recent year for which data are available, SCE delivered 85,448 gigawatt-hours (GWh or millions of kilowatt-hours) of electricity to its customers.[65] SCE has existing infrastructure in the immediate Project area consisting of electrical duct banks within Pine Avenue and Seaside Way that would be available to serve the Project.[66] Existing energy usage on-site is limited to lighting within the existing surface parking lot.

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[62] *Southern California Edison, Who We Are, www.sce.com/about-us/who-we-are, accessed November 26, 2018.*

[63] *The Power Content Label was developed by the State to provide a snapshot of the power sources used by utilities in a given year.*

[64] *Southern California Edison 2017 Power Content Label, July 2018, www1.sce.com/wps/wcm/connect/6ee40264-673a-45ee-b79a-5a6350ed4a50/2017PCL.pdf?MOD=AJPERES, accessed November 26, 2018.*

[65] *California Energy Commission, Energy Consumption Data Management System, www.ecdms.energy.ca.gov/elecbyutil.aspx, accessed November 26, 2018.*

[66] *Rosendin Electric, Electrical Service for 100 E. Ocean, Long Beach, CA 90802 Technical Memo, June 1, 2018. Refer to Appendix IS-11 of this Initial Study.*

Natural gas is provided to the Project area by the City of Long Beach Energy Resources Department (LBER). LBER provides natural gas to residents and businesses in Long Beach and Signal Hill and delivers gas through more than 1,800 miles of pipelines. LBER does not produce natural gas; natural gas is purchased on the open competitive market. Within the Project area, LBER currently maintains a 3-inch gas line in Pine Avenue and a 6-inch gas line in Seaside Way.[67] The existing surface parking lot use on-site does not involve the consumption of natural gas although a capped connection to the site exists.

With respect to transportation fuels, according to the California Energy Commission (CEC), transportation accounted for nearly 37 percent of California's total energy consumption in 2014.[68] Continuing that trend, in 2016, California consumed 15.5 billion gallons of gasoline and 3.7 billion gallons of diesel fuel.[69] Petroleum-based fuels currently account for 90 percent of California's transportation energy sources.[70] However, the State continues to develop flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gas emissions from the transportation sector, and reduce vehicle-miles traveled (VMT). Accordingly, gasoline consumption in California has declined.

Project Energy Requirements and Energy Use Efficiency

The Project would consume energy in the form of electricity, natural gas, and transportation fuels such as diesel and gasoline during construction and operational activities. The analysis below addresses the Project's energy requirements and energy use efficiencies by fuel type for each stage of the Project (construction, operations, and maintenance).[71] For purposes of this analysis, Project maintenance includes activities such as the repair of structures, landscaping, and architectural coatings. Energy usage related to Project maintenance activities are assumed to be included as part of Project operations.

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[67] *KPFF Consulting Engineers, Natural Gas Service for 100 E. Ocean, Long Beach, CA 90802, May 30, 2018. Refer to Appendix IS-11 of this Initial Study.*

[68] *California Energy Commission, 2016 Integrated Energy Policy Report, January 18, 2017, p. 4.*

[69] *California Energy Commission Transportation Energy Demand Forecast 2018, November 2017, p. 33.*

[70] *California Energy Commission, 2016–2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program, March 2016.*

[71] *Energy may also be consumed if and when the Project is removed. Removal activities consider the future demolition, removal, or abandonment of the Project at the end of its lifetime. However, as it is not known if or when the Project would be removed, an analysis of energy usage related to Project removal activities would be speculative. For this reason, energy usage related to Project removal is not analyzed herein.*

Construction

During Project construction, energy would be consumed in the form of electricity to power certain construction activities and equipment, and in the form of petroleum-based fuels in conjunction with both on-road and on-site (off-road) vehicle and equipment use. As discussed further below, construction activities typically do not involve the consumption of natural gas. As shown in Table 2 on page 118 and detailed below, a total of 68,013 kilowatt-hours (kWh) of electricity, 66,778 gallons of gasoline, and 76,184 gallons of diesel fuel is estimated to be consumed during Project construction.

Electricity

During construction of the Project, electricity would be consumed to supply and convey water for dust control and, on a limited basis, would be used to power lighting, electronic equipment, and other construction activities necessitating electrical power. Electricity would be supplied to the Project Site via existing electrical infrastructure within the Project area and would not affect other users or services provided by SCE.

As shown in Table 2, a total of approximately 68,013 kWh of electricity is estimated to be consumed during Project construction. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. In addition, although Title 24 requirements typically apply to long-term energy usage associated with building operations, construction lighting providing illumination for the site and staging areas for longer than 120 days would be subject to applicable Title 24 requirements, including limits on the wattage allowed per specified area, in order to conserve energy.[72] As such, the demand for electricity during construction would not cause wasteful, inefficient, or unnecessary use of electricity.

The estimated construction electricity usage represents approximately 1.5 percent of the Project's estimated net annual operational demand which, as discussed below, would be within SCE's supply and infrastructure service capabilities.[73] Moreover, construction activities would involve the removal of the existing electrical fixtures at the Project Site.

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[72] *California Building Energy Efficiency Standards, Title 24, Part 6, Sections 110.9, 130.0, and 130.2.*

[73] *The percentage is derived by taking the total amount of electricity usage during construction (68,013 kWh) and dividing that number by the total amount of net electricity usage during operation (4,690,078 kWh) to arrive at 1.5 percent.*

Table 2
Summary of Total Energy Use During Project Construction[a]

Fuel Type	Quantity
Electricity	
Water Conveyance	1,284 kWh
Lighting, Electronic Equipment, and Other Construction Activities necessitating electrical power [b]	66,730 kWh
Total Electricity	**68,013 kWh**
Gasoline	
On-Road Construction Equipment	66,778 gallons
Off-Road Construction Equipment	0 gallons
Total Gasoline	**66,778 gallons**
Diesel	
On-Road Construction Equipment	47,319 gallons
Off-Road Construction Equipment	28,865 gallons
Total Diesel	**76,184 gallons**

kWh = kilowatt hours

[a] *Detailed calculations are provided in Appendix IS-10 of this Initial Study.*

[b] *Electricity usage is based on SCAQMD construction site survey data and typical requirements for power generators. Such electricity demand would be temporary, limited, and would cease upon the completion of construction.*

Source: Eyestone Environmental, 2018.

Natural Gas

Construction activities, including the demolition of existing structures and the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities; thus there would be no demand generated by construction.

Transportation Energy

Project construction would consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the Project Site, construction worker travel to and from the Project Site, and delivery and haul truck trips (e.g., for deliveries of construction supplies and materials, hauling of demolition and earth materials to off-site reuse or disposal facilities, etc.).

The petroleum-based fuel use summary provided above in Table 2 represents the amount of transportation energy that could potentially be consumed during Project construction based on

a conservative set of assumptions, as detailed in Appendix IS-10 of this Initial Study. As shown, on- and off-road vehicles would consume an estimated 66,778 gallons of gasoline and approximately 76,184 gallons of diesel fuel throughout the Project's construction period. For comparison purposes, the fuel usage during Project construction would represent less than 0.01 percent of the annual on-road gasoline-related energy consumption and less than 0.1 percent of the annual diesel fuel-related energy consumption projected in Los Angeles County in 2021.[74]

Trucks and equipment used during construction activities would comply with the California Air Resources Board's (CARB) anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. In addition to reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would fuel consumption and result in the efficient use of construction-related energy. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements, and Project construction activities would comply with existing energy standards with regard to transportation fuel consumption. As such, the demand for petroleum-based fuel during construction would not cause wasteful, inefficient, or unnecessary use of energy.

Operation

During operation of the Project, energy would be consumed for multiple purposes, including, but not limited to: heating/ventilating/air conditioning (HVAC); refrigeration; lighting; and the use of electronics, equipment, and machinery. Energy would also be consumed in conjunction with water usage, solid waste disposal, and vehicle trips. As shown in Table 3 on page 120, the Project's energy demand would be approximately 4,690 megawatt-hours (MWh) of electricity per year; 15,818,630 cubic feet (cf) of natural gas per year; 218,310 gallons of gasoline per year; and 13,899 gallons of diesel fuel per year.

Electricity

As shown in Table 3, with compliance with 2016 Title 24 standards and applicable 2016 CalGreen requirements, Project operations would result in an estimated on-site demand for electricity totaling approximately 4,690 MWh per year. In addition to complying with CalGreen, the Applicant would implement design measures to meet LEED Silver® requirements which collectively would be capable of exceeding Title 24 energy efficiency requirements by at least 10 percent, include the use of Energy Star-labeled appliances, and reduce indoor water use by at least 20 percent. These measures would further reduce the Project's energy demand.

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[74] *Although the Project is anticipated to become operational in early 2022, this energy analysis evaluates a buildout year of 2021 which is considered conservative since energy efficiency standards are more stringent in future years, resulting in less energy consumption per capita over time.*

Table 3
Summary of Annual Energy Use During Project Operation[a]

Source	Estimated Energy Demand
Electricity[b]	
Building	4,490 MWh
Water	200 MWh
Total Electricity	**4,690 MWh**
Natural Gas[b]	
Building	15,818,630 cf
Total Natural Gas	**15,818,630 cf**
Transportation Fuels[c]	
Gasoline	218,310 gallons
Diesel	13,899 gallons
Total Transportation Fuels	**232,208 gallons**

cf = cubic feet

MWh = million kilowatt hours

[a] *Detailed calculations are provided in Appendix IS-10 of this Initial Study. Totals may not add up due to rounding.*

[b] *Electricity and natural gas estimates assume compliance with applicable 2016 CalGreen requirements and achievement of LEED Silver® or equivalent certification.*

[c] *Transportation fuel estimates include Project characteristics consistent with CAPCOA guidance measures.*

Source: Eyestone Environmental, 2018.

In addition, SCE is required to procure at least 33 percent of their energy portfolio from renewable sources by 2020. The current renewable sources procured by SCE include wind, solar, and geothermal sources. These sources account for 32 percent of SCE's overall energy mix in 2017, the most recent year for which data are available.[75] This represents the available off-site renewable sources of energy that would be used to meet the Project's energy demand. Furthermore, the Project would comply with Title 24 Section 110.10, which includes mandatory requirements for solar-ready buildings, and, as such, would not preclude the use of alternate energy sources.

Based on SCE's 2017 Forecast of Operations, SCE has estimated that its total energy sales in 2017 was 84,253 GWh of electricity.[76,77] As such, the Project's annual electricity consumption

[75] *California Energy Commission, Utility Annual Power Content Labels for 2017, Southern California Edison.*

[76] *Southern California Edison defines its future electricity supplies in terms of sales that will be realized at the meter.*

of 4,690 MWh per year would represent less than 0.006 percent of SCE's sales in 2017. Based on the above, Project operations would not cause wasteful, inefficient, or unnecessary use of electricity.

Natural Gas

As provided in Table 3 on page 120, with compliance with 2016 Title 24 standards and applicable 2016 CalGreen requirements, buildout of the Project is projected to generate an on-site demand for natural gas totaling approximately 15,818,630 cf per year. As discussed above, the Applicant would implement design measures to meet LEED Silver® requirements, which would include natural gas conservation measures in order to collectively be capable of exceeding Title 24 energy efficiency requirements by at least 10 percent. In order to meet the LEED energy performance requirement, the Project may include the use of efficient water heaters, cooking equipment, and/or other major appliances, among a menu of measures.

The Project's estimated demand for 15,818,630 cf of natural gas per year translates to 43,339 cf per day. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within the LBER planning area will be approximately 23.8 million cf per day in 2021.[78,79] The Project would account for less than 0.2 percent of the 2021 forecasted consumption in LBER's planning area. Based on the above, Project operations would not cause wasteful, inefficient, or unnecessary use of natural gas.

Transportation Energy

Based on the Project trip-generation estimates provided in the Traffic Study prepared for the Project, Project-related traffic would result in the consumption of petroleum-based fuels related to vehicular travel to and from the Project Site. The Project Site is located within ¼-mile of the Metro Blue Line Downtown Long Beach Station, the use of which by Project employees and guests would reduce vehicle trips and miles travelled. Furthermore, the Project would provide short- and long-term bicycle parking spaces in addition to bicycle-serving amenities that would encourage biking. The Project would also incorporate characteristics to reduce trips and VMT as compared to standard trip generation rates. The Project characteristics listed below are consistent with the California Air Pollution Control Officers Association (CAPCOA) guidance document, *Quantifying Greenhouse Gas Mitigation Measures*, which identifies the VMT and vehicle trips reductions for the Project Site relative to the standard trip and VMT rates in

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[77] *Southern California Edison 2017 Forecast of Operations, p. 9.*

[78] *California Gas and Electric Utilities, 2018 California Gas Report, p. 111.*

[79] *Although the Project is anticipated to become operational in early 2022, this energy analysis uses a buildout year of 2021 which is considered conservative since energy efficiency standards are more stringent in future years, resulting in less energy consumption per capita over time.*

CalEEMod (i.e., the model used to estimate fuel usage), which corresponds to reduction in relative GHG emissions.[80] Measures applicable to the Project include the following; a brief description of the Project's relevance to the measure is also provided:

- **CAPCOA Measure LUT-1—Increase Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services. The Project would increase the site density from roughly 0 jobs per acre to approximately 1,690 jobs per acre.

- **CAPCOA Measure LUT-4—Increase Destination Accessibility:** The Metro Blue Line Downtown Long Beach (Transit Mall) station is located 0.15 mile from the Project Site. In addition, public bus service in the Project vicinity is provided by Metro and Long Beach Transit, with 11 bus lines serving the area. The Project would also provide bicycle parking spaces and amenities to encourage utilization of alternative modes of transportation. Further, the Project Site is located within 0.5 mile of Downtown Long Beach, thus promoting walking while reducing vehicle trips to and from the Project Site.

- **CAPCOA Measure LUT-5—Increase Transit Accessibility:** As discussed immediately above, the Project would be located 0.15 mile from the Metro Blue Line Downtown Long Beach station, and 11 Metro and Long Beach Transit bus lines serve the Project area. The Project would also provide bicycle parking spaces and amenities to encourage utilization of alternative modes of transportation.

As such, the Project's siting would minimize transportation fuel consumption through the reduction of vehicle trips and VMT.

As discussed previously, the Project Site is located in Downtown Long Beach. This location is the focus for multi-modal transportation improvements by the City of Long Beach based on the City's Mobility Element(2013), Downtown and Transit Oriented Development (TOD) Pedestrian Master Plan (2016), and Bicycle Master Plan (2017). Improvements identified in these plans are anticipated to decrease single occupant vehicle trips and increase the mode-share of walking, cycling, and transit use over time. However, for purposes of a conservative analysis, no credit for these future improvements and change in travel behavior has been taken in this analysis.

As summarized in Table 3 on page 120, when accounting for the Project measures that would be implemented to reduce VMT, the Project's estimated petroleum-based fuel usage would be

[80] *CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, August 2010.*

218,310 gallons of gasoline and 13,899 gallons of diesel per year, for a total of 232,208 gallons of petroleum-based fuels annually. Based on the above, Project operations would not cause wasteful, inefficient, or unnecessary use of petroleum-based fuels.

Summary of Energy Requirements and Energy Use Efficiencies

As previously indicated, CEQA Guidelines Appendix F recommends quantification of a project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of a project's life cycle. If appropriate, the energy intensiveness of materials may be discussed. The Project's energy requirements were calculated based on the methodology contained in CalEEMod for electricity and natural gas usage. Project VMT data was calculated based on CAPCOA guidelines. The calculations also took into account energy efficiency measures such as Title 24, CalGreen, and vehicle fuel economy standards. Table 2 on page 118 and Table 3 on page 120 provide a summary of Project construction and operational energy usage, respectively. During Project construction activities, a total of 68,013 kWh of electricity would be consumed along with 142,962 gallons of transportation fuel (gasoline and diesel). During Project operations, a total of 4,690 MWh of electricity, 15,818,630 cf of natural gas, and 232,208 gallons of transportation fuel (gasoline and diesel) would be consumed on an annual basis.

Compliance with Existing Energy Standards

Construction equipment would comply with energy efficiency requirements contained in the Federal Energy Independence and Security Act or previous Energy Policy Acts for electrical motors and equipment.[81] Electricity and natural gas usage during Project operations presented in Table 3 would comply with 2016 Title 24 standards and applicable 2016 CalGreen requirements. Accordingly, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage.

With regard to transportation fuels, the Project would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy. During Project operations, vehicles traveling to and from the Project Site are assumed to comply with corporate average fuel economy (CAFE) fuel economy standards, as required.

[81] *Energy Independence and Security Act of 2007. Pub.L. (110-140).*

Based on the above, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage, as well as transportation fuel consumption.

Efficient Transportation Alternatives

As discussed above, the Project would include features to reduce VMT during operational activities. The Project includes dedicated bicycle parking facilities and encourages non-automotive forms of transportation such as walking or biking to destinations. The Project is also required to implement Transportation Demand Management (TDM) measures during operations to further reduce employee trips. In addition, the Project represents an infill development within an existing urbanized area that would *concentrate* new hotel and restaurant uses within a High Quality Transit Area (HQTA), as defined by the Southern California Association of Governments (SCAG) and discussed further below. Specifically, 11 Metro and Long Beach Transit bus routes run within 0.25 mile of the Project site. The Project Site is also located 0.15 mile from the Metro Blue Line Downtown Long Beach station. These features would allow for a reduction in VMT by approximately 67 percent in comparison to a standard project, as estimated by CalEEMod, with a corresponding reduction in the Project's petroleum-based fuel usage. Therefore, the Project would encourage the use of efficient transportation modes and alternatives.

Consistency with Adopted Energy Conservation Plans

As previously discussed, the Project would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the 2016 CalGreen Code and Title 24. In addition, the Applicant would implement design measures to meet LEED Silver® requirements which would be capable of exceeding Title 24 energy efficiency requirements by at least 10 percent, include use of Energy Star-labeled appliances, and reduce indoor water use by at least 20 percent. These measures would further reduce the Project's energy demand.

With regard to transportation uses, the Project's location and design would reduce VMT throughout the region and encourage use of alternative modes of transportation. The Project would be consistent with regional planning strategies that address energy conservation. SCAG's 2016–2040 RTP/SCS focuses on creating livable communities with an emphasis on sustainability and integrated planning, and identifies mobility, economy, and sustainability as the three principles most critical to the future of the region. As part of the approach, the 2016–2040 RTP/SCS focuses on reducing fossil fuel use by decreasing VMT, reducing building energy use, and increasing use of renewable sources. The Project would be consistent with the energy efficiency policies emphasized in the 2016–2040 RTP/SCS. Most notably, the Project would be an infill development within an existing urbanized area that would concentrate new hotel and restaurant uses within a HQTA, which is defined by the 2016–2040 RTP/SCS

as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. Specifically, 11 Metro and Long Beach Transit bus routes run within 0.25 mile of the Project site. The Project Site is also located 0.15 mile from the Metro Blue Line Downtown Long Beach station. Furthermore, the Project would provide short- and long-term bicycle parking spaces as required by City Code. Development of the Project within an HQTA would encourage the use of transit and reduce the transportation fuel usage associated with VMT.

The introduction of new land uses and job opportunities within a HQTA, as proposed under the Project, is consistent with the 2016–2040 RTP/SCS. In particular, the 2016–2040 RTP/SCS is estimated to result in an 8-percent decrease in VMT by 2020, an 18-percent decrease in VMT by 2035, and a 21-percent decrease in VMT by 2040. In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016–2040 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. Consistent with both the 2016–2040 RTP/SCS and CARB's updated targets adopted in March 2018, the Project would reduce VMT by 67 percent, thereby reducing fuel usage.

In addition, as previously discussed, the Project would exceed state energy efficiency requirements and would use electricity from SCE, which has a current (2017) renewable energy mix of 32 percent. All of these features would serve to reduce the consumption of electricity, natural gas, and transportation fuel. Based on the above, the Project would be consistent with adopted energy conservation plans.

Conclusion

Based on the analysis presented above and the calculations provided in Appendix IS-10 of this Initial Study, the Project would not result in the wasteful, inefficient, or unnecessary consumption of energy and thus would not generate significant impacts with regard to energy use and consumption. No mitigation measures are required.

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
b. Result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Less Than Significant Impact. The following analysis evaluates existing and projected supplies of electricity and natural gas and the capacity of existing infrastructure to serve the Project's estimated demands. In accordance with Appendix F of the CEQA Guidelines, the analysis includes relevant information to address the energy implications of the Project. The supporting energy calculations are included in Appendix IS-10 of this Initial Study.

As previously discussed, electricity transmission to the Project Site is provided and maintained by SCE through a network of utility poles and underground utility lines. Natural gas service is provided to the Project Site by LBER.

Construction

As discussed above, electricity would be intermittently consumed during construction due to the conveyance of the water used to control fugitive dust, as well as to provide electricity for temporary lighting and other general construction activities. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. The Project's estimated construction electricity usage represents approximately 1.5 percent of its estimated annual operational demand which, as discussed below, would be within the supply and infrastructure service capabilities of SCE.

As also previously discussed, construction activities typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities. Thus, there would be no demand for natural gas generated by construction.

Transportation fuel usage during Project construction activities would represent less than 0.001 percent of gasoline usage and less than 0.01 percent of diesel usage within Los Angeles County, respectively, in 2021. As energy consumption during Project construction activities would be relatively negligible, the Project would not noticeably affect regional energy consumption levels during the construction period.

Operation

Based on SCE's 2017 Forecast of Operations, SCE estimated that its total energy sales in 2017 was 84,253 GWh of electricity. As such, the Project's estimated annual electricity consumption of 4,690 MWh per year would represent less than 0.006 percent of SCE's sales in 2017. Furthermore, SCE has confirmed that the Project's electricity demand can be served

by the facilities in the Project area.[82] Therefore, it is anticipated that SCE's existing and planned electricity capacity and electricity supplies would be sufficient to support the Project's electricity demand.

As stated above, the Project's estimated demand for natural gas is 15,818,630 per year, which translates to 43,339 cf per day. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within the LBER planning area will be approximately 23.8 million cf per day in 2021.[83] The Project would account for less than 0.2 percent of the 2021 forecasted consumption in LBER's planning area.[84] Furthermore, LBER has confirmed that the Project's natural gas demand can be served by the facilities in the Project area.[85]

Conclusion

As energy consumption during Project construction would be comparatively negligible, and the Project's operational energy requirements would fall within SCE's and LBER's service capabilities, the Project would not result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities in a manner that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Project impacts related to energy usage would be less than significant, and no mitigation measures are required.

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[82] *Southern California Edison, Will Serve Letter, May 10, 2018. Refer to Appendix IS-12 of this Initial Study.*

[83] *California Gas and Electric Utilities, 2018 California Gas Report p. 111.*

[84] *California Gas and Electric Utilities, 2018 California Gas Report p. 111*

[85] *City of Long Beach Energy Services, Will Serve Letter, June 6, 2018. Refer to Appendix IS-12 of this Initial Study.*

Appendices

Appendix IS-1

Archaeological Records Search

South Central Coastal Information Center
California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395
California Historical Resources Information System
Los Angeles, Orange, Ventura and San Bernardino Counties
sccic@fullerton.edu

6/5/2018 SCCIC File #: 18994.5049

Stephanie Eyestone-Jones
Eyestone Environmental
2121 Rosecrans Ave, Suite 3355
El Segundo, CA 90245

Re: Records Search Results for the Project Proposed at 100 East Ocean Blvd, City of Long Beach

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Long Beach, CA USGS 7.5' quadrangle. The following summary reflects the results of the records search for the project area and a ½-mile radius. The search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), and the California State Historic Properties Directory (HPD) listings were reviewed for the above referenced project site and a ¼-mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released.

RECORDS SEARCH RESULTS SUMMARY

Archaeological Resources	Within project area: 0 Within project radius: 2
Built-Environment Resources	Within project area: 1 Within project radius: 45
Reports and Studies	Within project area: 5 Within project radius: 16
OHP Historic Properties Directory (HPD)	Within project area: 1 Within project radius: 29
California Points of Historical Interest (SPHI)	Within project area: 0 Within project radius: 0
California Historical Landmarks (SHL)	Within project area: 0 Within project radius: 0
California Register of Historical Resources (CAL REG)	Within project area: 1 Within project radius: 7
National Register of Historic Places (NRHP)	Within project area: 0 Within project radius: 2

Archaeological Determinations of Eligibility (ADOE):	Within project area: 0 Within project radius: 0

HISTORIC MAP REVIEW – The Downey, CA (1943) 1:62,500 scale historic maps indicated that in 1943 the area was already significantly developed. The City of Long Beach was already present, which included many improved roads and buildings. There were seven churches located within the ½-mile search radius and the project area was located at the edge of the beach at San Pedro Bay.

RECOMMENDATIONS

The subject property may have multiple known addresses (100 E Ocean Blvd. and 110 E Ocean Blvd.). The National Register Nomination forms for the property list the address as 110 W. Ocean; although this may simply be an address error. Nevertheless, most of the previously standing historical structure known as the "Jergens Trust Building" was already removed several years ago. However, it appears that a below ground-level portion of the arcade may still remain. This property appears to be listed on the California Register and found eligible (prior to significant demolition) for the National Register of Historic Places. The property has been developed since approximately 1918 and may be sensitive for archaeological resources. Although the project occurs in an area where the surface and subsurface appears to have been previously disturbed, there is still potential for the discovery of prehistoric or historic cultural resources within the project boundaries. Therefore, an archeological monitor is recommended during all ground disturbing activities. In the event that any evidence of cultural resources is encountered, all work within the vicinity of the find should stop until the qualified archaeologist can assess such finds and make recommendations. Excavation of potential cultural resources should not be attempted by project personnel. Additionally, the Native American Heritage Commission should be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area.

For your convenience, you may find a professional consultant* at www.chrisinfo.org. Any resulting reports by the qualified consultant should be submitted to the South Central Coastal Information Center as soon as possible.

*The SCCIC does not endorse any particular consultant and makes no claims about the qualifications of any person listed. Each consultant on this list self-reports that they meet current professional standards.

If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm. Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System,

Digitally signed by Stacy St. James
Date: 2018.06.05 12:08:27 -07'00'

Michelle Galaz
Assistant Coordinator

Enclosures:

(X) Invoice #18994.5049

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Appendix IS-2

Paleontological Records Search

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

25 May 2018

Eyestone Environmental
2121 Rosecrans Avenue, Suite 3355
El Segundo, CA 90245

Attn: Stephanie Eyestone-Jones, President

re: Paleontological resources for the proposed 100 East Ocean Boulevard Project, in the City of Long Beach, Los Angeles County, project area

Dear Stephanie:

I have conducted a thorough check of our paleontology collection records for the locality and specimen data for the proposed 100 East Ocean Boulevard Project, in the City of Long Beach, Los Angeles County, project area as outlined on the portion of the Long Beach USGS topographic quadrangle map that Brad J. Napientek sent to me via e-mail on 15 May 2018. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The surficial sediments in the proposed project area consist of older Quaternary Alluvium, derived primarily as fluvial deposits from the Los Angeles River that flows immediately to the west, but possibly including estuarine or beach deposits. These deposits may well contain significant vertebrate fossils, as they are known in the area to be fossiliferous.

Our closest vertebrate fossil locality from older Quaternary deposits is LACM 6896, almost due west of the northern border of the proposed project area near the intersection of Magnolia Avenue and Ocean Boulevard, that produced a specimen of fossil whale, Cetacea, from pile driving activities at a depth of less than 100 feet. To the east of the proposed project area, south of Ocean Boulevard across from Bixby Park at approximately 17th Place, our older

Quaternary locality LACM 1005 produced fossil specimens of mammoth, *Mammuthus columbi*, and ground sloth, *Nothrotheriops shastensis*, at approximately 60 feet from the surface. Just southeast of locality LACM 1005, situated along the beach between the parking lot of Bluff Park and the shoreline, our vertebrate fossil locality LACM 7739, at a depth of 25 feet produced a rich suite of fossil marine vertebrates (see appendix for faunal list) in addition to associated fossil invertebrates including snails, clams, tusk shells, barnacles, crabs, and sea urchins, probably from the marine older Quaternary San Pedro Sand.

Very shallow excavations in the Quaternary Alluvium exposed throughout the proposed project area probably will not uncover any significant vertebrate fossils. Deeper excavations, however, may well encounter significant fossil vertebrate remains. Any substantial excavations below the uppermost layers in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

Appendix IS-3

Geotechnical Report & Memorandum

GEODESIGN INC

Memorandum

To:	Yuri Moshinski	From:	Chris Zadoorian
Company:	Sodo Builders, LLC	Date:	June 13, 2018
Address:	270 South Hanford Street, Suite #100 Seattle, WA 98134		

cc:	Steven Rupert, GBD Architects (via email only) Brad Napientek and Ashley Rogers, Eyestone Environmental (via email only)

GDI Project:	SodoBuild-2-01
RE:	Responses to California Environmental Quality Act Items Proposed Mixed-Use Hotel Development 100 East Ocean Boulevard, Long Beach, California

INTRODUCTION

We performed a geotechnical investigation at the site of the proposed hotel development to be constructed at 100 East Ocean Boulevard in Long Beach, California and we summarized the results in a preliminary report dated November 9, 2018 and a draft report dated January 24, 2017.

We are currently working on a final design report that includes more detailed programming information including updated building height and column loading.

Brad Napientek of Eyestone Environmental reviewed our January 24, 2017 draft report requested clarification regarding (1) the potential for lateral spreading at the site, (2) the presence of expansive soils and (3) the current planned building height, 402 feet, which is approximately 100 feet taller than indicated in our draft report dated January 24, 2017.

Each item is addressed below.

<u>Item 1 – Potential for Lateral Spreading at the Site</u>

Lateral spreading is a secondary seismic hazard that may occur where the ground surface level is sloping and potentially liquefiable soils are present within the slope.

The ground surface level at the site does slope gently to the south with the project limits, and a grade change is present immediately north of the proposed building site, however, liquefiable soils are not present at the site and therefore, the potential for lateral spreading is not present at the site.

Item 2 – Expansive Soils

Fill soils ranging from approximately 4.0 to 14.5 feet in thickness were encountered in the borings. The fill soils generally consist of medium dense to very dense silty sand and hard sandy silt and contained various amounts of asphalt and brick fragments.

Native soil encountered beneath the fill generally consists of medium dense to very dense sand, sand with silt, and silty sand with intermittent layers of very stiff to hard silt and sandy silt approximately 2.5 to 8.5 feet in thickness.

None of the soils encountered exhibited the potential for expansion and therefore, expansive soils are not present at the site and as such mitigation measures are not required to address expansive soils.

Item 3 – Current Planned Building Height

The current planned building height is approximately 100 feet taller than the previously planned building height as described in our draft report dated January 24, 2017. The current planned development will result in an increased building weight when compared to the earlier concept and we estimated the increase to be on the order of 33 percent and based on the preliminary loading information provided by DCI, the project structural engineer, we estimate the current planned dead-plus-live foundation loading for the tower to be on the order of 8,500 psf.

While the proposed increased building height does not change the conclusions nor recommendations presented in our draft report, total settlement of the proposed tower will increase from a previously estimated 1½ inch or less to 2.0 inches or less. The increased settlement is tolerable for the planned foundation system (mat foundation) and remains compatible with the adjacent podium structure settlement of the proposed podium structure.

♦ ♦ ♦

We appreciate the opportunity to be of continued service to you. Please call if you have questions concerning this report or if we can provide additional services.

CJZ

Attachments

One copy submitted (via email only)

Document ID: SodoBuild-2-01-061318-geom-cjz

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GEODESIGN INC

REPORT OF GEOTECHNICAL ENGINEERING SERVICES

Proposed Hotel Development
100 East Ocean Boulevard
Long Beach, California

For
Sodo Builders, LLC
January 24, 2017

GeoDesign Project: SodoBuild-2-01

GEODESIGN INC

January 24, 2017

Sodo Builders, LLC
270 South Hanford Street, #100
Seattle, WA 98134

Attention: Edward Kirk and Yuri Moshinski

Report of Geotechnical Engineering Services
Proposed Hotel Development
100 East Ocean Boulevard
Long Beach, California
GeoDesign Project: SodoBuild-2-01

GeoDesign, Inc. is pleased to submit this geotechnical engineering report for the proposed hotel development to be constructed at 100 East Ocean Boulevard in Long Beach, California. Our services were performed in general accordance with our proposal dated June 16, 2016.

We appreciate the opportunity to be of service to you. Please contact us if you have questions regarding this report.

Sincerely,

GeoDesign, Inc.

Christopher J. Zadoorian, G.E.
Principal Engineer

cc: Katherine Schultz, GBD Architects (one copy)
Paul Rogness, DCI Consulting Engineers (one copy)
Jose Hernandez, KPFF Consulting Engineers (one copy)

ENT:CJZ
Attachments
One copy submitted (via email only)
Document ID: SodoBuild-2-01-012417-geor.docx
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Appendix B

CPT Data

Appendix C

P-S Log Report

ACRONYMS AND ABBREVIATIONS

1.0 INTRODUCTION

This report summarizes our geotechnical investigation for the proposed hotel development to be constructed at 100 East Ocean Boulevard in Long Beach, California as shown on Figure 1.

The site located at the southeast corner of Pine Avenue and East Ocean Boulevard and is bound on the south by East Seaside Way, on the east an existing tower at 180 East Ocean Boulevard, and to the north by a public park. An existing tunnel structure, the Jergins Tunnel, is located north of the site that crosses beneath East Ocean Boulevard and terminates in the Renaissance Hotel located the northeast corner of Pine Avenue and East Ocean Boulevard as shown on Figure 2.

The ground surface level at the site generally slopes down from north-to-south and ranges from approximately Elevation 19 at the northwest corner of the site to approximately Elevation 6 at the south end of the site.

Plans for the tower located at 180 East Ocean Boulevard were not available at the time we prepared this report, however, based on our observations in the field, the lowest finished floor level of the existing tower is established at approximately Elevation 6. It will ultimately be necessary to obtain the foundation plans for the tower in order to design temporary shoring and permanent walls below grade.

An existing tunnel structure, the Jergins Tunnel, is located north of the site that crosses beneath East Ocean Boulevard and terminates at the Renaissance Hotel located at the northeast corner of Pine Avenue and East Ocean Boulevard.

The ground surface level at the site generally slopes down from north-to-south and ranges from approximately Elevation 16 at the northwest corner of the site to approximately Elevation 6 at the southeast corner.

Paul Rogness of DCI Engineers furnished us with a structural narrative and preliminary foundation plans each dated November 23, 2016 that depict the proposed development. Jeremy Ryan of DCI Engineers furnished us with preliminary foundation loading information and preliminary foundation deformation analysis for our review.

Based on our review of the narrative and foundation plans and our discussions with Mr. Rogness, the proposed development will include the construction of an approximately 310-foot-tall, 26-story hotel building. The proposed development will include one full subterranean parking level with a finished floor elevation of approximately Elevation -3.

The planned foundation system will consist of a 5- to 7.5-foot-thick mat foundation beneath the core of the proposed tower, and spread and continuous footings to support the adjoining podium structures as shown on Figure 2. We anticipate the bottom of the foundations will be established between Elevations -6.0 to -12.5, approximately.

Based on the loading information provided by Mr. Ryan total dead-plus-live load applied pressure mat foundation would range to approximately 6,500 psf and dead-plus live column loads for the podium will be on the order of 1,200 kips to 1,650 kips.

Based on our review of the *Seismic Hazard Evaluation of the Long Beach 7.5-Minute Quadrangle, Los Angeles County, California* (California Geologic Survey [CGS], March 25, 1999), the southern approximately one-half of the site is located within a liquefaction hazard zone as shown on Figure 1.

Our investigation is summarized below followed by our conclusions and recommendations for the design and construction of the proposed development.

Please note that supplemental analysis will be required to develop design recommendations for temporary shoring and permanent walls below grade on the east building side once sufficient information is available for the adjacent tower at 180 East Ocean Boulevard.

Acronyms used herein are defined at the end of this document.

2.0 PURPOSE AND SCOPE

The purpose of our investigation was to determine the subsurface conditions at the site and develop geotechnical design recommendations for the proposed development. Our specific scope of services included the following primary tasks:

- Drilling 5 borings at the site using mud rotary drilling equipment
- Advancing 4 Cone Penetrometer Test (CPT) soundings
- Collecting representative samples from the borings and maintain a log of the soil conditions encountered at the site
- Performing P-S suspension logging to develop a shear-wave velocity profile
- Performing geotechnical laboratory testing on samples collected from the borings
- Evaluating liquefaction potential at the site
- Developing seismic design parameters in accordance with the 2016 CBC
- Developing foundation recommendations for the proposed development
- Developing recommendations for temporary shoring
- Developing recommendations for below-grade building walls
- Developing recommendations for floor slab support
- Developing recommendations for general site flatwork
- Developing recommendations for general site grading and earthwork
- Preparing this report summarizing our investigation and presenting our conclusions and recommendations

3.0 SUBSURFACE INVESTIGATION

3.1 SUBSURFACE EXPLORATIONS

3.1.1 Borings and CPTs

We explored the subsurface conditions at the site by drilling 5 borings (B-1 through B-5) and advancing four CPTS at the locations shown on Figure 2. The borings were drilled to depths ranging from 50.9 to 125.4 feet BGS using mud-rotary drilling equipment and the CPTs were advanced to depths ranging from 6.7 to 50.1 feet BGS. Refusal was encountered at a depth of 6.7 feet in CPT-2 after three attempts.

We maintained a log of the soil conditions encountered in each boring and collected relatively undisturbed and disturbed samples at regular depth intervals.

The logs of the borings, and a detailed description of our drilling and sampling are presented in Appendix A and logs of the CPTs are presented in Appendix B.

3.1.2 Geophysical Testing

Upon completion of drilling in boring B-5, P-S suspension logging was performed by GEOVision, Inc. to estimate the stiffness of the subsurface soil profile of the upper 125 feet.

The suspension logging method uses a 7-meter probe that contains a source and two receivers. The probe is lowered down the drilled hole where the source generates a pressure wave in the drilling fluid within the hole. The pressure wave is converted to seismic P- and S-waves at the boring sidewalls; at each receiver, the P- and S-waves are converted back to pressure waves. The elapsed time between wave arrivals at the receivers is used to determine the average velocity of a 1-meter-high column of soil. The process is repeated for the full depth of the boring to obtain a continuous log of the boring.

Based on the results of shear wave velocity measurements, the average shear wave velocity for the upper 100 feet was approximately 1,070 feet per second (330 meters per second).

The results of the P-S logging are presented in Appendix C.

3.2 SUBSURFACE CONDITIONS

AC pavement ranging from 1 to 3 inches in thickness was encountered at the surface of each boring.

Fill soils ranging from approximately 4.0 to 14.5 feet in thickness were encountered in the borings. The fill soils generally consist of medium dense to very dense silty sand and hard sandy silt and contained various amounts of asphalt and brick fragments. It's likely that existing debris and/or remnants of prior development at the site are the cause of refusal within CPT-2.

Native soil encountered beneath the fill generally consists of medium dense to very dense sand, sand with silt, and silty sand with intermittent layers of very stiff to hard silt and sandy silt approximately 2.5 to 8.5 feet in thickness.

Generalized depictions of the subsurface conditions are presented in Figures 3 to 5.

3.3 GROUNDWATER CONDITIONS

Groundwater was encountered in our explorations at depths ranging from approximately 7.0 to 12.5 feet BGS, corresponding to approximately Elevations -1 to -2.5.

You furnished us with a Phase I Environmental Assessment dated December 2010 prepared by SCS Engineers that included installation of two groundwater monitoring wells at the site in 2004. Based on the well data at the time of installation, groundwater was encountered at approximately 8 feet BGS in MW-1 and at approximately 11 feet BGS in MW-2, corresponding to approximately Elevation -0 to -2.0.

Based on our review of the *Seismic Hazard Evaluation of the Long Beach 7.5-Minute Quadrangle, Los Angeles County, California* (CGS, March 25, 1999), the historical high groundwater level at the site is less than 10 feet BGS which is consistent with the data from our explorations.

For the purposes of this investigation, we assumed a design groundwater level Elevation 2.0.

4.0 GEOTECHNICAL LABORATORY TESTING

We performed geotechnical laboratory testing on samples collected from our investigations to determine strength, consolidation and other pertinent characteristics of the soil. The following tests were performed:

- In-place moisture and dry density
- Atterberg limits
- Grain-size distribution
- Direct shear
- Consolidation

The results of the testing are presented in Appendix A.

5.0 GEOLOGIC AND SEISMIC HAZARDS

Primary geologic and seismic hazards that may impact the development project include liquefaction potential and surface fault rupture. Each is addressed briefly in the following sections.

5.1 LIQUEFACTION POTENTIAL

Based on our review of the Seismic Hazard Zones map of the Long Beach 7.5 minute Quadrangle dated March 25, 1999 by the California Geological Survey (CGS), the southern approximately one-half of the site is located within a liquefaction hazard zone.

Liquefaction generally occurs in saturated, loose to medium dense, granular soil and in saturated, soft to moderately firm silt as a result of strong ground shaking. As the density and/or particle size of the soil increases and as the confinement (overburden pressure)

increases, the potential for liquefaction decreases. Typically, saturated soil within the upper 50 feet of the ground surface or lowest adjacent grade is considered subject to liquefaction.

Our borings included relatively closely spaced sampling intervals for the purpose of performing a detailed liquefaction analysis.

We utilized the procedure outlined in the National Center for Earthquake Engineering Research document titled *Proceedings of the NCEER Workshop of Liquefaction Resistance of Soils* (Youd and Idriss, 1997, updated in 2001).

To evaluate the liquefaction potential of fine-grained soils, we utilized the procedures summarized and/or suggested by Boulanger and Idriss (2006), which include references to the work by Andrus and Martin (2000), Seed et al. (2003), and Bray et al. (2004). In essence, these procedures evaluate whether soils will behave more like clay or more like sand. Clay-like behavior generally precludes liquefaction while sand-like behavior indicates soils may be subject to liquefaction and should be evaluated using the appropriate procedure.

Our determinations for clay- and sand-like behavior were made based on the plasticity data, moisture content, and grain-size distribution data from our laboratory testing.

The groundwater level at the time of our field investigation was generally consistent with the historical high groundwater level in the area; therefore, the current groundwater level data was used for each boring.

The primary seismic input data for a liquefaction analyses includes the pre-dominant earthquake magnitude and peak ground acceleration (PGA). We determined a predominant earthquake magnitude of 6.86 and PGA_M of 0.628 g using the USGS 2008 interactive deaggregation web tool, and the USGS web-based seismic design maps.

The results of our analyses indicate that soils below the planned foundation levels are sufficiently dense and stiff to preclude liquefaction.

5.2 SEISMIC (DRY) SETTLEMENT

Seismic-induced (aka "dry") settlement is generally agreed to occur in loose, clean sand above the water table as the result of strong ground shaking.

The granular soils encountered at the site are sufficient dense to preclude the occurrence of seismic-induced dry settlement.

5.3 SURFACE FAULT RUPTURE

Faults in Southern California are considered active, potentially active, and inactive based on criteria developed by CGS for the Alquist-Priolo Earthquake Fault Zoning Program (Hart, 1999). By definition, an active fault is one that has had surface displacement within Holocene time (approximately the last 11,000 years). A potentially active fault is one that has demonstrated surface displacement of Quaternary age deposits (last 1.6 million years). Inactive faults have not moved in the last 1.6 million years. The primary purpose of the Alquist-Priolo Earthquake Fault

Zoning Program is to identify sites that have a potential for surface rupture due to active faults that are in close proximity to the site. In such cases, a building setback zone is established to mitigate the potential for surface rupture.

The site is not located within a designated fault-study zone and the closest such zone is approximately 2 miles northeast of the site. The potential for ground surface fault rupture at the site is considered to be very low.

6.0 CONCLUSIONS

6.1 GENERAL

The site is free from geologic or seismic hazards that would preclude the proposed development, and the proposed development is considered feasible from a geotechnical perspective.

The site is subject to strong ground shaking that would result from an earthquake occurring on a nearby or distant fault source; however, this hazard is common in Southern California and can be mitigated by implementing the provisions of the California Building Code (CBC).

6.2 FOUNDATIONS

Native soils encountered at the planned foundation levels consist of medium dense to dense silty sand and very stiff to hard sandy silt. These soils are suitable to support the proposed tower on a mat foundation and the adjacent podium on spread footings.

Fill soils are expected to depths of up to approximately 14.5 feet in thickness and may be deeper in areas not explored during our field investigation; however the existing fill will be removed as part of the planned excavation.

If fill materials are encountered below the planned foundation bottom, these materials shall be removed and replaced with lean-mix concrete below the footing as recommended in Section 7.1.

6.3 GROUNDWATER

The planned excavation will extend below the groundwater table; therefore, provisions for temporary dewatering during construction will be required.

Development of groundwater pumping rates and design details for temporary dewatering systems is beyond the scope of this investigation; however, we anticipate that such systems would require a series of well-points and/or internal trenches.

Groundwater discharged during construction will require off-site disposal and typically this is accomplished either through the storm drain system or the sanitary sewer system. In each case, a permit is required through the appropriate regulatory agency.

We can aid in the design of on-site dewatering systems and/or in obtaining necessary discharge permits, if requested.

Provisions to account for groundwater in the permanent design of the proposed below-grade structure walls and floor slab-on-grade are presented in Sections 7.3 and 7.4.

6.4 FLOOR SLABS

The current concept is to utilize a topping slab above the mat foundation and for the remainder of the building footprint to utilize a conventional floor slab-on-grade.

The topping slap will necessarily be supported on compacted fill placed over the mat foundation.

For the remainder of the building footprint, native soils are generally anticipated at the planned floor slab level, however, in boring B-5 and CPT-3 we existing fill appears to extend a few feet below the lowest finished floor level.

Since the majority of the floor slab will be supported on native soils, if existing fill is present in isolated areas it would be prudent to remove the existing fill and replace it as properly compacted fill. However, if existing fill is more than a few feet thick below the bottom of the floor slab, in which case it is less practical to remove and recompact, an alternative solution could be implemented to allow some existing fill to remain in place, as recommended in Section 7.2.

Additionally, the building floor slab will be subject to hydrostatic pressure and waterproofing of the floor slab will be required in accordance with the 2016 CBC.

6.5 SHORING, EXCAVATIONS, AND PERMANENT BELOW-GRADE WALLS

Proposed excavations on the order of 10 to 15 feet BGS will be required to achieve the planned lowest finish floor level and an additional approximately 5 to 10 feet for foundation excavations.

Temporary shoring will be required to support the proposed excavations in conjunction with temporary construction dewatering.

Recommendations for temporary excavations, temporary shoring and permanent below grade walls are presented in Sections 7.3. 7.4 and 7.5, respectively, based on the information available at this time.

Once foundation information for the adjacent tower located at 180 East Ocean Boulevard is available, revised recommendations will be developed that consider the influence of the adjacent foundations, as appropriate. If the adjacent tower is supported on spread footings, it is likely that underpinning will be will be an appropriate solution.

7.0 RECOMMENDATIONS

7.1 FOUNDATIONS

7.1.1 General

The proposed hotel tower may be supported on a mat foundation and the adjacent podium structure may be supported on spread footings established in on-site native soils.

Foundation excavation bottoms should be carefully observed and probed by our technician to confirm undocumented fill, loose, soft, or otherwise unsuitable soils are not present. If unsuitable soils are present, these soils should be removed and replaced with lean-mix concrete.

Recommendations for the tower mat foundation and spread footings are presented below.

7.1.2 Mat Foundation

We performed static settlement analysis for the proposed tower mat foundation based on the preliminary dead-plus live loading information provided by Messrs. Rogness and Ryan and the results of our analysis indicate total static settlement of 1½ inches or less for the mat foundation and differential settlement across the mat of ½ inch or less. We anticipate the majority of static settlement will occur during construction as the dead load is applied.

For foundation deformation evaluation of the mat foundation, a subgrade modulus equal to 120 pci may be used, noting that this value already has considered the effect of the size of the mat foundation. Utilizing a subgrade modulus of 120 pci, we compute dynamic deformation of the foundation soil of approximately 0.4 to 0.5 inches based on applied bearing pressures from two preliminary seismic loading cases provided to us by Mssrs. Rogness and Ryan.

Updated foundation deformation analysis should be performed as part of the design development process to verify that foundation deformation estimates are compatible with geotechnical settlement dynamic settlement estimates.

7.1.3 Spread Footings

The proposed parking podium may be supported on spread footings established in the on-site native soils. Spread footings a minimum of 2 feet wide and established at least 2 feet below the lowest adjacent grade or top of floor slab may be designed using an allowable bearing pressure of 7,000 psf.

The recommended bearing pressures are a net value and apply to the total of dead and long-term live loads and may be increased up to one-third when considering earthquake or wind loads. The weight of the footing and overlying backfill can be neglected when calculating footing loads.

We performed settlement analyses for the proposed podium footings based on the loading information provided by Mssrs. Ryan and Rogness and the results of our analysis indicated total settlement of 1 inch or less for spread footings and differential settlement of ½ inch or less between adjacent spread footings as well as between spread footings and the mat foundation.

7.1.4 Lateral Resistance

For mat and spread footings, lateral loading may be resisted by foundations using an undrained passive pressure of 225 psf per foot of embedment for footings where the concrete is placed directly against the undisturbed native soils.

A coefficient of friction equal to 0.25 may be used when calculating resistance to sliding for foundations bearing on undisturbed native soils, assuming that a waterproofing membrane is present below the bottom of the foundations and/or waste slab, if utilized.

The passive resistance and the frictional resistance may be used in combination without reduction and may also be increased by one-third when considering short-term seismic and wind loading.

7.2 FLOOR SLABS

The proposed building floor slab over the mat foundation will be a topping slab supported and may be supported on properly compacted fill.

For the remainder of the building footprint, the proposed building floor slab may be supported on native soils where present. If existing undocumented fill materials are present, these materials should be removed and replaced as properly compacted fill or, alternatively, replaced to a depth of 8 inches below the bottom of the floor slab with crushed rock placed on a non-woven geotextile fabric.

The bottom of the floor slab excavation should be carefully observed and probed by our technician to confirm undocumented fill, loose, soft, or otherwise unsuitable soils are not present and/or to provide mitigation recommendations in the field.

Satisfactory subgrade support for floor slabs supporting up to an estimated 400 psf areal loading on properly compacted fill and/or stiff or dense native alluvial soil can be obtained.

The building floor slab should be designed to resist and upward pressure resulting from the design groundwater level of Elevation 2.0.

7.3 TEMPORARY EXCAVATIONS AND VERTICAL CUTS

If necessary, temporary, unsurcharged slopes should not exceed a 1.5H:1V gradient when constructed in existing fill and/or native material. Such temporary slopes should not exceed 15 feet in height.

Temporary vertical cuts that will be beneficial for foundation construction may be made into the native material but should not exceed 3 feet in height. Deeper cuts for foundation excavations should be sloped at 1.5H:1V.

Temporary cut slopes should be protected from erosion by directing surface water away by placing sand bags at the top of the slopes and during wet weather, covering the slopes with plastic sheeting.

7.4 TEMPORARY SHORING

7.4.1 Temporary Shoring Design Lateral Earth Pressures

Typically, cantilevered shoring is feasible for retained heights of approximately 15 feet or less, and braced shoring typically becomes economical for retained heights exceeding 15 feet.

Cantilevered shoring should be designed to resist a triangular lateral earth pressure distribution as shown in Figure 6 and internally braced shoring should be designed to resist a trapezoidal lateral earth pressure distribution as shown in Figure 7.

Please note that once foundation information for the adjacent tower located at 180 East Ocean Boulevard is available, revised recommendations will be developed that consider the influence of the adjacent foundations, as appropriate.

The upper 10 feet of the below-grade building walls should be designed to resist a uniform lateral pressure of 100 psf to account for normal traffic loading, where present as shown on Figures 6 and 7.

Where the surface at the top of the shoring is sloped, the recommended lateral earth pressures should be increased as recommended in Table 1.

Table 1. Increase in Lateral Earth Pressures for Retained Slopes

Slope Inclination at Top of Wall (H:V)	Increase in Lateral Earth Pressure (percent)
1:1	200
1.5:1	165
2:1	150

In addition, when developing design drawings for temporary shoring, it would be prudent to consider the location of construction cranes and other potentially heavy equipment or loads that may act against the shoring system.

7.4.2 Soldier Piles

For the design of soldier piles spaced at least 2 diameters on centers, the allowable lateral bearing value (passive value) of the native soil below the level of excavation may be assumed to be 250 psf per foot of depth, up to a maximum of 2,500 psf, assuming that the groundwater table is drawn down to approximately the bottom of excavation.

To develop the full lateral value, provisions should be taken to ensure firm contact between the soldier piles and the undisturbed soil.

If the embedded portion of the soldier pile shaft is filled with lean-mix concrete with a minimum compressive strength of 2,000 psi, then the effective width of the soldier pile shaft for use in developing passive resistance may be assumed to be twice the diameter of the shaft. If the embedded portion of the soldier pile shaft is filled with other material (such as low strength sand-cement slurry), the effective width of the soldier pile should be limited to be the diagonal dimension of the soldier pile beam.

The frictional resistance between the soldier piles and the retained earth may be used in resisting the downward component of the tieback anchor loads. For design, the coefficient of friction

between the soldier piles and the retained earth is 0.4. This value is based on the assumption that uniform full bearing will be developed between the steel soldier beam and the shaft backfill material and the retained earth.

In addition, provided that the portion of the soldier piles below the excavated level is backfilled with structural concrete, the soldier piles below the excavated level may be used to resist downward loads. For resisting the downward loads, the frictional resistance between the concrete soldier piles and the soil below the excavated level may be taken equal to 300 psf for drilled solider piles. For soldier piles that are vibrated into the supporting soil, the frictional resistance between the soldier piles and the soils below the excavated level may be taken as 600 psf.

Where vibratory methods are utilized, the diagonal of the solider beam may be used for the width when computing allowable passive resistance. Pre-drilling, if utilized in conjunction with vibratory methods, should not extend below the bottom of the planned excavation and the diameter of the pre-drilling auger should be less than the beam diagonal.

7.4.3 Timber Lagging

Continuous lagging will be required between the soldier piles. The soldier piles and anchors should be designed for the full anticipated lateral pressure; however, the pressure on the lagging will be less due to arching in the soil. For clear spans of up to 8 feet, we recommend that the lagging be designed for a triangular distribution of earth pressure where the maximum pressure is 400 psf at the mid-line between soldier piles and 0 psf at the soldier piles.

7.4.4 Tiebacks

Tieback friction anchors may be used to resist lateral loads. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn at 30 degrees with the vertical through the bottom of the excavation. The anchors should extend at least 20 feet beyond the potential active wedge and to a greater length as necessary to develop the desired capacities.

The capacities of anchors should be determined by testing the initial anchors as outlined below. We anticipate that gravity-filled anchors will be capable of achieving an allowable bond strength of 1 to 3 kips per lineal foot of anchor, depending on the method of construction. A variety of methods is available for construction of anchors. If post-grouted anchors are utilized, we estimate that the anchors will develop resistance on the order of three times the estimated value.

We recommend that the shoring designer and contractor be responsible for selecting the appropriate bond length and installation methods to achieve the required capacity.

Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads. If the anchors are spaced at least 6 feet on-centers, reduction in the capacity of the anchors does not need to be considered due to group action.

The anchors are commonly installed at angles of 15 to 40 degrees below the horizontal; however, in many cases it is necessary to utilize steeper inclinations where adjacent private

property is present. Caving of the anchor holes should be anticipated and provisions made to minimize such caving. The anchors should be filled with concrete placed by pumping from the tip out, and the concrete should extend from the tip of the anchor to the active wedge. To minimize chances of caving, we suggest that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flushed with the face of the excavation. The sand backfill may contain a small amount of cement to allow the sand to be placed by pumping. For 8-inch-diameter or less post-grouted anchors, the anchor may be filled with concrete to the surface of the shoring.

Our representative should select a representative number of the initial anchors for 24 hour, 200 percent tests and 200 percent quick tests. The purpose of the 200 percent test is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

For post-grouted anchors where concrete is used to backfill the anchor along its entire length, the test load should be computed as required to develop the appropriate friction along the entire bonded length of the anchor.

We estimate that the influence of the post-grouting and the adjacent soil within the bonded length of the anchors will be less than 5 feet from the anchor.

The total deflection during the 24 hour, 200 percent tests should not exceed 12 inches during loading. The anchor deflection should not exceed 0.75 inch during the 24 hour period, measured after the 200 percent test load is applied. If the anchor movement after the 200 percent load has been applied for six hours is less than 0.5 inch and the movement over the previous four hours has been less than 0.1 inch, the test may be terminated.
For the quick 200 percent tests, the 200 percent test load should be maintained for 30 minutes. The total deflection of the anchor during the quick 200 percent tests should not exceed 12 inches. The deflection after the 200 percent test load has been applied should not exceed 0.75 inch during the 30-minute period. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

All of the production anchors should be pre-tested to at least 150 percent of the design load. The total deflection during the tests should not exceed 12 inches. The rate of creep under the 150 percent test should not exceed 0.1 inch over a 15 minute period for the anchor to be approved for the design loading.

After a satisfactory test, each production anchor should be locked off at the design load. The locked off load should be verified by rechecking the load in the anchor. If the locked off load varies by more than 10 percent from the design load, the load should be reset until the anchor is locked off within 10 percent of the design load. The installation of the anchors and the testing of the completed anchors should be observed by a representative of our firm.

7.4.5 Raker Bracing

As an alternative to tiebacks, raker bracing may be used to internally brace the soldier piles. If used, raker bracing could be supported laterally by temporary concrete footing (aka deadmen) or by the permanent interior footings. For design of such temporary footings poured with the bearing surface normal to the rakers inclined at 45 to 60 degrees with the vertical, a bearing value of 4,000 psf may be used for footings on the dense or stiff native soil provided the shallowest point of the footing is at least 1 foot below the lowest adjacent grade. To reduce the movement of the shoring, the rakers should be tightly wedged against the footings and/or shoring system.

7.4.6 Monitoring

Some means of monitoring the performance of the shoring system is recommended. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all the soldier piles. When the design of the shoring system has been finalized, we can discuss this further with the design consultants and the contractor.

It is difficult to accurately predict the amount of deflection of a shoring system. It should be realized, however, that some deflection will occur. We estimate that this deflection could be on the order of 1 inch at the top of the shored embankment. If greater deflection occurs during construction, additional bracing may be necessary to minimize settlement of the utilities in the adjacent streets. If it is desired to reduce the deflection of the shoring, a greater active pressure could be used in the shoring design.

7.4.7 Shoring Construction Considerations

Due to the presence of granular soil that may be subject to caving and shallow groundwater, casing and/or drilling mud may be required to prevent caving during the installation of soldier beams and tieback anchors.

Due to the presence of ground water at the site, we recommend placing soldier pile concrete via tremie pipe.

If utilized, vibration for solider piles should not be utilized within 40 feet of existing structures and the peak particle velocity (PPV) should not exceed ½ inch per second. If the PPV velocity is exceeded, the vibration installation operation should be terminated and a mitigation plan should be submitted by the contractor for review and approval prior to resuming vibration.
Pre-drilling, if utilized in conjunction with vibratory methods, should not extend below the bottom of the planned excavation and the diameter of the pre-drilling auger should be less than the beam diagonal.

7.5 PERMANENT BELOW-GRADE BUILDING WALLS

For static conditions, the undrained, below-grade building walls should be designed to resist a trapezoidal-shaped, earth pressure distribution and permanent hydro-static pressure as shown in Figure 8.

For seismic loading conditions, undrained below-grade building walls should be designed to resist a triangular-shaped active lateral earth pressure distribution and permanent hydrostatic pressure, in conjunction with a triangular-shaped seismic lateral earth pressure distribution as shown on Figure 9.

Please note that once foundation information for the adjacent tower located at 180 East Ocean Boulevard is available, revised recommendations will be developed that consider the influence of the adjacent foundations, as appropriate.

The upper 10 feet of the below-grade building walls should also be designed to resist the surcharge pressure resulting from adjacent traffic along Pine Avenue and East Seaside Way as shown on Figure 8 and 9.

Where the surface at the top of the shoring is sloped, the recommended lateral earth pressures should be increased as recommended in Table 1 presented in Section 7.4.

Please note that because the lower portion of the wall will be designed to hydrostatic pressure, conventional wall back-drainage provisions are not required as water that is introduced into the upper soils though irrigation or other means is not anticipated to appreciably raise the groundwater level at the site.

The building walls below grade should be waterproofed to prevent groundwater intrusion into the subterranean level.

7.6 FREE-STANDING RETAINING WALLS

7.6.1 Foundations

If required, free-standing retaining wall foundations should be established on at least 3 feet of properly compacted fill soil and/or the medium dense to dense/ very stiff to hard native soils a minimum of 2 feet below the lowest adjacent grade or floor slab. Wall foundations established in this fashion may be designed using an allowable bearing pressure of 2,500 psf.

To resist lateral loading, a coefficient of friction equal to 0.3 may be used in conjunction with a passive pressure of 300 psf per foot of embedment. The frictional resistance and passive earth pressure may be used in combination and without reduction.

7.6.2 Design Lateral Earth Pressures

Free-standing retaining walls should be designed to resist an equivalent fluid pressure equal to 30 pcf. If the surface at the top of the wall is sloped, the recommended lateral earth pressures should be increased as indicated in Table 1 presented in Section 7.4.

7.6.3 Wall Back-Drainage

Permanent retaining walls should be constructed with adequate back-drainage to prevent the buildup of hydrostatic pressure behind the walls. The installation of drainage boards on the back of the walls, in conjunction with conventional weep holes at the base of the walls, would provide adequate drainage. As an alternative, a collector pipe could be installed at the base of the wall and discharged to a suitable outlet.

7.7 SEISMIC DESIGN

The seismic design for the proposed tower development will be based on the document titled *An Alternative Procedure for Seismic Analysis and Design of Tall Buildings Located in the Los Angeles Region,* 2014 edition, by The Los Angeles Tall Buildings Structural Design Council (LATBSDC). We will perform a site specific ground motion study and develop earthquake time history records as part of that evaluation.

CBC-prescribed seismic design parameters for the podium structure are presented in Table 2.

Table 2. CBC Seismic Design Parameters

Parameter	Short Period (T_s = 0.2 second)	1 Second Period (T_1 = 1.0 second
MCE Spectral Acceleration, S	1.608	0.605
Site Class	D	
Site Coefficient	$F_a = 1.0$	$F_v = 1.5$
Adjusted Spectral Acceleration	$SM_S = 1.608$	$SM_1 = 0.907$
Design Spectral Response Acceleration Parameters	$S_{DS} = 1.072$	$S_{D1} = 0.605$

7.8 SITE PREPARATION

Site preparation for this project will primarily include exposing the bottom of foundations and floor slabs and preparing soil at the bottom of trenches. For foundation support, the exposed bottoms do not require special preparation, except when disturbed by construction activities or when undocumented fill is encountered beneath foundation bottoms. In that case, the undocumented fill should be removed and replaced with lean-mix concrete as recommended in Section 7.1.

Where encountered beneath the podium area floor slab, all undocumented fill, loose, disturbed or otherwise unsuitable soils should be removed and replaced as properly compacted fill, or alternatively, removed for a depth of 8 inches and replaced with ¾-inch minus crushed rock placed on a non-woven geotextile fabric.

It is likely that the placement of a waste-slab will be beneficial for securing and protecting the approved bottom of excavation for either or both foundations and floor slab.

For areas to receive fill and/or beneath other flatwork (walkways and driveways), the upper 6 inches should be scarified and re-compacted to the degree of relative compaction recommended in Section 7.9 of this report.

7.9 GRADING CONSIDERATIONS

7.9.1 General

If not carefully executed, site preparation can result in the presence of disturbed and/or excessively soft soil conditions. This may require additional effort to mitigate or in more extreme cases, if not detected, could result in significant costs to repair damage to flatwork or structures.

Earthwork should be planned and executed to minimize subgrade disturbance. Soil that has been disturbed during site preparation activities and/or soft or loose zones identified during probing should be removed beneath floor slabs.

7.9.2 Compaction

All granular fill material should be compacted to at least 95 percent of the maximum dry density at or near the optimum moisture content, as determined by ASTM D 1557. Cohesive fills should be compacted to at least 90 percent of the maximum dry density, as determined by ASTM D 1557, and moisture conditioned 2 to 4 percent over the optimum moisture content.

Fill material should be placed in loose lifts not exceeding 8 inches in thickness, properly moisture conditioned, and mechanically compacted to the minimum required density. For granular fills, compaction may be achieved using heavy equipment and vibration.

7.9.3 Site Drainage

Adequate site drainage should be maintained at all times. Site drainage should be collected and routed to suitable discharge locations.

7.10 MATERIALS FOR FILL

The fill material should be free of organic matter and other deleterious material and, in general, should consist of particles no larger than 3 inches in largest dimension.

The following sections provide recommendations for the re-use of on-site material in compacted fills and for the use of imported material in required fills.

On-site granular soils are suitable for use in the required fills provided particles larger than 3 inches in largest dimension are removed.

8.0 CONSTRUCTION OBSERVATION

Geotechnical testing and observation during construction is considered to be a continuing part of the geotechnical consultation. To confirm that the recommendations presented herein remain applicable, our representative should be present at the site to provide appropriate observation and testing during the following primary activities:

- Solider pile and tieback installation
- Tieback anchor testing
- Lagging installation
- Installation of wall back-drainage provisions

- Foundation bottom observation and approval
- Placement and compaction of fill material
- Removal of shoring within the public right-of-way upon completion of the project
- De-tensioning of tieback anchors

9.0 LIMITATIONS

We have prepared this report for use by Sodo Builders, LLC, and members of the design and construction team for the proposed development. The data and report can be used for estimating purposes, but our report, conclusions, and interpretations should not be construed as a warranty of the subsurface conditions and are not applicable to other sites.

Soil borings indicate soil conditions only at specific locations and only to the depths penetrated. They do not necessarily reflect soil strata or water level variations that may exist between exploration locations. If subsurface conditions differing from those described are noted during the course of excavation and construction, re-evaluation will be necessary.

The recommendations presented in this report are based on the current site development plan and structural information provided to us by the project team. If design changes are made, we should be retained to review our conclusions and recommendations and to provide a written evaluation or modification.

The scope of our services does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences or procedures, except as specifically described in our report for consideration in design.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with that degree of skill and care ordinarily exercised by reputable geotechnical consultants practicing in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

♦ ♦ ♦

We appreciate the opportunity to be of continued service to you. Please call if you have questions concerning this report or if we can provide additional services.

Sincerely,

GeoDesign, Inc.

Eric Torres, P.E.
Staff Engineer

REGISTERED PROFESSIONAL ENGINEER
JOHN W. HALSETH
82559
CIVIL
STATE OF CALIFORNIA

Signed 01/24/2017

John W. Halseth, P.E.
Project Engineer

Christopher J. Zadoorian, G.E.
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER JOHN ZADOORIAN
No. 2493
GEOTECHNICAL
STATE OF CALIFORNIA

Signed 01/24/2017

FIGURES

VICINITY MAP BASED ON AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH PRO®

SITE LOCATION
LATITUDE: 33.766265°
LONGITUDE: -118.191967°

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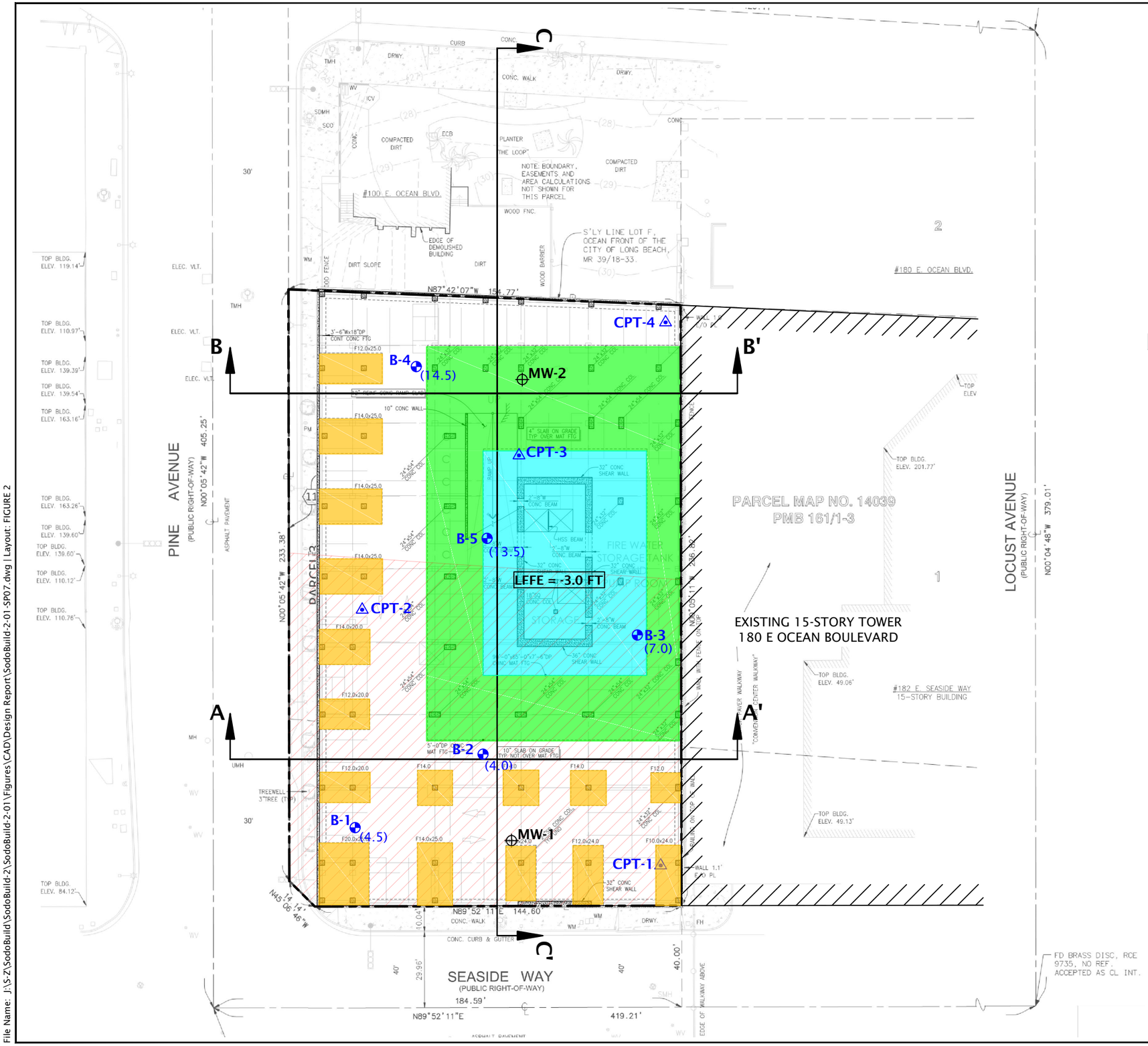
SODOBUILD-2-01	VICINITY MAP	
JANUARY 2017	PROPOSED HOTEL DEVELOPMENT LONG BEACH, CA	FIGURE 1

Printed By: mmiller | Print Date: 1/24/2017 5:42:20 PM
File Name: J:\S-Z\SodoBuild\SodoBuild-2\SodoBuild-2-01\Figures\CAD\Design Report\SodoBuild-2-01-VM01.dwg | Layout: FIGURE 1



LEGEND:

B-1 (4.5)	BORING FILL THICKNESS (FEET)
CPT-1	CONE PENETROMETER TEST
MW-1	GROUNDWATER MONITORING WELL (MACTEC 2004)
	LIMITS OF LIQUEFACTION HAZARD ZONE BASED ON CGS LONG BEACH QUADRANGLE, MARCH 1999
	7.5-FOOT-THICK MAT FOUNDATION
	5-FOOT-THICK MAT FOUNDATION
	SPREAD FOOTINGS
	EXISTING BUILDING
	SITE BOUNDARY
LFFE = -3.0 FT	LOWEST FINISHED FLOOR ELEVATION
A A'	CROSS SECTION

N

0 40 80

(SCALE IN FEET)

NOTES:

1. SITE PLAN BASED ON ABOVE GRADE PARKING IMAGE PREPARED BY GBD ARCHITECTS INCORPORATED.
2. SITE PLAN BASED ON ALTA/NSPS LAND TITLE SURVEY SHEET 1 IMAGE DATED SEPTEMBER 21, 2016 AND PREPARED BY KPFF CONSULTING ENGINEERS.

SITE PLAN

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE 2

SODOBUILD-2-01

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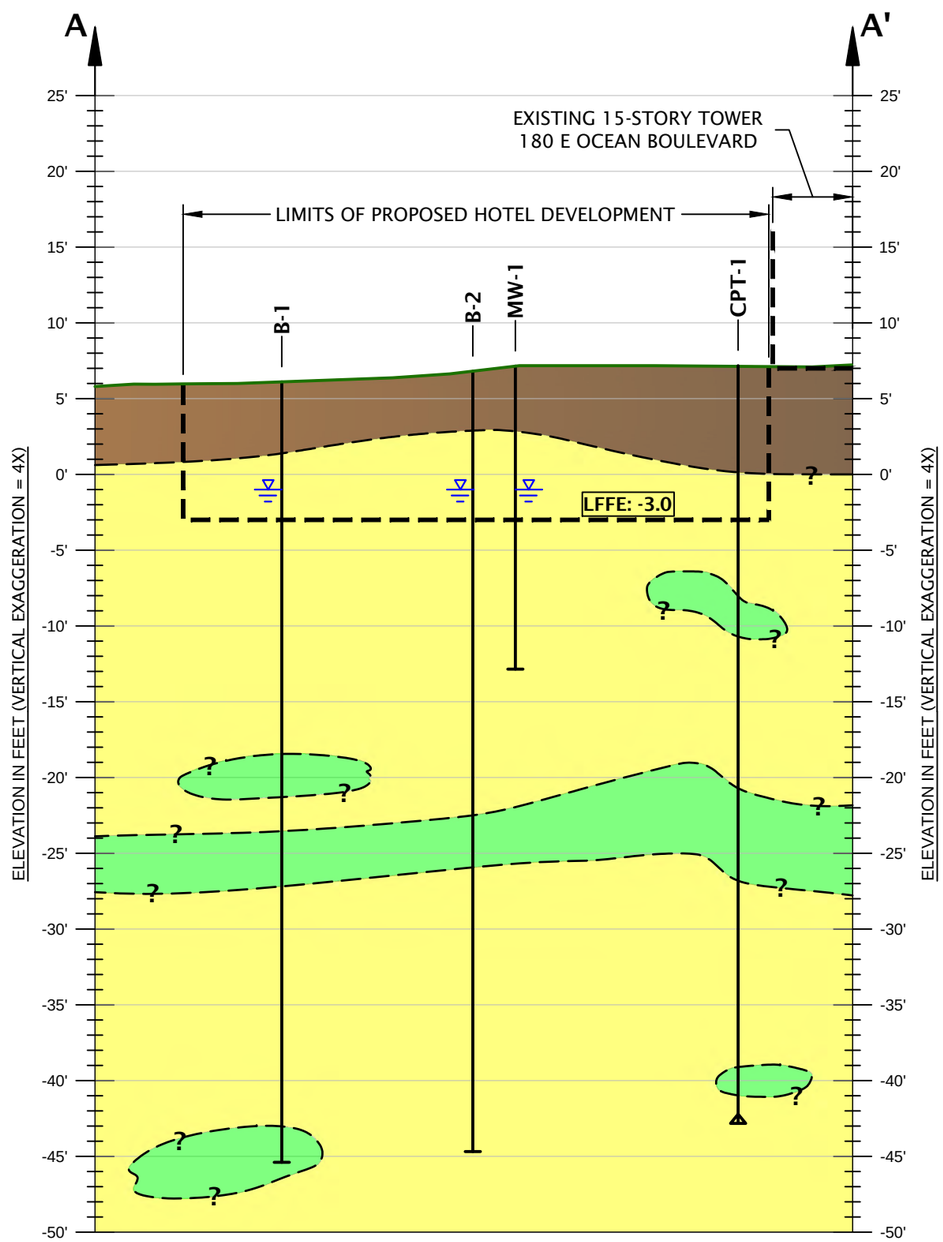

LEGEND:

- EXISTING TOPOGRAPHY
- BORING
- CONE PENETROMETER
- INTERPRETED CONTACT
- GROUNDWATER LEVEL
- EXISTING FILL
- MEDIUM DENSE TO VERY DENSE SAND, SAND WITH SILT, AND SILTY SAND
- VERY STIFF TO HARD SILT AND CLAY
- LFFE: -3.0 — PROPOSED LOWEST FINISHED FLOOR ELEVATION (FEET)

0 10 20
(VERTICAL SCALE IN FEET)

0 40 80
(HORIZONTAL SCALE IN FEET)

CROSS SECTION A-A'

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE 3

SODOBUILD-2-01

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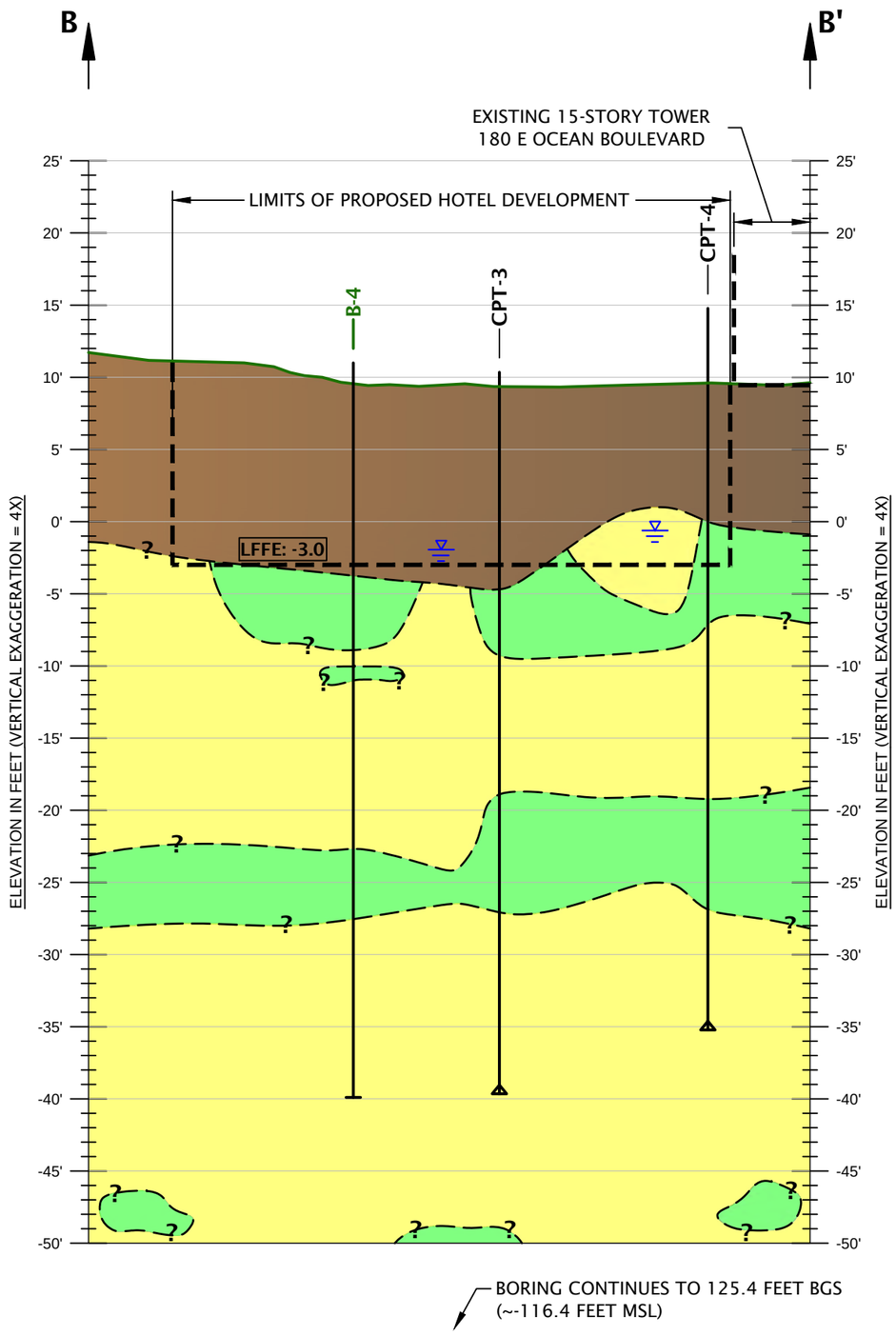
File Name: J:\S-Z\SodoBuild\SodoBuild-2\SodoBuild-2-01\Figures\CAD\Design Report\SodoBuild-2-01-CS06.dwg | Layout: FIGURE 3



LEGEND:

- EXISTING TOPOGRAPHY
- BORING
- CONE PENETROMETER
- INTERPRETED CONTACT
- GROUNDWATER LEVEL
- EXISTING FILL
- MEDIUM DENSE TO VERY DENSE SAND, SAND WITH SILT, AND SILTY SAND
- VERY STIFF TO HARD SILT AND CLAY
- LFFE: -3.0 — PROPOSED LOWEST FINISHED FLOOR ELEVATION (FEET)

0 10 20
(VERTICAL SCALE IN FEET)

0 40 80
(HORIZONTAL SCALE IN FEET)

CROSS SECTION C-C'

FIGURE 4

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

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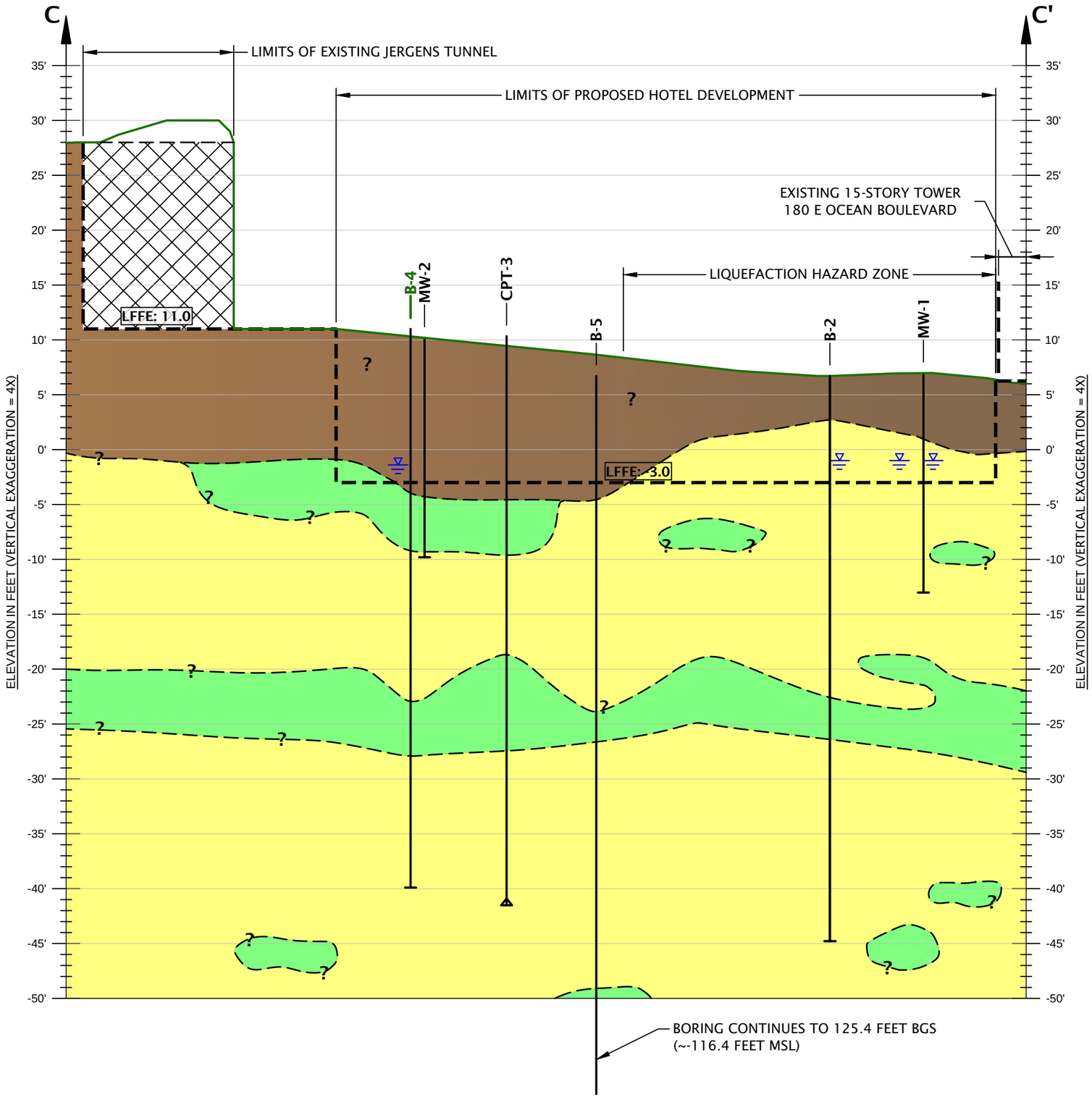
File Name: J:\S-Z\SodoBuild\SodoBuild-2\SodoBuild-2-01\Figures\CAD\Design Report\SodoBuild-2-01-CS06.dwg | Layout: FIGURE 4



LEGEND:

- EXISTING TOPOGRAPHY
- BORING
- CONE PENETROMETER
- INTERPRETED CONTACT
- GROUNDWATER LEVEL
- EXISTING FILL
- MEDIUM DENSE TO VERY DENSE SAND, SAND WITH SILT, AND SILTY SAND
- VERY STIFF TO HARD SILT AND CLAY
- LFFE: -3.0 — PROPOSED LOWEST FINISHED FLOOR ELEVATION (FEET)

0 10 20
(VERTICAL SCALE IN FEET)

0 40 80
(HORIZONTAL SCALE IN FEET)

CROSS SECTION B-B'

FIGURE 5

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

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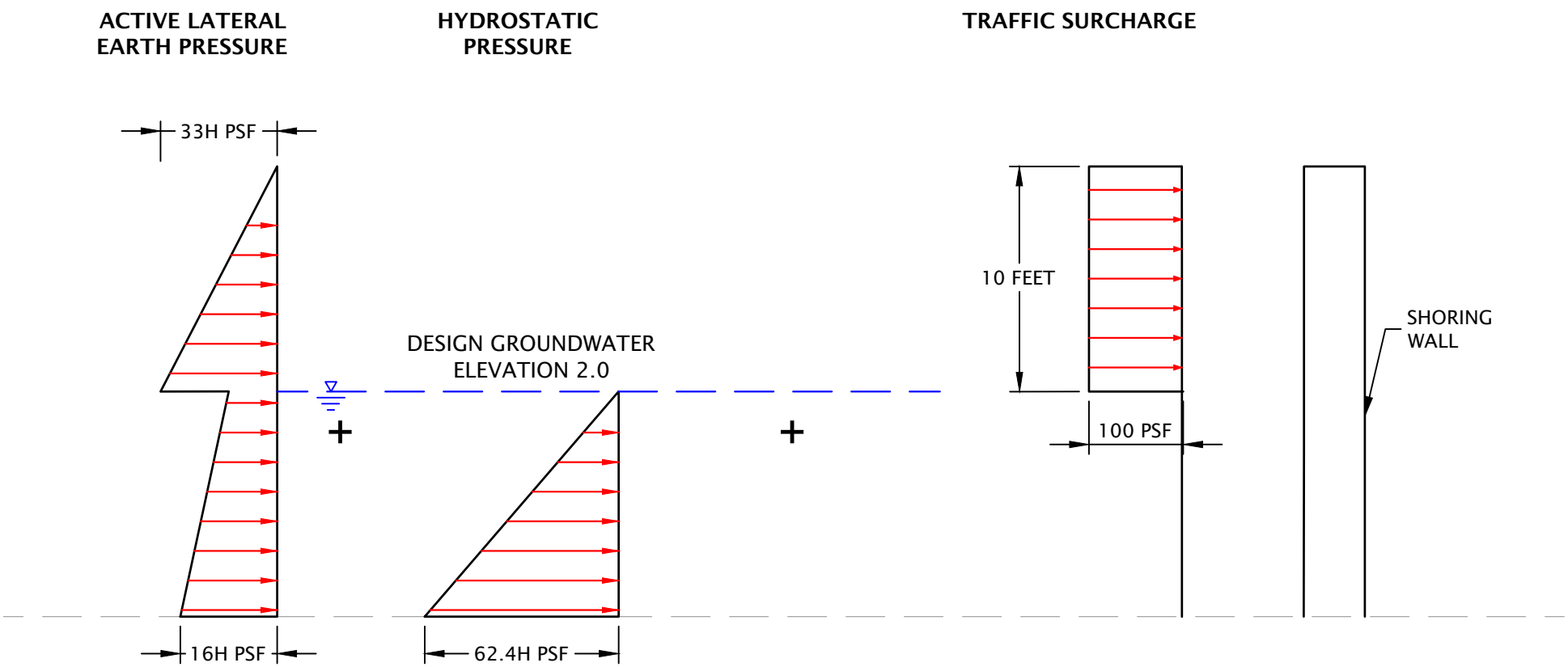

INFLUENCE FROM ADJACENT TOWER FOUNDATION NOT INCLUDED

NOT TO SCALE

NOTES:

1. FIGURE SHOULD BE USED IN CONJUNCTION WITH REPORT TEXT.
2. THE LATERAL EARTH PRESSURES ARE UNFACTORED.

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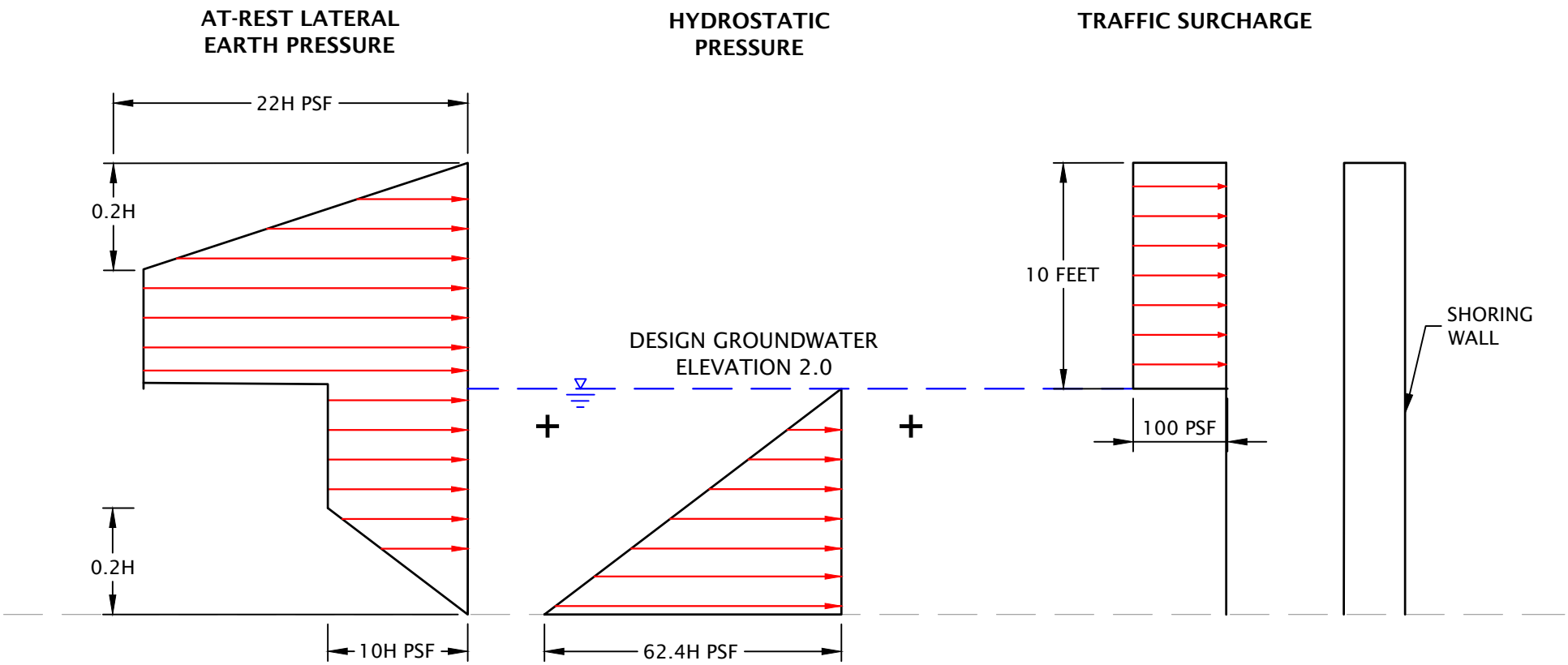
SODOBUILD-2-01	**UNDRAINED CANTILEVER SHORING LATERAL EARTH PRESSURE**	
JANUARY 2017	PROPOSED HOTEL DEVELOPMENT LONG BEACH, CA	**FIGURE 6**



INFLUENCE FROM ADJACENT TOWER FOUNDATION NOT INCLUDED

NOT TO SCALE

NOTES:

1. FIGURE SHOULD BE USED IN CONJUNCTION WITH REPORT TEXT.
2. THE LATERAL EARTH PRESSURES ARE UNFACTORED.

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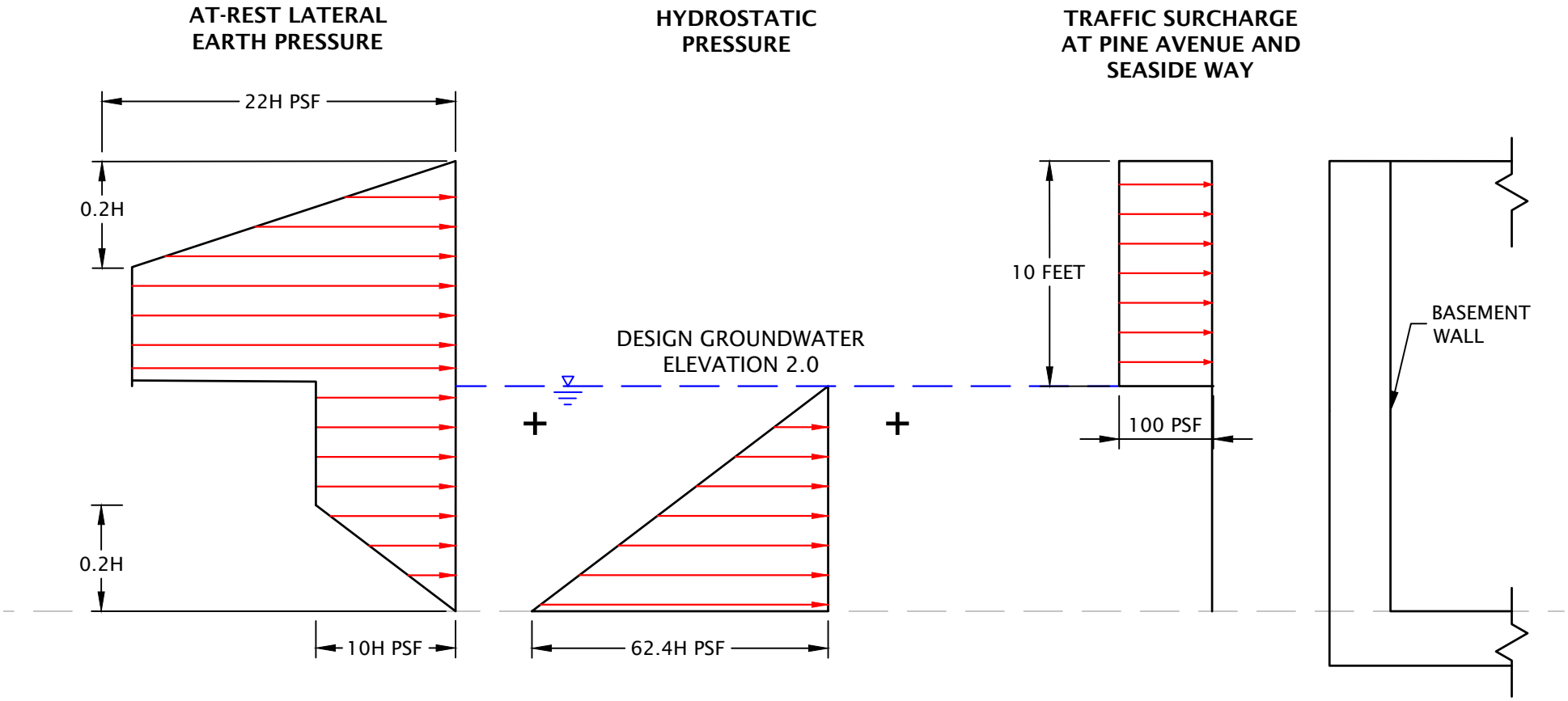
SODOBUILD-2-01	**UNDRAINED INTERNALLY BRACED SHORING LATERAL EARTH PRESSURE**	
JANUARY 2017	PROPOSED HOTEL DEVELOPMENT LONG BEACH, CA	**FIGURE 7**



INFLUENCE FROM ADJACENT TOWER FOUNDATION NOT INCLUDED

NOT TO SCALE

NOTES:

1. FIGURE SHOULD BE USED IN CONJUNCTION WITH REPORT TEXT.
2. THE LATERAL EARTH PRESSURES ARE UNFACTORED.

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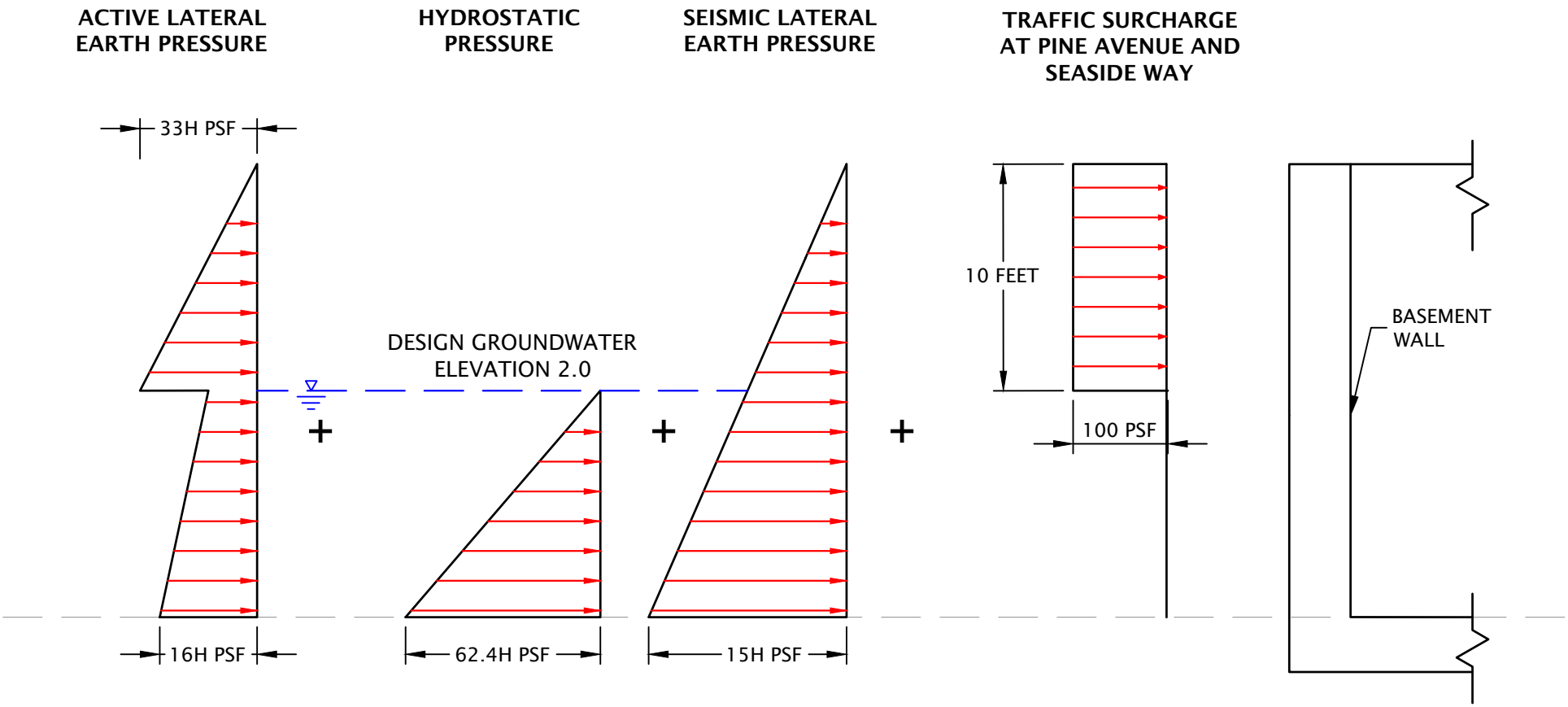
SODOBUILD-2-01	**UNDRAINED AT-REST LATERAL EARTH PRESSURE AND SURCHARGE PERMANENT BELOW-GRADE WALLS**	
JANUARY 2017	PROPOSED HOTEL DEVELOPMENT LONG BEACH, CA	**FIGURE 8**



INFLUENCE FROM ADJACENT TOWER FOUNDATION NOT INCLUDED

NOT TO SCALE

NOTES:

1. FIGURE SHOULD BE USED IN CONJUNCTION WITH REPORT TEXT.
2. THE LATERAL EARTH PRESSURES ARE UNFACTORED.

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SODOBUILD-2-01	**UNDRAINED SEISMIC LATERAL EARTH PRESSURE AND SURCHARGE PERMANENT BELOW-GRADE WALLS**	
JANUARY 2017	PROPOSED HOTEL DEVELOPMENT LONG BEACH, CA	**FIGURE 9**

APPENDIX A

APPENDIX A

SUBSURFACE EXPLORATIONS

GENERAL

We explored the subsurface conditions at the site by drilling 5 borings (B-1 through B-5) to depths ranging from 50.9 to 125.4 feet BGS using mud rotary drilling equipment and advanced four cone penetration test (CPT) soundings at the site to depths ranging from 6.7 to 50.1 feet BGS. Refusal was encountered at a depth of 6.7 feet in CPT-2 after three attempts.

We maintained a log of the soil conditions encountered in each boring and collected relatively undisturbed samples at regular intervals in each boring. SPTs were performed at selected depths.

Upon completion borings were backfilled with a bentonite-cement grout mixture and we restored to surface to match the pre-existing condition.

Drill cuttings from each boring were placed in drums pending the results of chemical testing and subsequently disposed of off-site by a licensed materials hauler.

Logs of the borings are presented in this appendix. The logs of the CPT soundings are presented in Appendix B.

SOIL SAMPLING

Samples were obtained from the borings using modified California split-spoon samplers in general accordance with ASTM D 3550. The split-spoon samplers were driven into the soil with a 140-pound hammer free-falling 30 inches. The samplers were driven 18 inches or to refusal as indicated on the exploration logs. The number of blows required to drive the sampler the final 12 inches (or less if refusal is met) is recorded on the exploration logs presented in this appendix, unless otherwise noted.

In addition, SPTs were performed in the borings in general accordance with ASTM D 1586. The 2-inch-diameter, split-spoon sampler was driven into the soil with a 140-pound hammer free-falling 30 inches. The samplers were driven a total distance of 18 inches or to refusal. The number of blow counts required to drive the sampler the final 12 inches is recorded (or less if refusal is met) on the exploration logs, which are presented in this appendix.

SOIL CLASSIFICATION

The soil samples were classified in accordance with the exploration key and soil classification system sheets for each episode of drilling, which are included in this appendix prior to the exploration logs. The exploration logs indicate the depths at which the soils or their characteristics change, although the change actually could be gradual. If the change occurred between sample locations, the depth was interpreted. Classifications and sampling intervals are presented on the exploration logs included in this appendix.

GEOPHYSICAL TESTING

Suspension P-S velocity logging was performed in our current boring B-5 by GEOVision, Inc. The suspension P-S velocity logging was performed to estimate the stiffness of the subsurface soil profile and was performed for the upper 125 feet in B-5.

The suspension logging method uses a 7-meter probe that contains a source and two receivers. The probe is lowered down the drilled hole where the source generates a pressure wave in the drilling fluid within the hole. The pressure wave is converted to seismic P- and S-waves at the boring sidewalls; at each receiver, the P- and S-waves are converted back to pressure waves. The elapsed time between wave arrivals at the receivers is used to determine the average velocity of a 1-meter-high column of soil. The process is repeated for the full depth of the boring to obtain a continuous log of the boring.

The results of the P-S logging are presented in Appendix C.

LABORATORY TESTING

MOISTURE CONTENT

The natural moisture content of selected samples was obtained from the exploration in general accordance with ASTM D 2216. The natural moisture content is a ratio of the weight of the water to soil in a test sample and is expressed as a percentage. The test results are presented in this appendix.

DRY DENSITY

Selected soil samples were tested to determine the in situ dry density. The tests were performed in general accordance with ASTM D 2937. The dry density is defined as the ratio of the dry weight of the soil sample to the volume of that sample. The dry density typically is expressed in units of pcf. The test results are presented in this appendix.

CONSOLIDATION TESTING

One-dimensional consolidation tests were performed in general accordance with ASTM D 2435 on relatively undisturbed samples obtained from the geotechnical borings. The tests measure the volume change of a soil sample under predetermined loads. The test results are presented in this appendix.

STRENGTH TESTING

Direct shear tests were completed on select samples in general accordance with ASTM D 3080. The test results are presented in this appendix.

ATTERBERG LIMITS

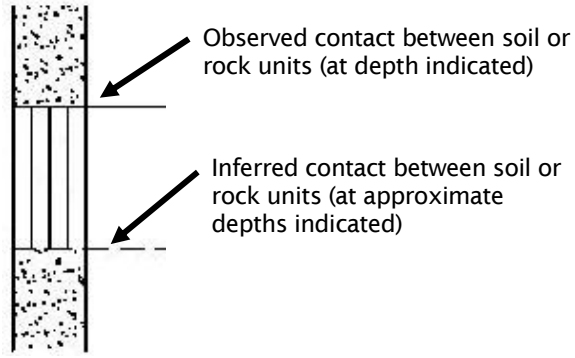
The plastic limit and liquid limit (Atterberg limits) of select samples were determined in accordance with ASTM D 2937. The results of the Atterberg limit tests are included in this appendix.

GRAIN-SIZE DISTRIBUTION

Grain-size distribution was performed in accordance with ASTM D422. The results of the testing are presented in the appendix.

SYMBOL	SAMPLING DESCRIPTION
	Location of sample obtained in general accordance with ASTM D 1586 Standard Penetration Test with recovery
	Location of sample obtained using thin-wall Shelby tube or Geoprobe® sampler in general accordance with ASTM D 1587 with recovery
	Location of sample obtained using Dames & Moore sampler and 300-pound hammer or pushed with recovery
	Location of sample obtained using Dames & Moore and 140-pound hammer or pushed with recovery
	Location of sample obtained using 3-inch-O.D. California split-spoon sampler and 140-pound hammer
	Location of grab sample
	Rock coring interval
	Water level during drilling
	Water level taken on date shown

Graphic Log of Soil and Rock Types



GEOTECHNICAL TESTING EXPLANATIONS

ATT	Atterberg Limits	P	Pushed Sample
CBR	California Bearing Ratio	PP	Pocket Penetrometer
CON	Consolidation	P200	Percent Passing U.S. Standard No. 200 Sieve
DD	Dry Density		
DS	Direct Shear	RES	Resilient Modulus
HYD	Hydrometer Gradation	SIEV	Sieve Gradation
MC	Moisture Content	TOR	Torvane
MD	Moisture-Density Relationship	UC	Unconfined Compressive Strength
NP	Nonplastic	VS	Vane Shear
OC	Organic Content	kPa	Kilopascal

ENVIRONMENTAL TESTING EXPLANATIONS

CA	Sample Submitted for Chemical Analysis	ND	Not Detected
P	Pushed Sample	NS	No Visible Sheen
PID	Photoionization Detector Headspace Analysis	SS	Slight Sheen
		MS	Moderate Sheen
ppm	Parts per Million	HS	Heavy Sheen

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EXPLORATION KEY

TABLE A-1

RELATIVE DENSITY - COARSE-GRAINED SOIL

Relative Density	Standard Penetration Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)
Very Loose	0 – 4	0 - 11	0 - 4
Loose	4 – 10	11 - 26	4 - 10
Medium Dense	10 – 30	26 - 74	10 - 30
Dense	30 – 50	74 - 120	30 - 47
Very Dense	More than 50	More than 120	More than 47

CONSISTENCY - FINE-GRAINED SOIL

Consistency	Standard Penetration Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)	Unconfined Compressive Strength (tsf)
Very Soft	Less than 2	Less than 3	Less than 2	Less than 0.25
Soft	2 - 4	3 – 6	2 - 5	0.25 - 0.50
Medium Stiff	4 - 8	6 – 12	5 - 9	0.50 - 1.0
Stiff	8 - 15	12 – 25	9 - 19	1.0 - 2.0
Very Stiff	15 - 30	25 – 65	19 – 31	2.0 - 4.0
Hard	More than 30	More than 65	More than 31	More than 4.0

PRIMARY SOIL DIVISIONS			GROUP SYMBOL	GROUP NAME
COARSE-GRAINED SOIL (more than 50% retained on No. 200 sieve)	GRAVEL (more than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (< 5% fines)	GW or GP	GRAVEL
		GRAVEL WITH FINES (≥ 5% and ≤ 12% fines)	GW-GM or GP-GM	GRAVEL with silt
			GW-GC or GP-GC	GRAVEL with clay
		GRAVEL WITH FINES (> 12% fines)	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND (50% or more of coarse fraction passing No. 4 sieve)	CLEAN SAND (<5% fines)	SW or SP	SAND
		SAND WITH FINES (≥ 5% and ≤ 12% fines)	SW-SM or SP-SM	SAND with silt
			SW-SC or SP-SC	SAND with clay
		SAND WITH FINES (> 12% fines)	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
FINE-GRAINED SOIL (50% or more passing No. 200 sieve)	SILT AND CLAY	Liquid limit less than 50	ML	SILT
			CL	CLAY
			CL-ML	silty CLAY
			OL	ORGANIC SILT or ORGANIC CLAY
		Liquid limit 50 or greater	MH	SILT
			CH	CLAY
			OH	ORGANIC SILT or ORGANIC CLAY
HIGHLY ORGANIC SOIL			PT	PEAT

MOISTURE CLASSIFICATION

Term	Field Test
dry	very low moisture, dry to touch
moist	damp, without visible moisture
wet	visible free water, usually saturated

ADDITIONAL CONSTITUENTS

Secondary granular components or other materials such as organics, man-made debris, etc.

Percent	Silt and Clay In: Fine-Grained Soil	Silt and Clay In: Coarse-Grained Soil	Percent	Sand and Gravel In: Fine-Grained Soil	Sand and Gravel In: Coarse-Grained Soil
< 5	trace	trace	< 5	trace	trace
5 – 12	minor	with	5 – 15	minor	minor
> 12	some	silty/clayey	15 – 30	with	with
			> 30	sandy/gravelly	Indicate %

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SOIL CLASSIFICATION SYSTEM

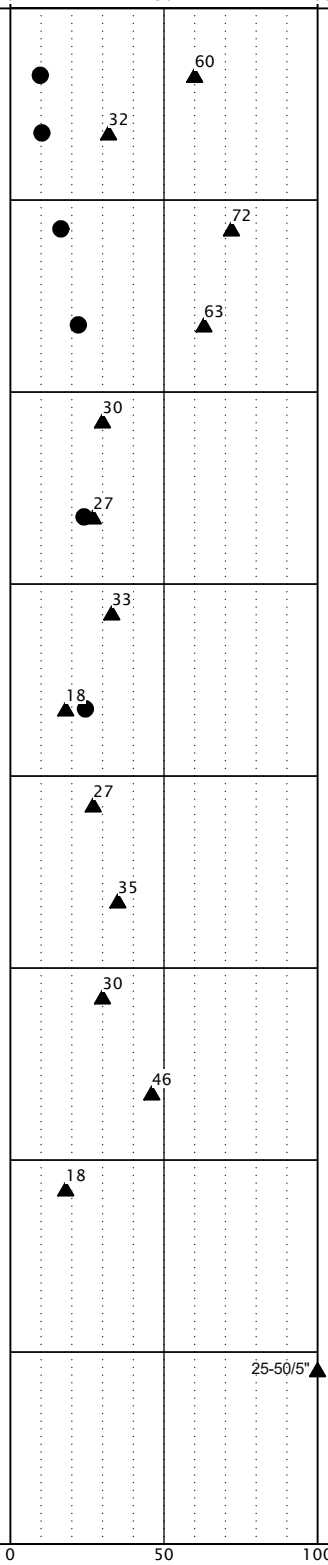
TABLE A-2

DEPTH FEET	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	INSTALLATION AND COMMENTS
0	ASPHALT CONCRETE (3.0 inches).	6.0 / 5.7 / 0.3		
	Hard, gray-brown, sandy SILT (ML), minor asphalt fragments, trace brick fragments; moist, sand is fine - **FILL**.		DD	DD = 126 pcf
			DD DS	DD = 122 pcf
	Medium dense, gray-brown, silty SAND (SM); moist, fine - **FILL**.	2.5 / 3.5 / 1.5 / 4.5		
5	Dense, gray SAND (SP), trace silt; moist, fine.		DD	DD = 97 pcf
	wet at 7.0 feet		DD	DD = 100 pcf
10	Dense, gray SAND with silt (SP-SM); wet, fine.	-3.5 / 9.5		
	Medium dense to dense, gray, silty SAND (SM); wet, fine.	-6.0 / 12.0	P200	P200 = 12%
15	gray-brown, trace shell fragments at 15.0 feet		P200	P200 = 17%
20	gray at 22.5 feet			
25	Very stiff, gray-brown, sandy SILT (ML); moist, sand is fine.	-18.5 / 24.5		
	Dense, gray SAND (SP), trace silt; wet, fine.	-21.0 / 27.0		
30	Very stiff, gray SILT (ML), some clay; moist.	-23.5 / 29.5	ATT PP	PP = 2.5 tsf LL = 54% PL = 31%
	gray-brown at 31.0 feet			
	Dense to very dense, gray, silty SAND (SM), trace clay; wet, fine.	-27.0 / 33.0		
35				
40				

GRAPHIC LOG

SAMPLE

▲ BLOW COUNT
● MOISTURE CONTENT %
RQD% CORE REC%



7.0 feet during drilling

DRILLED BY: SoCal Drilling

LOGGED BY: ENT

COMPLETED: 09/13/16

BORING METHOD: mud rotary (see document text)

BORING BIT DIAMETER: 4 7/8 inches

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BORING B-1

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-1

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	▲ BLOW COUNT ● MOISTURE CONTENT % ▥ RQD% ▨ CORE REC% (0 – 50 – 100)	INSTALLATION AND COMMENTS
40		(continued from previous page)				▲ 36	
45		gray-brown, without clay at 45.0 feet				▲ 58	
			-43.0 / 49.0				
50		Hard, gray-brown SILT (ML), some clay; moist.		ATT PP		● ▲ 43	PP = 3.0 tsf LL = 39% PL = 33%
			-45.5 / 51.5				
55		**Exploration completed at a depth of 51.5 feet.** **Groundwater measured at a depth of 7.0 feet BGS during drilling.** **Backfilled with bentonite chips.**					
60							
65							
70							
75							
80							

DRILLED BY: SoCal Drilling LOGGED BY: ENT COMPLETED: 09/13/16

BORING METHOD: mud rotary (see document text) BORING BIT DIAMETER: 4 7/8 inches

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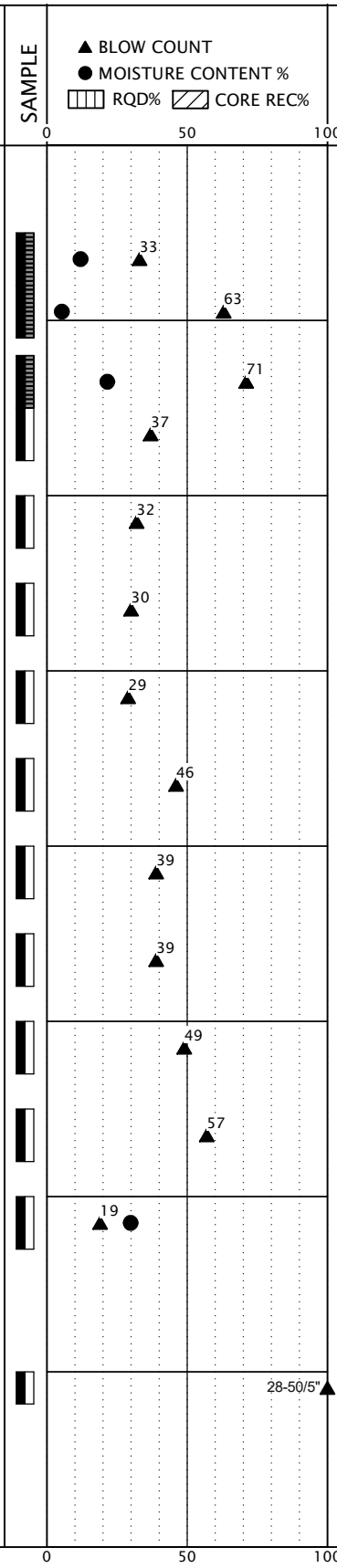
BORING B-1
(continued)

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-1

DEPTH FEET	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	INSTALLATION AND COMMENTS
0	ASPHALT CONCRETE (3.0 inches).	7.0 / 6.7			
	Medium dense, brown, silty SAND (SM); moist, fine - **FILL**.	0.3			
	Dense, gray SAND (SP), trace silt; moist, fine.	3.0 / 4.0			
5	wet at 8.0 feet				
10	Dense, gray SAND with silt (SP-SM); wet, fine.	-2.5 / 9.5			
	medium dense at 12.5 feet				
15	Medium dense to dense, gray-brown, silty SAND (SM); wet, fine.	-7.5 / 14.5			
20	gray, minor shell fragments at 20.0 feet				
	without shell fragments at 22.5 feet				
25	Dense, gray-brown SAND (SP), trace silt; wet, fine to medium.	-17.5 / 24.5			
	Very dense, gray SAND with silt (SP-SM); wet, fine.	-20.0 / 27.0			
30	Very stiff, gray-brown SILT (ML), some clay; moist.	-22.5 / 29.5			
	Very dense, gray-brown, silty SAND (SM); wet, fine to medium.	-26.0 / 33.0			
35					
40					



DRILLED BY: SoCal Drilling

LOGGED BY: ENT

COMPLETED: 09/13/16

BORING METHOD: mud rotary (see document text)

BORING BIT DIAMETER: 4 7/8 inches

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BORING B-2

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-2

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	▲ BLOW COUNT ● MOISTURE CONTENT % ▥ RQD% ▨ CORE REC% (0 – 50 – 100)	INSTALLATION AND COMMENTS
40		(continued from previous page)				54	
45		fine to coarse at 45.0 feet				68	
50						77	
		Exploration completed at a depth of 51.5 feet.	-44.5 / 51.5				
		Groundwater measured at a depth of 8.0 feet BGS during drilling.					
55		**Backfilled with bentonite chips.**					
60							
65							
70							
75							
80							

DRILLED BY: SoCal Drilling LOGGED BY: ENT COMPLETED: 09/13/16

BORING METHOD: mud rotary (see document text) BORING BIT DIAMETER: 4 7/8 inches

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BORING B-2
(continued)

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

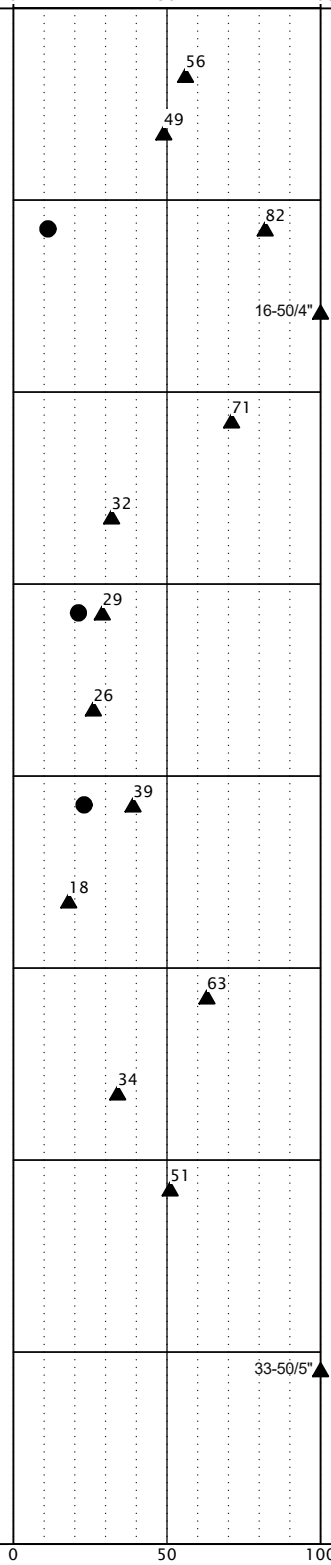
FIGURE A-2

DEPTH FEET	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	INSTALLATION AND COMMENTS
0	ASPHALT CONCRETE (1.0 inch).	8.0 / 7.9 / 0.1		
	Dense, brown, silty SAND (SM), trace gravel; moist, fine, gravel is fine to coarse - **FILL**.			
5	very dense, trace brick fragments at 5.0 feet		DD DS	DD = 121 pcf
	Very dense, gray SAND with silt (SP-SM); wet, fine.	1.0 / 7.0		
	Dense, gray, silty SAND (SM); wet, fine.	-1.0 / 9.0		
10	trace shell fragments at 12.5 feet			
15	Very stiff, gray, sandy SILT (ML); wet, sand is fine.	-6.5 / 14.5	DD DS PP	DD = 106 pcf PP = 2.0 tsf
	Medium dense, gray, silty SAND (SM); wet, fine.	-9.0 / 17.0		
20	Medium dense, gray SAND with silt (SP-SM); wet, fine to medium.	-13.0 / 21.0	DD DS	DD = 99 pcf
	fine to coarse at 22.5 feet			
25	Dense, gray-brown, silty SAND (SM); wet, fine.	-16.5 / 24.5		
	Hard, gray-brown SILT (ML); moist.	-19.0 / 27.0	ATT PP	PP = 4.0 tsf LL = 48% PL = 39%
30			PP	PP = 4.5 tsf
	Very dense, gray-brown, silty SAND (SM); wet, fine to medium.	-25.0 / 33.0		
35				
40				

GRAPHIC LOG

SAMPLE

▲ BLOW COUNT
● MOISTURE CONTENT %
RQD% CORE REC%



9.5 feet, during drilling

DRILLED BY: SoCal Drilling

LOGGED BY: ENT

COMPLETED: 11/09/16

BORING METHOD: mud rotary (see document text)

BORING BIT DIAMETER: 4 7/8 inches

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BORING B-3

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-3

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	▲ BLOW COUNT ● MOISTURE CONTENT % ▥ RQD% ▨ CORE REC% (0 – 50 – 100)	INSTALLATION AND COMMENTS
40		fine to coarse at 40.0 feet				27-50/3" ▲	
		Very dense, gray SAND with silt (SP-SM); wet, fine to medium.	-35.0 / 43.0				
45						35-50/4" ▲	
50						41-50/5" ▲	
		Exploration completed at a depth of 50.9 feet.	-42.9 / 50.9				
		Groundwater measured at a depth of 9.5 feet BGS during drilling.					
55		**Backfilled with bentonite chips.**					
60							
65							
70							
75							
80							

DRILLED BY: SoCal Drilling LOGGED BY: ENT COMPLETED: 11/09/16

BORING METHOD: mud rotary (see document text) BORING BIT DIAMETER: 4 7/8 inches

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BORING B-3
(continued)

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

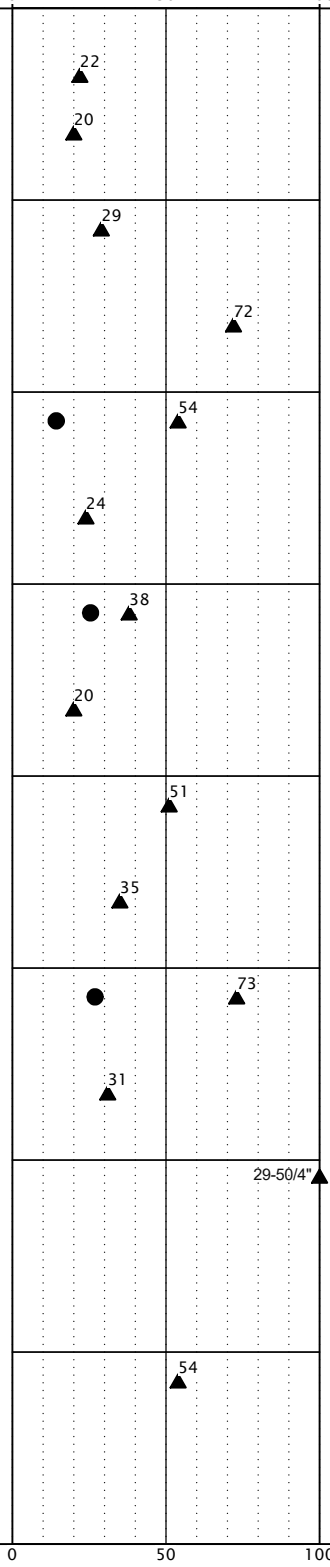
FIGURE A-3

DEPTH FEET	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	INSTALLATION AND COMMENTS
0	ASPHALT CONCRETE (2.0 inches).	11.0 / 10.8		
	Medium dense, brown, silty SAND (SM); moist, fine - **FILL**.	0.2		
	trace brick fragments at 2.5 feet			
5	without brick fragments at 5.0 feet			
	dense, minor brick fragments at 7.5 feet			
10	trace brick fragments at 10.0 feet		DD DS	DD = 117 pcf
	medium dense; wet at 12.5 feet			
15	Very stiff, gray-brown to brown, sandy SILT (ML); moist, sand is fine.	-3.5 / 14.5	DD CON DS PP	DD = 98 pcf PP = 3.5 tsf
			PP	PP = 2.0 tsf
20	Medium dense, gray, silty SAND (SM); wet, fine.	-8.5 / 19.5		
	Hard, brown CLAY (CL); moist.	-10.0 / 21.0		
	Dense, gray SAND with silt (SP-SM); wet, fine to medium.	-10.5 / 21.5		
25	Dense to very dense, gray, silty SAND (SM); wet, fine.	-13.5 / 24.5	DD DS	DD = 95 pcf
30				
35	Hard, gray-brown SILT (ML), trace clay; moist.	-22.5 / 33.5		
40	Very dense, gray SAND with silt (SP-SM); wet, fine to coarse.	-27.5 / 38.5		

GRAPHIC LOG

SAMPLE

▲ BLOW COUNT
● MOISTURE CONTENT %
RQD% CORE REC%



12.5 feet, during drilling

DRILLED BY: SoCal Drilling

LOGGED BY: ENT

COMPLETED: 11/11/16

BORING METHOD: mud rotary (see document text)

BORING BIT DIAMETER: 4 7/8 inches

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BORING B-4

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-4

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	▲ BLOW COUNT ● MOISTURE CONTENT % ▥ RQD% ▨ CORE REC% (0 – 50 – 100)	INSTALLATION AND COMMENTS
40		(continued from previous page)	-29.5 / 40.5				
		Very dense, gray, silty SAND (SM); wet, fine to coarse.				35-50/5"	
45		dense, siltier at 45.0 feet				69	
		fine at 46.0 feet					
50		very dense, gray-brown at 50.0 feet	-39.9 / 50.9			32-50/5"	
		Exploration completed at a depth of 50.9 feet.					
		Groundwater measured at a depth of 12.5 feet BGS during drilling.					
55		**Backfilled with bentonite chips.**					
60							
65							
70							
75							
80							

DRILLED BY: SoCal Drilling LOGGED BY: ENT COMPLETED: 11/11/16

BORING METHOD: mud rotary (see document text) BORING BIT DIAMETER: 4 7/8 inches

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BORING B-4
(continued)

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

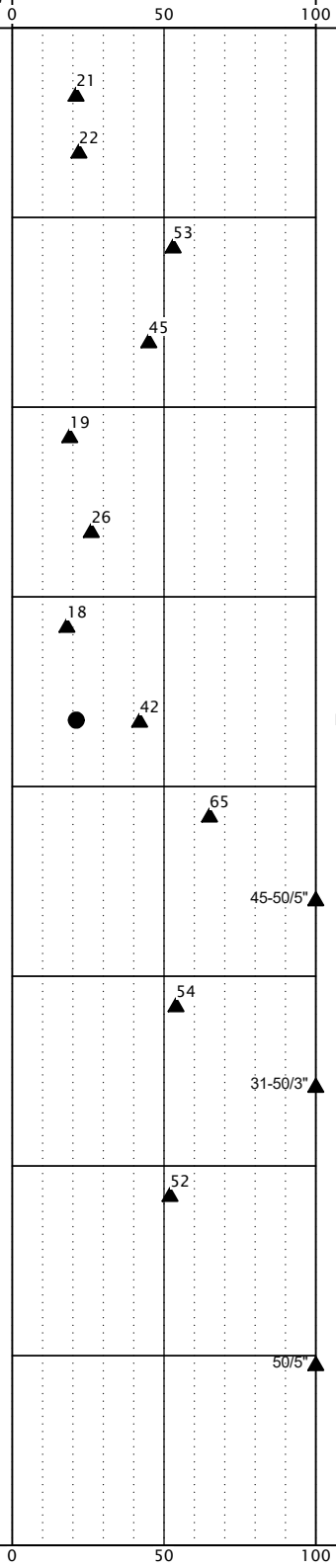
FIGURE A-4

DEPTH FEET	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	INSTALLATION AND COMMENTS
0	ASPHALT CONCRETE (2.3 inches).	9.0 / 0.2		
	Medium dense, brown, silty SAND (SM); moist, fine - **FILL**.	8.8		
	trace gravel and brick fragments; gravel is fine to coarse at 2.5 feet			
5	dense at 5.0 feet			
10	medium dense at 10.0 feet			
	Medium dense, gray SAND with silt (SP-SM), trace shell fragments; wet, fine.	-4.5 / 13.5		
15	Medium dense, brown, silty SAND (SM); wet, fine.	-5.5 / 14.5		
	gray-brown at 17.5 feet		DD CON DS	DD = 108 pcf
20	Very dense, gray SAND with silt (SP-SM); wet, fine.	-10.5 / 19.5		
25	trace shell fragments at 25.0 feet			
	without shell fragments at 27.5 feet			
30	Hard, gray SILT (ML); moist.	-24.0 / 33.0		
35	Very dense, gray-brown, silty SAND (SM); wet, fine to medium.	-26.2 / 35.2		
40				

GRAPHIC LOG

SAMPLE

▲ BLOW COUNT
● MOISTURE CONTENT %
RQD% CORE REC%



11.5 feet, during drilling

DRILLED BY: SoCal Drilling

LOGGED BY: ENT

COMPLETED: 11/10/16

BORING METHOD: mud rotary (see document text)

BORING BIT DIAMETER: 4 7/8 inches

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BORING B-5

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-5

DEPTH FEET	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	BLOW COUNT / MOISTURE CONTENT % / RQD% / CORE REC% (0–50–100)	INSTALLATION AND COMMENTS
40	brown; fine to coarse at 40.0 feet				36-50/5"	
	Very dense, gray SAND (SP), trace silt; wet, fine to coarse.	-34.0 / 43.0				
45					50/5"	
	Very dense, gray-brown, silty SAND (SM); wet, fine.	-39.0 / 48.0				
50					39-50/4"	
55					45-50/4"	
	Hard, gray-brown SILT (ML), some clay; moist.	-49.0 / 58.0				
60			PP		73	PP = 4.0 tsf
	Very dense, gray-brown, silty SAND with clay (SM); wet, fine.	-52.0 / 61.0				
	Hard, gray-brown SILT (ML); moist.	-54.0 / 63.0				
65			PP		24-50/5"	PP = >4.5 tsf
70	very stiff, dark gray, minor sand; sand is fine at 70.0 feet	-61.5 / 70.5	PP		23-50/4"	PP = 2.0 tsf
	Very dense, dark gray, silty SAND (SM); wet, fine.					
	Very stiff, dark gray, sandy SILT (ML), minor clay; moist, sand is fine.	-64.0 / 73.0				
75			PP		28	PP = 2.5 tsf
	Very dense, gray, silty SAND (SM); wet, fine.	-67.5 / 76.5				
80						

DRILLED BY: SoCal Drilling LOGGED BY: ENT COMPLETED: 11/10/16

BORING METHOD: mud rotary (see document text) BORING BIT DIAMETER: 4 7/8 inches

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BORING B-5
(continued)

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-5

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	▲ BLOW COUNT ● MOISTURE CONTENT % RQD% CORE REC% (0 – 50 – 100)	INSTALLATION AND COMMENTS
80		(continued from previous page)					
		Very dense, gray SAND with silt (SP-SM); wet, fine.	-74.0 / 83.0				
85						50/5"	
90						50/4"	
		Very dense, gray SAND (SP); wet, fine to medium.	-84.0 / 93.0				
95						50/5"	
		Very dense, dark gray, silty SAND (SM); wet, fine.	-89.0 / 98.0				
100						46-50/4"	
105						25-50/5"	
110						50/5.5"	
115						50/6"	
120							

DRILLED BY: SoCal Drilling LOGGED BY: ENT COMPLETED: 11/10/16

BORING METHOD: mud rotary (see document text) BORING BIT DIAMETER: 4 7/8 inches

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BORING B-5
(continued)

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-5

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	▲ BLOW COUNT ● MOISTURE CONTENT % RQD% CORE REC% (0 – 50 – 100)	INSTALLATION AND COMMENTS
120		(continued from previous page)				50/4"	
125			-116.4 / 125.4			50/5"	
		Exploration completed at a depth of 125.4 feet.					
		Groundwater measured at a depth of 11.5 feet BGS during drilling.					
130		**Backfilled with bentonite chips.**					
135							
140							
145							
150							
155							
160							

DRILLED BY: SoCal Drilling LOGGED BY: ENT COMPLETED: 11/10/16

BORING METHOD: mud rotary (see document text) BORING BIT DIAMETER: 4 7/8 inches

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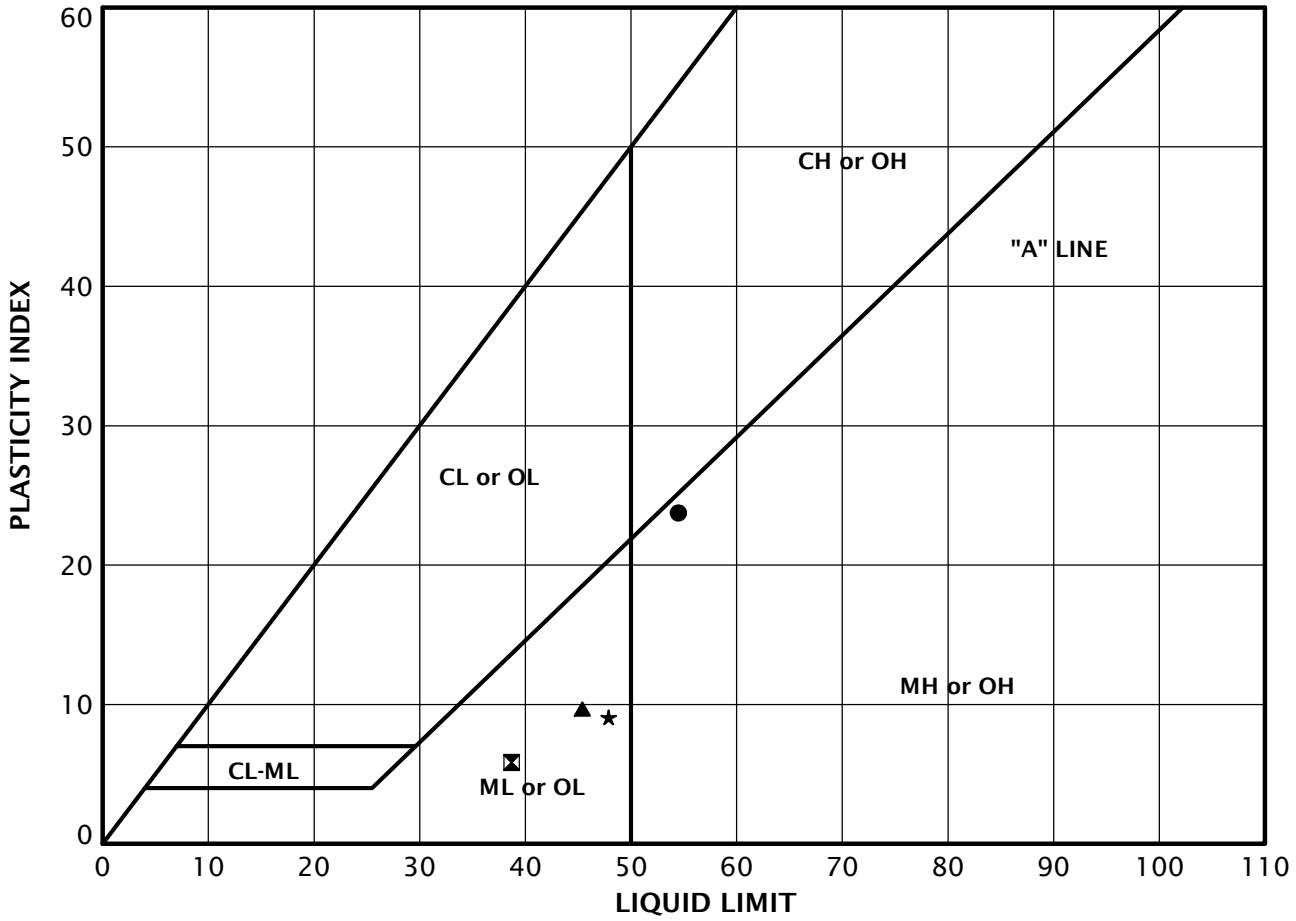
BORING B-5
(continued)

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-5



KEY	EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	MOISTURE CONTENT (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
●	B-1	30.0		54	31	23
⊠	B-1	50.0	30	39	33	6
▲	B-2	30.0	30	45	36	9
★	B-3	27.5		48	39	9

ATTERBERG_LIMITS 7 SODOBUILD-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 10/3/18:KT

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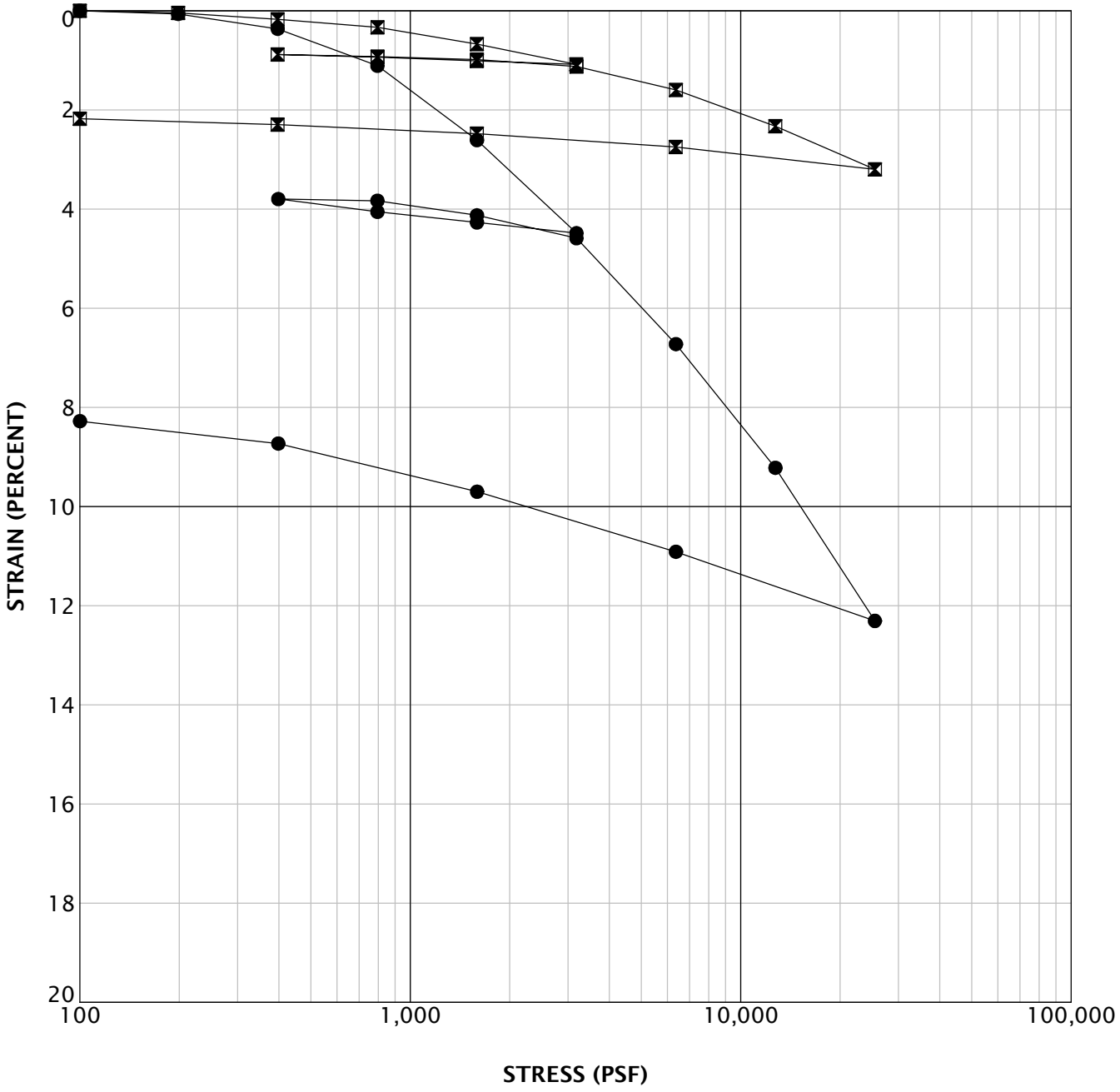
ATTERBERG LIMITS TEST RESULTS

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-6



KEY	EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)
●	B-4	15.0	25	98
⊠	B-5	17.5	21	108

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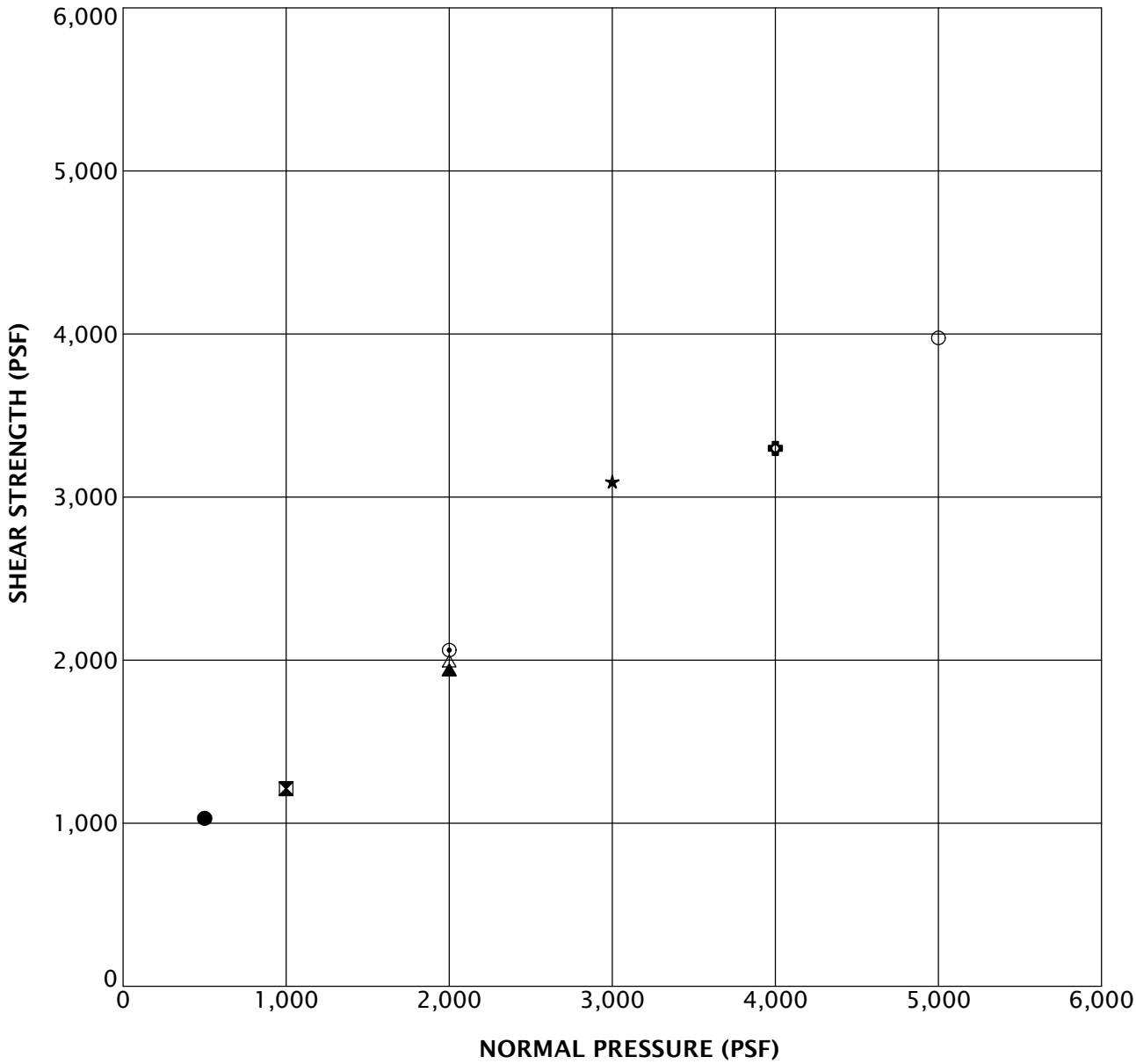
CONSOLIDATION TEST RESULTS

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-7

CONSOL_STRAIN_100K SODOBUILD-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 10/3/18:KT



KEY	EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	SOAKED
●	B-1	2.5	10	119	YES
⊠	B-3	5.0	11	121	YES
▲	B-3	15.0	21	106	YES
★	B-3	20.0	23	99	YES
⊙	B-4	10.0	14	117	YES
✿	B-4	15.0	25	99	YES
○	B-4	25.0	27	95	YES
△	B-5	17.5	21	105	YES

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DIRECT SHEAR TEST RESULTS

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PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-8

DIRECT_SHEAR_FAIL_ENV_NO BOX SODOBUILD-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 10/3/18:KT

SAMPLE INFORMATION			MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	SIEVE			ATTERBERG LIMITS		
EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	ELEVATION (FEET)			GRAVEL (PERCENT)	SAND (PERCENT)	P200 (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
B-1	1.0	5.0	10	126						
B-1	2.5	3.5	10	122						
B-1	5.0	1.0	16	97						
B-1	7.5	-1.5	22	100						
B-1	12.5	-6.5	24				12			
B-1	17.5	-11.5	24				17			
B-1	30.0	-24.0						54	31	23
B-1	50.0	-44.0	30					39	33	6
B-2	2.5	4.5	12	111						
B-2	4.0	3.0	5	102						
B-2	6.0	1.0	22	101						
B-2	30.0	-23.0	30					45	36	9
B-3	5.0	3.0	11	121						
B-3	15.0	-7.0	21	106						
B-3	20.0	-12.0	23	99						
B-3	27.5	-19.5						48	39	9
B-4	10.0	1.0	14	117						
B-4	15.0	-4.0	25	98						
B-4	25.0	-14.0	27	95						
B-5	17.5	-8.5	21	108						

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SUMMARY OF LABORATORY DATA

PROPOSED HOTEL DEVELOPMENT
LONG BEACH, CA

FIGURE A-9

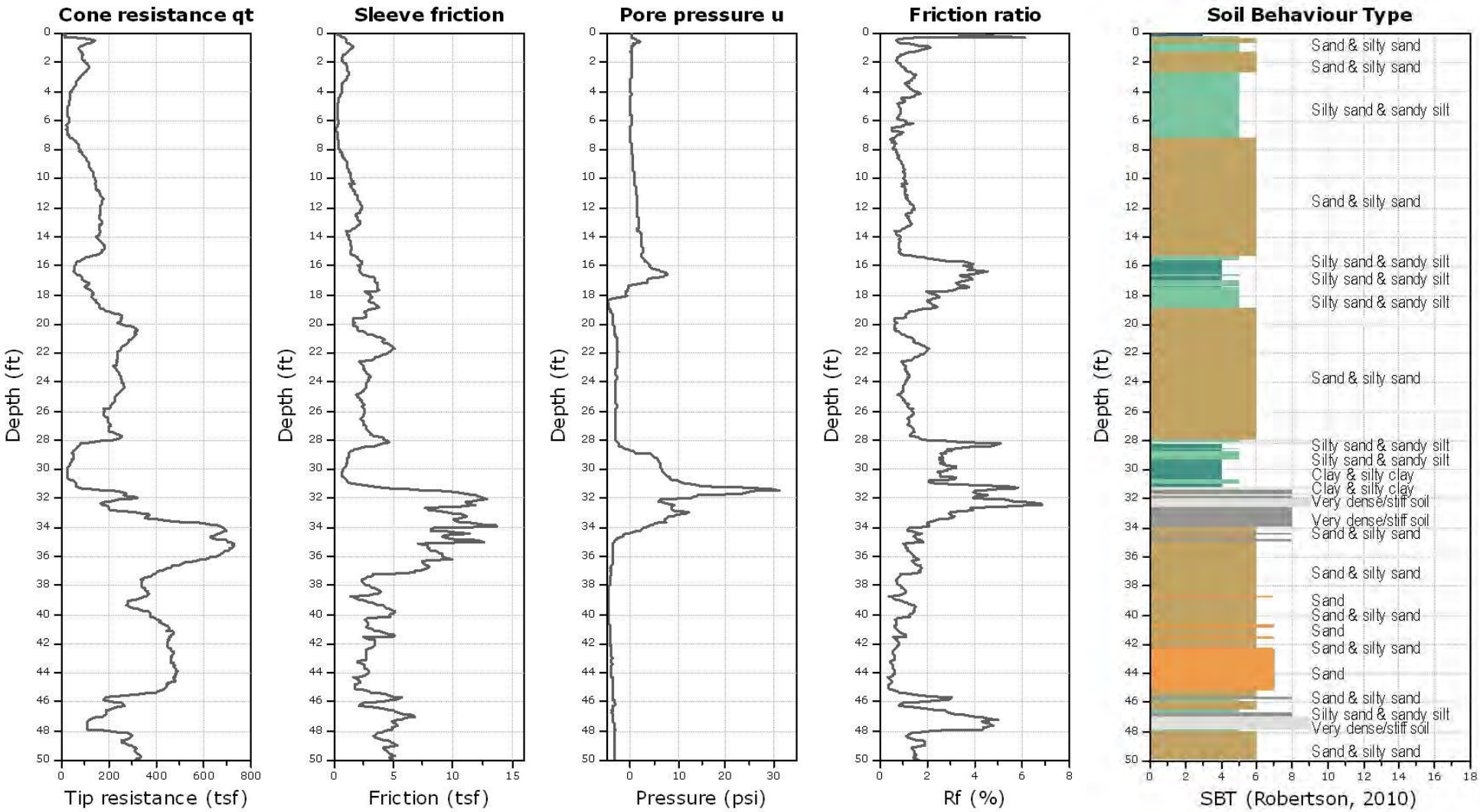
APPENDIX B

Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

CPT-1

Project: **GeoDesign, Inc.**
Location: **100 E. Ocean Blvd Long Beach, CA**

Total depth: 50.13 ft, Date: 11/18/2016
Cone Type: Vertek

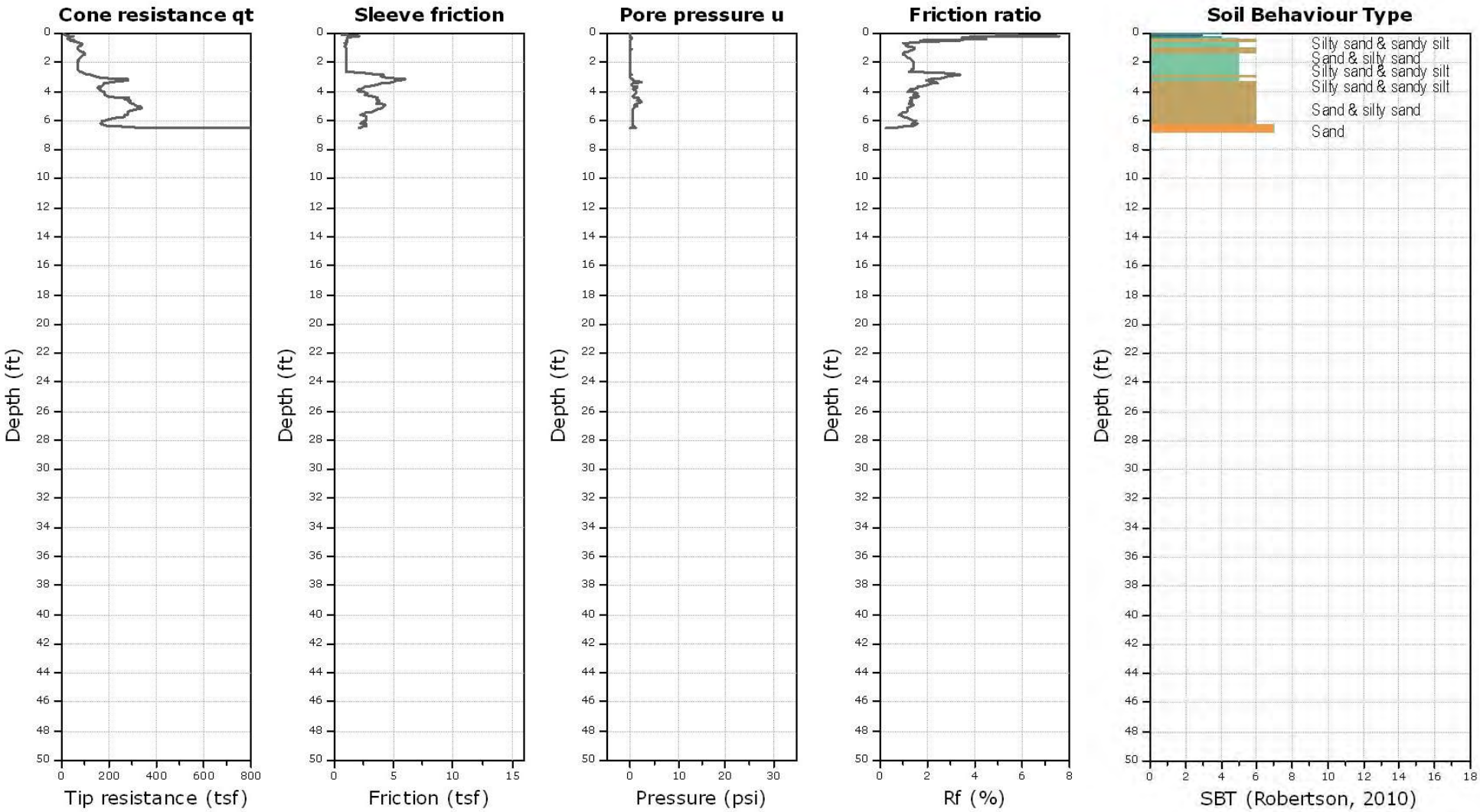


Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

CPT-2

Project: **GeoDesign, Inc.**
Location: **100 E. Ocean Blvd Long Beach, CA**

Total depth: 6.54 ft, Date: 11/18/2016
Cone Type: Vertek

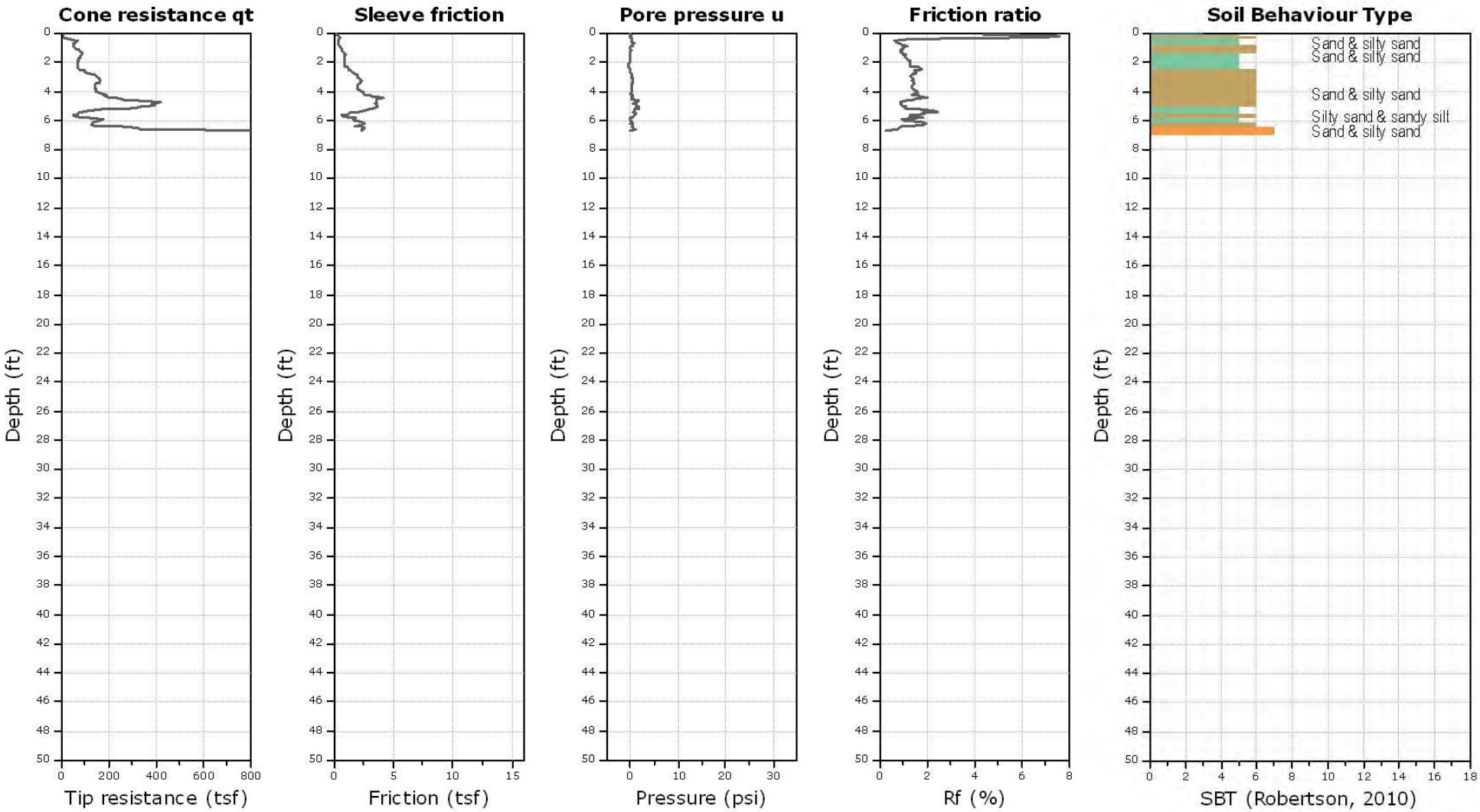


Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

CPT-2A

Project: **GeoDesign, Inc.**
Location: **100 E. Ocean Blvd Long Beach, CA**

Total depth: 6.68 ft, Date: 11/18/2016
Cone Type: Vertek



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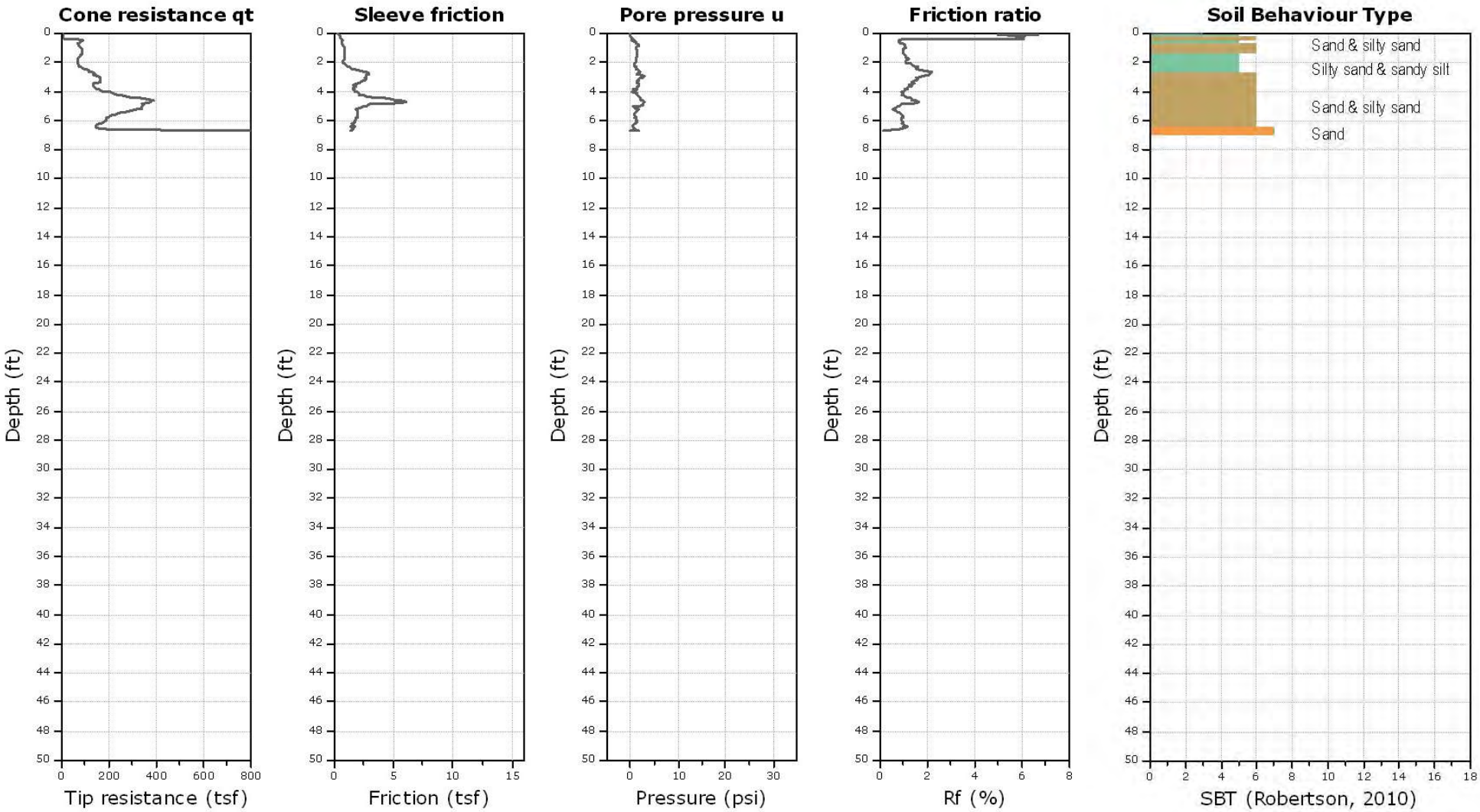
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

CPT-2B

Project: **GeoDesign, Inc.**
Location: **100 E. Ocean Blvd Long Beach, CA**

Total depth: 6.73 ft, Date: 11/18/2016
Cone Type: Vertek



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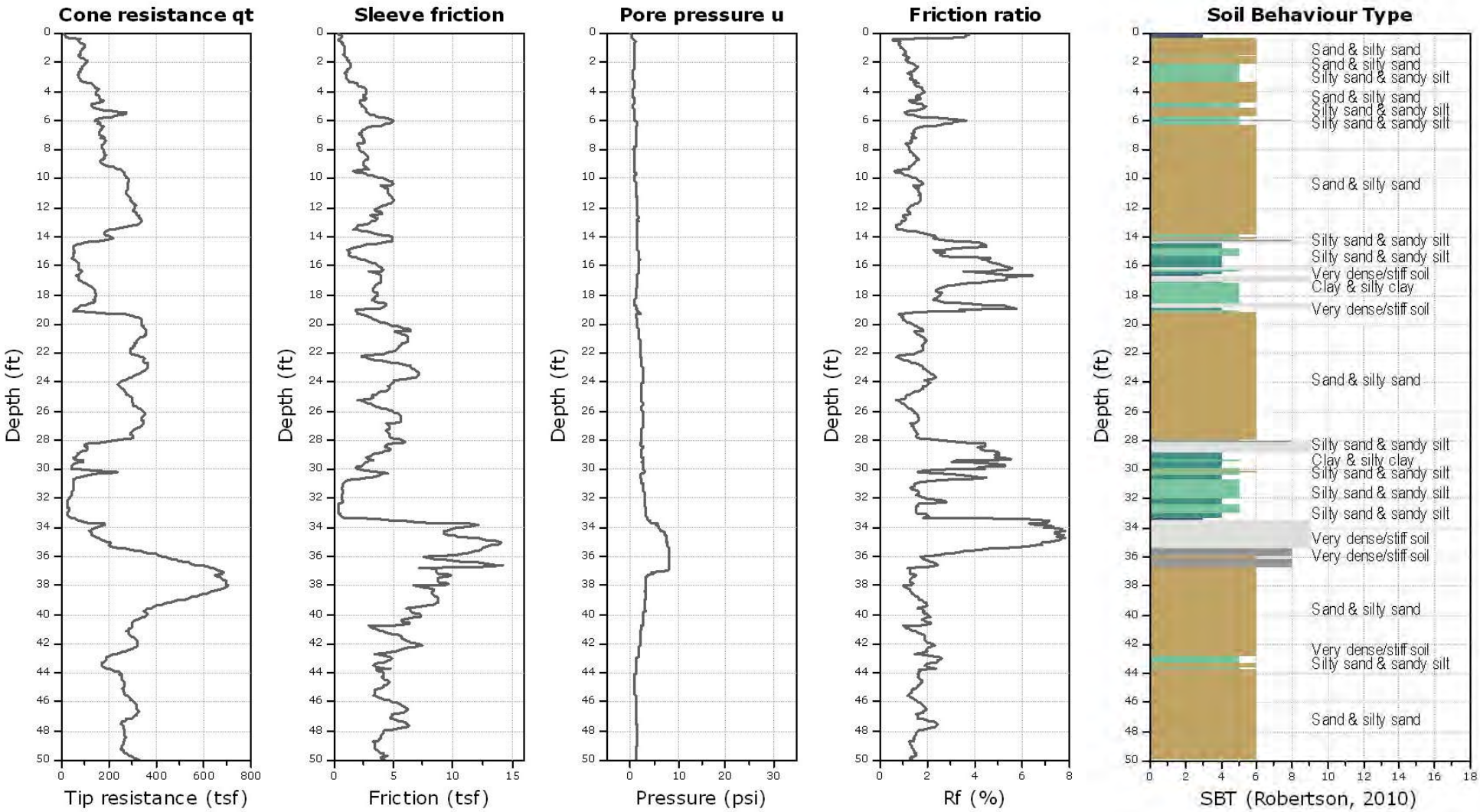
rich@kehoetesting.com
www.kehoetesting.com

CPT-3

Project: **GeoDesign, Inc.**
Location: **100 E. Ocean Blvd Long Beach, CA**

Total depth: 50.10 ft, Date: 11/18/2016
Cone Type: Vertek



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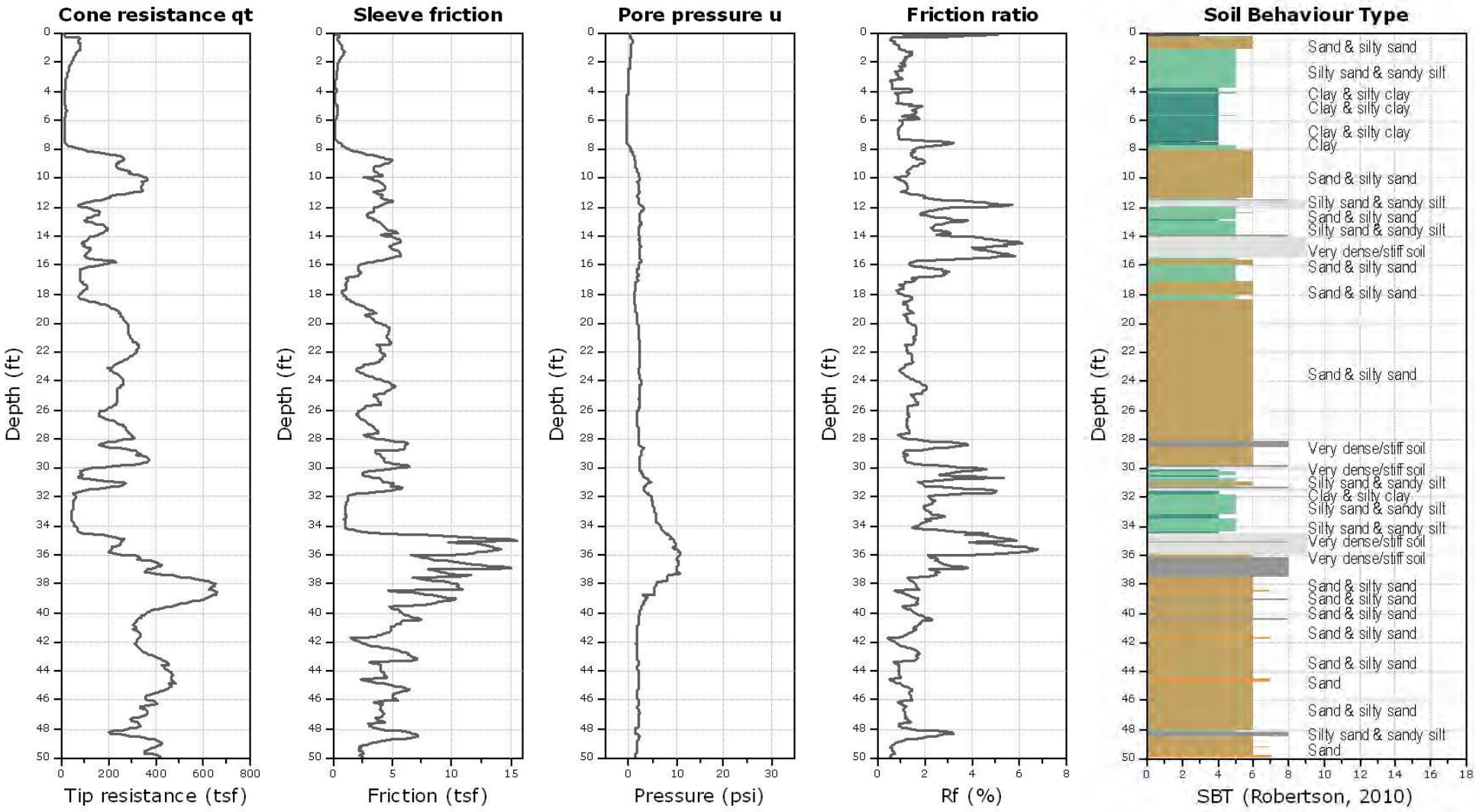
rich@kehoetesting.com
www.kehoetesting.com

CPT-4

Project: **GeoDesign, Inc.**
Location: **100 E. Ocean Blvd Long Beach, CA**

Total depth: 50.10 ft, Date: 11/18/2016
Cone Type: Vertek