



# VENICE AUXILIARY PUMPING PLANT

(SCH #2015111038)

## FINAL ENVIRONMENTAL IMPACT REPORT

PREPARED FOR:



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# Contents

	Page
<b>Chapter 1 Introduction.....</b>	<b>1-1</b>
1.1 Final EIR Organization .....	1-1
1.2 Project Background.....	1-1
1.3 Existing Conditions.....	1-2
1.3.1 Project Location .....	1-2
1.3.2 Environmental Setting .....	1-2
1.3.3 Project Site Land Use Designation and Zoning and Surrounding Uses.....	1-3
1.4 Project Objectives .....	1-4
1.5 Proposed Project.....	1-4
1.5.1 Operational Requirements .....	1-4
1.5.2 Aboveground Facilities.....	1-5
1.5.3 Parking .....	1-6
1.5.4 Public Art.....	1-6
1.5.5 Belowground Facilities and Diversion Structure within the Grand Canal .....	1-6
1.5.6 Odor Control .....	1-7
1.5.7 Utilities and Services .....	1-7
1.5.8 Landscaping and Drainage .....	1-8
1.5.9 Site Security .....	1-8
1.5.10 On- and Off-site Circulation, Parking, and Pedestrian Access.....	1-8
1.5.11 Open Space.....	1-9
1.5.12 Operations and Maintenance.....	1-9
1.5.13 Project Construction.....	1-9
<b>Chapter 2 Response to Comments.....</b>	<b>2-1</b>
2.1 Distribution of the Draft EIR .....	2-1
2.2 Comments on the Draft EIR .....	2-1
2.3 Responses to Comments .....	2-2
2.3.1 State Government.....	2-3
2.3.2 Local Government.....	2-8
2.3.3 Interested Parties/Public .....	2-11
2.4 References .....	2-28
<b>Chapter 3 Modifications to the Draft EIR.....</b>	<b>3-1</b>
3.1 Introduction .....	3-1
3.2 Changes to the Draft EIR.....	3-1

Changes Made to Executive Summary .....3-1  
Impacts Determined to Be Less than Significant.....3-3  
Changes Made to Chapter 2 (Project Description) .....3-6  
Changes Made to Section 3.5 (Geology and Soils) .....3-8  
Changes Made to Section 3.8 (Land Use and Planning) .....3-9  
Changes Made to Section 3.10 (Transportation/Traffic) .....3-13  
Changes Made to Chapter 4 (Comparison of Alternatives) .....3-19  
Changes Made to Draft EIR Appendices .....3-19

**Appendix L Public Hearing Transcript**

**Appendix M Updated Geotechnical Report for the Venice Auxiliary Pumping Plant**

## Tables

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<b>Table</b>	<b>Page</b>
Table 2-1 Public Comments Received on the Draft EIR.....	2-2

## 1.1 Final EIR Organization

This chapter presents background and introductory information for the proposed Venice Auxiliary Pumping Plant (VAPP) Project (Proposed Project). Chapter 2, “Responses to Comments,” presents information regarding the distribution of and comments on the Draft EIR, and the responses to these comments. Chapter 3, “Modifications to the Draft EIR,” presents the modifications to the Draft EIR. This Final EIR fulfills the requirements of the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] 21000 et seq.), the State CEQA Guidelines (California Code of Regulations [CCR] 15000 et seq.). The City of Los Angeles (City), Department of Public Works, Bureau of Engineering (LABOE) is the CEQA lead agency.

## 1.2 Project Background

This section briefly describes the project background and the Proposed Project. A description of alternatives to the Proposed Project is provided in Chapter 4 (Comparison of Alternatives) of the Draft EIR.

The City owns and operates the Venice Pumping Plant (VPP) (Pump Station No. 646), located at 140 Hurricane Street in the Los Angeles community of Venice, adjacent to the Ballona Lagoon and the Grand Canal. The VPP is the City’s largest pumping plant and it is considered a critical facility for conveying sewage from its tributary area. The facility was designed and built in 1957 and was last upsized and upgraded in 1987. Five pumps currently serve the facility. The VPP collects sewage from the City’s Coastal Interceptor Sewer (CIS), which serves the communities of Topanga, Pacific Palisades, Brentwood, Venice, and Mar Vista. It also serves the City of Santa Monica and parts of Los Angeles County. Sewage is pumped south to the City’s Hyperion Treatment Plant (HTP), located in Playa del Rey. Unlike other portions of the City’s sewage collection and conveyance system, there are no diversions for bypassing the facility or associated CIS for required maintenance or in the event of an emergency. Moreover, the existing VPP is essentially built out and has no additional space for required back up pumps and associated equipment to ensure system reliability.

During dry-weather flows (no rain), two pumps generally pump an average of 20 million gallons per day (mgd) of sewage. However, all five pumps have been used simultaneously to convey sewage influent from the collection area to the HTP during wet-weather flows (rain), depending on conditions. During certain years, flows during wet-weather conditions have reached 50 mgd and on several occasions, during extreme weather events (e.g., 1990s and 2000s), the flows exceeded the combined and simultaneous pumping capacity of the facility, resulting in near-miss events, which would have required emergency discharges directly to the Grand Canal and Ballona Lagoon or overflows into the surrounding street network. To address these issues, LABOE began planning and designing projects that would upgrade and enhance the CIS and VPP (see Chapter 2, Project Description of the Draft EIR), including the Proposed Project.

Construction is anticipated to begin in February 2018 and last approximately 2 years.

## 1.3 Existing Conditions

This section presents the existing environmental setting for the Proposed Project.

### 1.3.1 Project Location

The Project Site comprises three undeveloped residential lots, zoned Residential Water Ways (RW2-1), for a combined total of 12,076.5 square feet. Two lots are owned by the City of Los Angeles and located next to the existing VPP. The addresses are 3813 and 3817 South Esplanade (Assessor's Parcel Numbers [APNs] 4225-008-904 and 4225-008-904, respectively) (north parcels). One lot is privately owned; the City is in the process of acquiring the lot, which is located at 128 Hurricane Street (APN 4225-010-016) (west parcel). The three lots are not contiguous; however, their functions are integrative and needed to operate the VPP and VAPP as one facility. The west parcel comprises a single oblong lot west of the VPP that measures 85 by 60 feet. The north parcels, comprising two abutting parcels located north of the VPP, are approximately 90 feet long and 70 feet wide combined. Canal Court separates the VPP from the west parcel. Hurricane Street separates the VPP from the north parcels. The VPP manifold is underneath this portion of Hurricane Street (between Canal Court and Esplanade).

Figure 2-1, Project Vicinity Map of the Draft EIR, shows the location for the proposed VAPP in relation to the City and adjacent cities and communities. The Project Site is within the Ballona Lagoon West sub area of the Venice Community Planning Area and Council District 11.

Figure 2-2, Project Location Map of the Draft EIR shows the three construction Laydown Areas that will be used for material and equipment storage as well as construction staging during the anticipated 2-year construction period. Laydown Area 1 is located at 128 Hurricane Street, which is already part of the Project Site. Laydown Area 2 is a lot located at 3821 Via Dolce (APN 4225-013-904). This lot is approximately 3,537 square feet in size and across from the Venice Grand Canal, east of the Project Site. The lot is accessed from Via Dolce. Laydown Area 3 (APN 4296-001-270) is located at 9940 Jefferson Boulevard in Culver City, which is approximately 7 miles east of the Project Site. Laydown Area 3 is owned by the City of Los Angeles and approximately 198,735 square feet in size.

### 1.3.2 Environmental Setting

As shown in Figure 2-2, Project Location Map of the Draft EIR, the front eastern property lines of 3813 and 3817 South Esplanade abuts the Venice Grand Canal and are bounded by Canal Street to the west, Hurricane Street to the south, and multi-family residential to the north. The 128 Hurricane Street southern property line abuts Ballona Lagoon and is bounded by Hurricane Street to the north, Canal Court to the east, and multi-family residential to the west. The Esplanade, which is publicly accessible, connects the Ballona Lagoon trail with the California Coastal Trail at Washington Boulevard, 1,830 feet north of the Project Site. The Project Site is located within the California Coastal Zone. The Grand Canal and Ballona Lagoon (components of the Venice Canal System) are designated as Environmentally Sensitive Habitat Areas (ESHAs) by the California Coastal Commission, County of Los Angeles, and City of Los Angeles. The Venice Canal System, located adjacent to the Project Site, is a City of Los Angeles Historic-Cultural Monument (No. 270) and part of the Venice Historic Canal District (ZI-2370). The Project Site is also located within City Council District 11 and the Venice Community Planning Area (Ballona Lagoon West). The Project Site is classified as being within a liquefiable zone, a tsunami inundation zone, and a methane zone. The

128 Hurricane Street parcel is the site of an abandoned oil well and the overall Project Site is within the Playa del Rey oil/gas field and near other plugged and/or abandoned wells. Applicable plans include the Venice Local Coastal Plan Land Use Plan, Venice Specific Plan, and Coastal Corridor Transportation Specific Plan. The Proposed Project is subject to local City of Los Angeles Residential Design Standards and the Cultural Affairs Public Works Improvement Arts Program.

The VPP is one of five City-owned and operated pumping plants and part of the Hyperion Treatment Plant (HTP) service area (see Figure 2-3, Hyperion System of the Draft EIR). The HTP is located on a 144-acre site adjacent to Santa Monica Bay, southwest of Los Angeles International Airport (LAX) and approximately 4 miles south of the VPP. The area served by the HTP covers approximately 328,000 acres of the Los Angeles metropolitan area. The HTP, the largest treatment facility in the City, was designed and constructed to be a high-rate secondary treatment facility. The HTP provides primary treatment for all influent flow. The HTP is also the City of Los Angeles' main treatment facility for recycled water. Hyperion Treatment Plant is a recycled water source for the West Basin Municipal Water District, a public agency that provides recycled water from Hyperion to the cities of Carson, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Manhattan Beach, Lawndale, Redondo Beach, and unincorporated areas of Los Angeles County within its service area, as well as the cities of Torrance and Los Angeles, which are outside of its service area.

The HTP receives sewage from five major interceptor sewer systems, including the Coastal Interceptor Sewer (CIS). The CIS runs parallel to the coastal area of the City and includes a collection service area that encompasses the communities of Topanga, Pacific Palisades, Brentwood, Venice, and Mar Vista. It also services Santa Monica and parts of Los Angeles County. The CIS conveys untreated sewage flows from the collection area to the VPP via a 48-inch force main. Because of inadequate hydraulic head (liquid pressure), sewage flows from the CIS that enter the VPP must be continuously pumped in order to reach the HTP. The VPP is the City's largest pumping plant. Within the immediate vicinity of the VPP, the CIS parallels the Grand Canal. An emergency sewer discharge pipe is located within the Grand Canal. In an emergency, flows can be diverted to the Ballona Lagoon.

### **1.3.3 Project Site Land Use Designation and Zoning and Surrounding Uses**

The Project Site is currently vacant, comprising three unimproved lots. These are zoned under the City of Los Angeles Planning and Zoning Code as RW2-1; the City of Los Angeles Venice Community Plan land use designation is Residential/Medium Residential (see Section 3.8, Land Use and Planning of the Draft EIR, for more details). Laydown Area 3 in Culver City is zoned Industrial General (IG).

The Project Site is highly urbanized within the Ballona Lagoon West sub-area of Venice, north of Ironside Street. This area contains a mix of residential, open space, and public facility land uses. The Proposed Project is considered infill development. North and west of 3813 and 3817 South Esplanade are single and multi-family residential uses. To the east is the Venice Canal System, which is designated as open space. To the south is the VPP, which is a public facilities land use.

The 128 Hurricane Street parcel is bounded by the Ballona Lagoon to the south, Hurricane Street to the north, multi-family residential to the west, and Canal Court and the VPP to the east.

## 1.4 Project Objectives

The Proposed Project is intended to meet the following objectives:

- Prevent potential impacts on human and environmental health caused by sewage spills from the existing VPP during extreme wet-weather events;
- Increase reliability to the system by providing redundancy to pumping capacity to improve system reliability and allow regular service and maintenance activities to take place without compromising the ability of the City to maintain pumping capacity and minimize the risk of sewage overflows; and
- Address future risks related to climate change, including increased storm intensities and sea-level rise, which have the potential to result in flows that would be beyond the capacity of the existing VPP.

## 1.5 Proposed Project

The Proposed Project would be built on three vacant lots with a total combined area of approximately 12,076 square feet. As shown in Figure 2-4, Site Plan of the Draft EIR, the Proposed Project would include a number of improvements:

- One building, two stories and approximately 32 feet in height, with a total of 2,500 square feet that will house the operational control center for the plant, related electrical equipment, and employee workstations;
- Three 18 mgd wet-pit submersible pumps, constructed underground;
- Electrical equipment, utility connections, instrumentation and controls, transformers, and generators;
- A 17- by 17-foot submerged diversion structure on the existing CIS, the top of which would be below the lowest elevation of the Grand Canal and buried underneath it;
- Concrete wet well, influent piping and a sluice gate;
- A new 66-inch sewer to connect VAPP to the new diversion structure;
- Fencing with blinds and vegetation for screening the VAPP building;
- Parking – a total of eight parking spaces will be provided at 128 Hurricane Street to allow for Project required employee, delivery/visitor, and Beach Impact Zone parking;, and public parking, including the relocation of coastal parking; and
- Landscaping and Open Space at 128 Hurricane Street.

### 1.5.1 Operational Requirements

The VPP and VAPP combined will have an ultimate peak flow capacity of 87 mgd, based on the ultimate wet-weather flows (10-year storm event). The City's peak wet-weather modeling results established this flow rate (*Development of a Conceptual Plan for an Auxiliary Pumping Facility Alternative for the Venice Pumping Plant* [Carollo 2014]). The basis of design for the VAPP is summarized as follows:

- Ultimate Peak Wet-Weather Flow: 87 mgd (design based on 10-year storm event)
- Ultimate Peak Dry-Weather Flow: 71 mgd
- Current Peak Wet-Weather Flow: 55 mgd (January 6, 2009)
- Current Peak Dry-Weather Flow: 36 mgd
- Minimum Low Dry-Weather flow: 15 mgd (design)

The VAPP will have three submersible pumps available to operate at all times with variable frequency drives (VFD) that have the ability to adjust motor speed to match discharge flows. Sufficient overlap of pump operating ranges will be provided so that each pump flow condition will allow for the most efficient pump operation.

The VPP and the VAPP will act as one large wet well connected via the influent sewer. They will operate independently however, with separate controls. The VAPP can be isolated from the influent sewer by a slide gate located at the entrance to the wet well. The VPP does not have the capabilities to be isolated and taken off-line and as such, for wet well maintenance, a temporary plug will be required at the upstream manhole. The control system will provide the ability to operate each pumping plant independently if one of the pumping plants needs to be taken off-line for maintenance. The ideal operations scenario for the VPP and VAPP will be to operate and maintain a constant water surface level using the VFDs and a set of pump operational parameters depending on the flow level.

## 1.5.2 Aboveground Facilities

The Proposed Project includes a two-story electrical and control building along the west side of Project Site, adjacent to Canal Court (see Figure 2-4, Site Plan of the Draft EIR) and associated employee and visitor/delivery parking for the new building located at 128 Hurricane Street. The building would be two stories, about 32 feet in height, 50 feet in length, and 2,500 square feet (both levels combined) in area. The building would include spaces for an electrical equipment room and a generator room on the first floor. In addition to a state-of-the-art control station, the second floor would include workstations for computer operators, a restroom, mechanical room, and server rooms. Heating, ventilation, and air-conditioning equipment for the electrical building would be located north of the building.

The preliminary building design includes perimeter walls constructed of reinforced concrete, with a cool roofing system (PVC membrane or similar) above the second level. Proposed finishes include architectural stamped concrete, reveals, and impressions; metal awnings over each of the exterior doors and sustainable roofing (Sika Décor or similar); and painted surfaces with colors that blend in with the surrounding neighborhood. Windows would be required for occupied spaces on the second level; all windows would be energy-efficient dual-glazed units. The exterior conceptual design would be enhanced to include architectural features that are in keeping with the architecture, massing, and materials that are currently present on the adjacent residential structures.

The VAPP electrical system would include a small diesel-fueled standby generator to provide power for critical loads in the event of a loss of power from the Los Angeles Department of Water and Power (LADWP) and the inability of existing VPP standby generators to provide power to the VAPP. The standby generator would be located in an enclosed room on the first floor with 1-hour flood-rated doors; an intake and exhaust louver would provide the proper cooling for the generator. Because of the location of the electrical building within a residential neighborhood, acoustic louvers

would also be installed. The VAPP generator would provide up to 24 kilowatts (kW) of power at 120/240 volts (V) for lighting, the Supervisory Control and Data Acquisition system, the security/access control system, and air conditioning for the VAPP control room. The VAPP generator would have an integral storage tank that would hold enough fuel for up to 8 hours of run time at full load.

### **1.5.3 Parking**

Parking for the Proposed Project would be provided on the 128 Hurricane Street lot. There would be a total of eight parking spaces. Per the Venice Specific Plan and the Venice Local Coastal Program Land Use Plan, the Proposed Project would require at least five project-dedicated parking spaces, three are required for the project, and two for Beach Impact Zone parking. Five existing on-street parking spaces along Hurricane Street on the south side of the new VAPP lot will be removed; three will be relocated in the 128 Hurricane Street lot and the remaining made available in the project vicinity in accordance with the requirements of the City of Los Angeles Department of City Planning, Department of Transportation, and the California Coastal Commission.

### **1.5.4 Public Art**

This Proposed Project may include a public art installation on the 128 Hurricane Street lot. All City capital improvement projects whether funded by Council controlled or proprietary departments must comply with the City of Los Angeles Public Works Improvements Arts Program. The program was established to connect all City capital improvement projects with the opportunity to create art installed at facilities, to enhance amenities, assist with the restoration of historic features and provide community art services throughout the City. The program is managed by the Department of Cultural Affairs (DCA) and its General Manager. All public art projects are reviewed by the Public Art Committee and recommended for approval by the Cultural Affairs Commission.

### **1.5.5 Belowground Facilities and Diversion Structure within the Grand Canal**

At the northeast corner of the Project Site, adjacent to the Esplanade, three 18 mgd submersible pumps and a valve and metering vault are proposed (see Figure 2-4, Site Plan of the Draft EIR). The three submersible pumps would withdraw sewage from a wet well through a new 66-inch sewer pipe and discharge into a common header that would serve both the VPP and VAPP. Each force main (48-inch and 54-inch) could then be isolated by ball valves that would be controlled at the VAPP. Under normal operation, the VAPP and VPP would operate as a single functional pump station, with their respective wet wells hydraulically linked through similar elevations and an even flow split. Access would be limited to the structure that would house the pumps and vault. Sealed hatches would provide access for maintenance and minimize odors.

As noted above, the existing 66-inch CIS sewer pipe that serves the VPP is located within the Grand Canal. To minimize disruptions to the VPP, a diversion structure would be constructed to allow flows to be diverted to the VAPP. The diversion structure would be below the grade of the Grand Canal, by approximately 18 feet, and would not protrude aboveground into the Canal and would be buried beneath it. The structure would allow flows to be diverted to either the VAPP or VPP. A gate would also be provided at the inlet of the VAPP to allow isolation for maintenance purposes.

Influent piping would be provided from the new diversion structure to the new wet well. The lined concrete cylinder pipe would be protected from corrosion caused by hydrogen sulfide. The VAPP piping would connect to the new VPP replacement manifold that was recently constructed in Hurricane Street with use of a 42-inch flange at its west end. From there, the piping would continue back to the new valve vault at the VAPP.

## 1.5.6 Odor Control

As noted above, the existing VPP is equipped with an exhaust fan that discharges vapors through an existing stack. The wet well and associated pumps are sealed and located underground. Field investigation of the ventilation fan shows that the flange that connects the fan to the dispersion stack is displaced, and odors can exit through the gap at the joint. To remedy this, the fan and flanges would be replaced with compatible equipment. In addition, a slide gate at the entrance to the VAPP wet well from the influent pipe would be installed to deter odors. Any odors in the CIS piping will be confined to that system and handled as they normally are at the VPP. When the VAPP is in operation, the head spaces of the wet wells will be linked by the 66-inch sewer, and the exhaust fan will be able to service the entire system. No additional odor control measures are anticipated.

During construction of the coffer dam within the Grand Canal, sediment that contains organic material would be extracted which could result in odors when removed from the ground if not properly handled. Once these materials are removed, they would be temporarily stored in Laydown Areas 1 and 3. Various odors may be emitted from the sediment piles during construction that may impact the sensitive receptors in the project area. However, best management practices will be used to address any potential odors.

## 1.5.7 Utilities and Services

For VAPP operation, electricity, potable water, and sewer service utilities would be required. Each of these is discussed in greater detail below.

### 1.5.7.1 Electricity and Standby Power

Because the VAPP would be working separate from, yet in conjunction with, the VPP, the electrical power supply to VAPP would be independent from the VPP. As such, the Proposed Project would require two additional 480 V services from LADWP, providing an added degree of reliability and avoiding dependence on existing VPP step-down transformers and switchgear for utility power. Two existing 34.5 kV primary circuits that serve the VPP would be used because of their proximity. A new 34.5 kV switching cabinet, two new 34.5 kV–480 V three-phase pad-mounted transformers, and two new exterior secondary (480 V) cable pull sections, all owned and maintained by LADWP, would be installed for the new services at the VAPP. The 480 V three-phase power would be accepted from the LADWP pad-mounted transformers, with a switchgear located inside the VAPP electrical building. A main-tie arrangement would be provided to utilize either transformer, if necessary, and fully power the VAPP. Each main breaker would have an LADWP meter for revenue accounting and a digital meter for local monitoring/connectivity to the control system. The VAPP switchgear would distribute 480 V to the VAPP pump motor controllers and a motor control center.

Standby power for VAPP pumping operations would be provided by existing VPP standby generators in addition to a new generator (previously described above). The existing VPP 480 V switchgear, which receives and manages VPP standby generator power, would be utilized to provide

standby power to the VAPP electrical system. Two 480 V, 1,600-amp (A) power circuit breakers would be installed in the existing VPP switchgear and connected to the VAPP 480 V switchgear. Removal of two 1,200 A power circuit breakers from the existing VPP switchgear would be necessary to facilitate installation of the new 1,600 A power circuit breakers. These new 1,600 A power circuit breakers would be manually operated and normally closed.

### **1.5.7.2 Potable Water and Sanitary Sewer**

Potable water would be provided for equipment wash down purposes and a restroom that would be located in the electrical building. Sanitary sewer service would be provided for wash down and lavatory water.

### **1.5.8 Landscaping and Drainage**

Because a minimal amount of open area would be present at the VAPP site, landscaping would largely be limited to 0.75-inch gravel or crushed stone for erosion and dust control. Depending on space availability and infrastructure requirements, the planting of shrubbery and trees may also be possible. The specific locations and species would be evaluated and then included in a landscape plan that would be prepared during final design.

On the 128 Hurricane Street lot, following completion of project construction, the construction laydown site would be converted to a publicly accessible site with public art, parking, and Open Space. The specific locations and species of plantings within the Open Space would also be identified in a landscape plan that would be prepared during final design.

New stormwater drainage facilities associated with the Proposed Project would be constructed entirely within the Project Site. These may include storm drains, inlets, downspouts, catch basins, and overland sheet flow and low-impact development features.

### **1.5.9 Site Security**

As with the existing VPP, the entire VAPP site would be secured with fencing and/or concrete walls. Signage at an access-controlled entry/exit gate would denote the area that is closed to the public. In addition, an access control and video surveillance system would be provided to protect operators while working between the two sites and provide remote monitoring. Perimeter security lighting would also be installed within the VAPP site. It is anticipated that nighttime lighting sources would face inside away from sensitive receptors and be similar to those on the adjacent VPP site. All lighting would adhere to applicable plans and ordinances.

### **1.5.10 On- and Off-site Circulation, Parking, and Pedestrian Access**

Pacific Avenue, Hurricane Street, Via Dolce, and Marquesas Way will provide access to the Project Site, including construction Laydown Areas. Hurricane Street between Canal Court and Esplanade would be closed to public traffic during construction; however, these roadways would remain accessible during operation of the Proposed Project and preserve Coastal Access (see Figure 2-2, Project Location Map of the Draft EIR). Five parking spaces on Hurricane Street will be removed with a red curb and/or a driveway along the southerly boundary of the Proposed Project along Hurricane Street; three will be relocated in the 128 Hurricane Street lot and the remaining made

available in the project vicinity in accordance with the requirements of the City of Los Angeles Department of City Planning, Department of Transportation and the California Coastal Commission. A total of eight parking spaces would be provided on the 128 Hurricane Street lot with three spaces for the Project to address employee, delivery and visitor-serving parking, two spaces as required by Beach Impact Zone parking (in compliance with the Venice Specific Plan), and three spaces being relocated from Hurricane Street.

Pedestrian access to the Esplanade and associated Grand Canal and Ballona Lagoon from Hurricane Street would be temporarily eliminated during construction (up to 2 years). However, alternative access to these areas would be available via existing routes along Canal Court and Galleon Street or Esplanade. During operation, pedestrian access would continue to be available from Hurricane Street, Canal Court, and the 128 Hurricane Street lot, and coastal access would be maintained.

### **1.5.11 Open Space**

The Proposed Project would include Open Space, as required by the Venice Specific Plan and would be incorporated into the project design on the VAPP site and at the 128 Hurricane Street lot. Although the exact design of the Open Space has not been finalized, Figure 2-4, Site Plan of the Draft EIR contains a preliminary design. As currently envisioned, a total of 3,639 square feet of open space would be provided on the VAPP site and a total of 787 square feet would be provided for public use on the 128 Hurricane Street lot. Some type of public art may also be incorporated into the 128 Hurricane Street lot.

### **1.5.12 Operations and Maintenance**

Once operational, the VAPP would augment the existing capacity of the VPP. However, the VAPP would also enhance capacity so that a combined ultimate peak flow of 87 mgd could be accommodated and processed through the VPP and VAPP. This capacity would be capable of accommodating wet-weather flows from a 10-year storm event. During operations, the Proposed Project would require two full-time employees (per shift) who would work three consecutive 8-hour shifts, 7 days per week.

Maintenance requirements for VAPP equipment are anticipated to be similar to those for VPP. The main focus would be the three submersible pumps, which would be accessed from hatches to the wet well. It is anticipated that each pump would need to be inspected annually. This would require short-term use of equipment and machinery over 2 or 3 days as well as construction workers to remove, inspect, and service the pumps. Additionally, in instances when pumps need to be removed for maintenance purposes, temporary, short-term closure of Hurricane Street east of Canal Court to Esplanade and fronting both VAPP and VPP may be required. As noted above, this temporary closure is anticipated to occur twice yearly for up to 2 weeks. Access to the diversion structure would be provided from a manhole that would connect it to the wet well. No access from the Grand Canal would be required during these regularly scheduled maintenance activities.

### **1.5.13 Project Construction**

Construction of the Proposed Project is anticipated to begin in March 2018 and last approximately two years. Construction would begin with initial site preparation, which would enable machinery and equipment to access and work within the site. Once the site is prepared, construction phasing

would involve six distinct stages in two separate areas, as outlined below and shown in Figure 2-2, Project Location Map of the Draft EIR, which shows the locations where access would be temporarily restricted to the public and the location of the three proposed laydown areas.

- Laydown Area 1 – A vacant lot at 128 Hurricane Street, immediately west of the VPP and adjacent to Ballona Lagoon. This site, which is approximately 4,345 square feet, would be used as a construction laydown area.
- Laydown Area 2 – A vacant lot owned by Los Angeles County, across from and east of the Grand Canal at Via Dolce. This site, which is accessed from Via Dolce, is approximately 6,150 square feet. Laydown Area 2 could be used for material and equipment storage. However, Laydown Area 1 is to be the primary site for construction staging and storage.
- Laydown Area 3 – A vacant lot located at 9940 Jefferson Boulevard, Culver City. It would be used for soil stockpiling. The lot is approximately 198,735 square feet.

Standard construction equipment would be used, including compactors, bulldozers, front loaders, trenchers, construction cranes, water trucks, dump trucks, and delivery trucks that would bring construction-related materials to the site. Construction access to the Project Site would be via Pacific Avenue, Hurricane Street, Via Dolce, and Marquesas Way. Construction workers would be required to park off-site and then travel to and from the site by shuttle. No construction worker or equipment parking would be allowed along Hurricane Street or on adjacent streets. Access to Laydown Area 3 in Culver City would be achieved via Hurricane Street, Pacific Avenue, Washington Boulevard, Lincoln Boulevard, and other streets such as Sepulveda Boulevard, and Jefferson Boulevard. The final haul route will be selected in consultation with the Los Angeles Department of Transportation (LADOT) and the City of Culver City.

During construction, some perimeter lighting may be required, both on the Project Site and in Laydown Areas 1 and 2, for security purposes. Lighting would, however, be directed on-site and away from sensitive receptors (residences and the Grand Canal) to minimize any spillover effects. Security fencing would be erected around all laydown areas prior to construction activities.

### **1.5.13.1 Stage 1**

The Project Site and Laydown Area 1 (APN 4225-010-016) are currently fenced. A portion of Hurricane Street and Canal Court would be temporarily closed (see Figure 2-2, Project Location Map of the Draft EIR). Prior to use, security fencing would be erected around Laydown Area 2 (APN 4225-013-904), across from and east of the Grand Canal, and at Laydown Area 3, in Culver City (APN 4296-001-270). Shoring would be installed around the Project Site, after which excavation to a depth of approximately 25 feet and dewatering of the site would occur. At this stage of construction, pedestrian access along the Esplanade, Ballona Lagoon, and the Grand Canal would be maintained at Canal Court. However, pedestrian access to the Grand Canal from Hurricane Street would be temporarily eliminated; pedestrians would be diverted to Galleon Street to the north (see Figure 2-2, Project Location Map of the Draft EIR).

### **1.5.13.2 Stage 2**

Upon completion of excavation at the VAPP site, the bottom of the excavated site would be sealed and prepared for the above - and below - ground structure and related facilities. Preliminary earthwork plans indicate that the Proposed Project would require approximately 10,000 cubic yards of soil to be excavated, of which approximately 2,300 cubic yards would be stockpiled at Laydown

Area 1. The remaining 7,700 cubic yards of soil would be exported off-site and stockpiled at Laydown Area 3, resulting in a total of 2,970 total one-way truck trips. Laydown Area 2 (across Grand Canal), given the slope and access constraints, may be used only as needed for equipment and materials storage. Laydown Area 1 will be the primary laydown area and storage site. For backfill at the VAPP, a total of 2,300 cubic yards of soil would be utilized from Laydown Area 1 and 3,850 cubic yards from Laydown Area 3. The total truck trips associated with transporting the 3,850 cubic yards of soil from Laydown Area 3 to the VAPP would be 1,486 total one-way truck trips. Once the VAPP is completed, the remaining total of 3,850 cubic yards of soil stockpiled at Laydown Area 3 would be disposed of at the Sunshine Canyon Landfill or similar facility, resulting in a total of 1,486 total one-way truck trips. The estimates presented here of total truck trips include an allowance of 35% for soil expansion and less-than-full loads, and assume that soil is transported in trucks with a capacity of seven cubic yards. Water pumped from the site would be disposed of in a manner consistent with Regional Water Quality Control Board regulations.

Proposed grading for the site would slope away from the electrical building and pumping plant for a minimum of 5 feet and then be directed via swales or similar surface features toward the east property boundary. This would follow the existing drainage pattern for the majority of the site.

### **1.5.13.3 Stage 3**

Construction of the underground facilities associated with the proposed VAPP, including the three new pumps, the wet well, valve vault, meter vault, and piping, would occur during this stage. These facilities would be constructed at a maximum depth of approximately 25 feet below ground. Upon installation of the underground features, the site would be backfilled and compacted with the existing stockpiled soil contained within Laydown Area 1 and Laydown Area 3.

### **1.5.13.4 Stage 4**

Within the Grand Canal, a new sewer diversion structure, approximately 23 by 95 feet, would be installed at a depth of approximately 18 feet below ground at the canal and then sealed. To facilitate the installation of the diversion structure, a temporary coffer dam would be installed. Water flowing in the Grand Canal would be diverted around the cofferdam structure so that excavation could occur without inundation. With excavation completed, the diversion structure would be constructed in place, and then sealing would occur. Excavated materials would be hauled from the site and stockpiled at either Laydown Area 1 or Laydown Area 3 or transported to an approved area landfill; upon completing of installation and sealing, The Grand Canal would be backfilled using the stockpiled excavated material and the coffer dam removed. Ultimately, the diversion structure would be entirely underneath the Grand Canal. Construction of the cofferdam, placement of the diversion structure, and backfill and soil compaction within the Grand Canal would last approximately 4 to 6 months. During that time, the Esplanade on the west side of the Grand Canal would be temporarily closed between the northern boundary of the Project Site and approximately 95 feet south of the existing VPP (see Figure 2-2, Project Location Map of the Draft EIR).

### **1.5.13.5 Stage 5**

During this stage a modular diversion structure will be installed over the CIS, feeding the new wet well to divert sewage flows. The pipe would then be connected, and a seal would be inserted into the shell. Backfill and soil compaction would be completed, and the Grand Canal channel bottom would be restored to its original elevation.

### **1.5.13.6 Stage 6**

This final stage would involve sealing the diversion structure, removing all shoring steel, and allowing flows to resume to pre-construction conditions within the Grand Canal. The Esplanade would be re-opened to pedestrian access on the west side of the Grand Canal. Construction of surface improvements at the Project Site would then occur. This would include constructing an approximately 32-foot-high electrical building, installing two new 480 V LADWP transformers, and providing public access and landscaping improvements.