

Appendix J

**Trip Generation Memorandum & Parking Memorandum**





## MEMORANDUM

Date: October 3, 2016

To: Gilbert Ruiz, ICF Inc.

From: Netai Basu

**Subject: *Parking Assessment – Venice Auxiliary Pumping Plant Project***

LA15-2780.00

---

Fehr & Peers has prepared this technical memorandum to summarize the results of a parking utilization analysis for the proposed Venice Auxiliary Pumping Plant project (VAPP) located in the Ballona West neighborhood in Los Angeles, California. This memorandum describes the existing parking supply and utilization in the vicinity of the project site, and analyzes whether there is sufficient existing parking supply for the VAPP in the vicinity of the project site. This memorandum is presented in four sections. First, we describe the project background and related projects. Next, we describe the data collection efforts. We then present the existing utilization and parking assessment for the VAPP project site and we discuss the parking implications for the surrounding neighborhood. We finally summarize the parking assessment for this project.

### PROJECT BACKGROUND

The City of Los Angeles owns and operates the Venice Pumping Plant (VPP) near the Ballona Lagoon and Grand Canal. The VPP is the largest of the City's five pumping stations and is considered a critical facility to convey sewage from the tributary area, as there are currently no diversions to bypass the pumping plant. The facility collects sewage from the coastal areas of the City through one existing 48-inch pipeline (force main) and transports it south to the Hyperion Treatment Plant in Playa Del Rey.

During periods of heavy rain, the facility has almost exceeded capacity and has had multiple simultaneous pump failure. As such, system redundancy is needed. The Venice Auxiliary Pumping Plant (VAPP) project is intended to provide additional, dependable pumping capacity to accommodate peak wet-weather flows. Figure 1 displays the project site within the surrounding neighborhood.



**Figure 1 – VAPP Project Location Map**



## RELATED PROJECTS

### ***Venice Dual Force Main Project***

A second 54-inch pipeline, known as the Venice Dual Force Main Project (VDFM), is planned for construction to convey flows from VPP and VAPP to a discharge vault nearly two miles to the southeast near the intersection of Vista Del Mar & Gills Street. To minimize impacts to the surrounding community, streamline construction activities, and minimize overall project cost, the City is planning to schedule construction of the VAPP immediately following completion of the VDFM project. Construction of the VDFM is anticipated to begin in January 2017. Although work on the overall VDFM project will continue until December 2019, construction in the vicinity of Hurricane Street is scheduled to be completed by the end of 2017.

### ***Manifold Project***

Construction of the VPP manifold connecting the existing VPP and proposed VDFM project within Hurricane Street was completed in August 2015. With the Venice manifold in place, both the VPP and VAPP will be able to tie-in, thereby forming one system with one control facility.



## **DATA COLLECTION**

Parking utilization surveys were conducted bi-hourly from 8:00 AM to 10:00 PM near the project site on a typical weekend day and a typical weekday (Saturday, September 12 and Thursday September 17, 2015). These days were selected to represent typical weekend and weekday conditions and because they do not fall on street sweeping or trash collection days. The local street sweeping schedule varies by street but parking is generally restricted on Mondays or Tuesdays from 10:00 AM to 12:00 PM. Trash collection occurs on Fridays.

Counts were collected of on-street public parking and one off-street public lot in a study radius of approximately 0.3 mile around the project site. The number of available parking spaces for each roadway segment or lot was inventoried at the beginning of data collection efforts. Parking utilization was separated between unrestricted parking and any restricted parking for a given location. The only time-restricted parking within the vicinity of the project site is the metered spaces located along Strongs Drive between Anchorage Street and Washington Boulevard, while the remaining spaces are only restricted per their respective scheduled street-sweeping and trash collection days.

Figure 2 identifies the parking supply for the VAPP project site. For unmarked, on-street spaces, the number of spaces was estimated by measuring the available curb space and assuming an average length of 22.5 feet per vehicle, unless occupancy surveys showed a higher occupancy on a particular block.

## **VAPP PROJECT SITE PARKING ANALYSIS**

The proposed VAPP site is located in the Marina Peninsula neighborhood just west of the Venice Grand Canal, on the northeast corner of Hurricane Street and Canal Court. The area surrounding VAPP is a mix of predominantly single-family and multi-family residential. Washington Boulevard, located approximately 0.3 mile north of the project site, serves as the nearest and primary commercial corridor.

Parking within the community is predominantly unrestricted, publicly available and on-street. Several streets serve primarily as pedestrian walkways, linking the Grand Canal to the beach. A City-owned off-street parking lot is located on the northwestern edge of the study area, at the terminus of Washington Boulevard. It includes a total of 364 parking spaces (329 regular, 26 extended spaces for recreational vehicles and nine spaces designated for disabled parking). Hurricane Street, where the VAPP site is located, also contains restricted on-street parking. Once construction begins, Hurricane Street will be permanently closed to traffic between Esplanade and Canal Court. This will result in the loss of five on-street parking spaces. Additionally, the segment of Canal Court adjacent to the project site will be temporarily closed during the construction period; however, parking is prohibited there.



The Venice Pumping Plant currently requires two employees per 8-hour shift (three shifts over a 24-hour period) and two parking spaces are located within the VPP site. Once VAPP becomes operational, this staffing level will remain unchanged. Thus VAPP/VPP would require up to four parking spaces at the peak time, when shift changes occur. Per the Venice Specific Plan and the Venice Local Coastal Program Land Use Plan, the project must also provide one space for Beach Impact Zone parking. The proposed project will construct eight off-street parking spaces at 128 Hurricane Street, which will fully satisfy the need for replacement parking (five spaces), employee parking (four spaces including the existing two off-street employee spaces within the VPP), and the one new space required as Beach Impact Zone parking.

As shown in Table 1 and Table 2, there are an estimated 763 publicly available parking spaces in the survey area, including 399 publicly available on-street spaces and 364 spaces at the public parking lot. This also includes eight time-restricted parking spaces and 391 unrestricted parking spaces. We divided the study area by zones, as shown in Figure 3 and Figure 4 to better summarize the peak period weekend and weekday occupancy data:

- Zone 1 – Parking capacity within 700 feet of the project site
- Zone 2 – Parking capacity from 700 to 1,000 feet of the project site.
- Zone 3 – Parking capacity from 1,000 to 1,700 feet of the project site
- Zone 4 – Public parking lot located at the western terminus of Washington Boulevard

Table 3 and Table 4 illustrate parking occupancy for the entire 14-hour data collection period for the weekend and weekday, organized by zone. Figure 3 and Figure 4 illustrate the peak-period occupancy rates by zone on a typical weekend day and weekday, which is discussed further below.

As shown in Figure 3, the weekend peak utilization by zone for the surveyed parking near the project site, observed from 4:00 to 6:00 PM on Saturday September 12, 2015, shows that the on-street spaces are almost fully occupied:

- Zone 1 – 97% of spaces utilized, with three spaces available
- Zone 2 – 95% of spaces utilized, with eight spaces available
- Zone 3 – 99% of spaces utilized, with one space available
- Zone 4 – 71% of spaces utilized, with 106 spaces available

Figure 4 displays the weekday peak utilization by zone for the surveyed parking near the project site, observed from 2:00 to 4:00 PM on Thursday September 17, 2015 as follows:

- Zone 1 – 79% of spaces utilized, with 22 spaces available
- Zone 2 – 71% of spaces utilized, with 48 spaces available
- Zone 3 – 81% of spaces utilized, with 24 spaces available
- Zone 4 – 44% of spaces utilized, with 204 spaces available



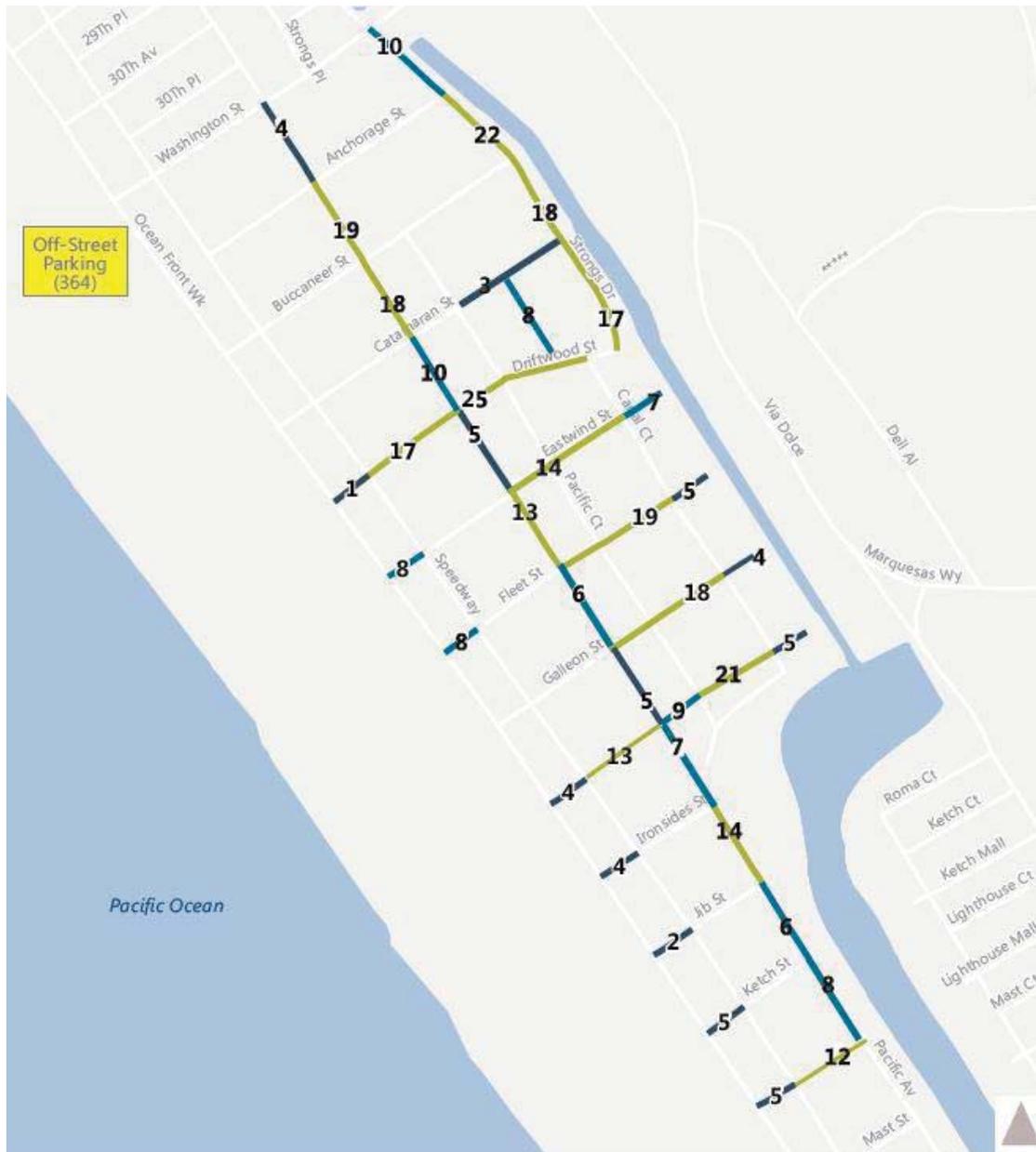
Based on this analysis, the available parking supply near the VAPP site is sufficient under normal circumstances to replace the five spaces that would be removed from Hurricane Street as part of the proposed project. Within approximately 1,000 feet of the VAPP site, at least 70 spaces are available during the weekday peak period and at least 11 spaces are available during the busier weekend peak period.

### **SUMMARY AND CONCLUSIONS**

The planned VAPP project, located in the Marina Peninsula neighborhood in Los Angeles, California, is intended to provide additional pumping capacity to the existing VPP. Parking utilization surveys were conducted in the neighborhood around the project site over a typical weekday and a typical weekend day at 2-hour intervals.

During the 2-year construction period of the VAPP, the loss of the five existing parking spaces from Hurricane Street between Canal Court and the Grand Canal would temporarily reduce the parking supply in the project vicinity. This will affect the convenience of drivers seeking to park, by reducing the total supply of on-street parking in the neighborhood around the VAPP site, although the total on-street parking in the vicinity could still accommodate these vehicles. During peak times on peak summer weekend days, weekdays and holidays, however, it is recognized that parking utilization is higher than what was observed on the survey dates. On those days the loss of these on-street spaces could result in a small increase in vehicles circling through the neighborhood as they seek available parking.

Upon project completion, the on-street parking on Hurricane Street east of Canal Court would be fully replaced off-street at 128 Hurricane Street. In addition, the proposed VAPP project, together with the existing VPP facility, would provide four employee parking spaces, sufficient to accommodate its needs, as well as one additional space as required for Beach Impact Zone parking. Thus, upon completion the project would result in one additional parking space in the project vicinity.



**Inventory**

- Low
- Medium
- High

# = Number of Parking Spaces



Figure 2  
 Parking Inventory



Figure 3  
 Parking Utilization - Weekend Peak Hour (4:00 PM)



Figure 4  
 Parking Utilization - Weekday Peak Hour (2:00 PM)



**Table 1 - Parking Inventory and Occupancy - Weekend Peak Period (Saturday 9/12/15, 4 pm - 6 pm)**

	Zone 1	Zone 2	Zone 3	Zone 4	Overall
Public Parking Inventory	104	166	129	364	763
Available Spaces	3	8	1	106	118
Occupancy Rate	97%	95%	99%	71%	98%

Note - occupancy rate includes cars parked legally and illegally

**Table 2 - Parking Inventory and Occupancy - Weekday Peak Period (Thursday 9/17/15, 2 pm - 4 pm)**

	Zone 1	Zone 2	Zone 3	Zone 4	Overall
Public Parking Inventory	104	166	129	364	763
Available Spaces	22	48	24	204	298
Occupancy Rate	79%	71%	81%	44%	61%

Note - occupancy rate includes cars parked legally and illegally

**Table 3 - On-Street Parking Occupancy by Zone - Weekend (Saturday 9/12/15, 4pm - 6 pm)**

Time Beginning	Zone 1	Zone 2	Zone 3	Zone 4	Average Occupancy
8:00	82%	88%	86%	10%	50%
10:00	88%	89%	86%	24%	57%
12:00	94%	93%	92%	48%	72%
14:00	94%	95%	92%	72%	83%
16:00	94%	95%	96%	71%	84%
18:00	91%	96%	92%	54%	75%
20:00	88%	95%	81%	43%	67%

Note - occupancy rate includes cars parked legally and illegally

**Table 4 - On-Street Parking Occupancy by Zone - Weekday (Thursday 9/17/15, 2pm - 4 pm)**

Time Beginning	Zone 1	Zone 2	Zone 3	Zone 4	Average Occupancy
8:00	80%	75%	61%	8%	41%
10:00	73%	73%	70%	13%	44%
12:00	73%	68%	73%	30%	52%
14:00	82%	72%	90%	44%	63%
16:00	80%	70%	76%	37%	56%
18:00	78%	70%	92%	37%	59%
20:00	75%	71%	85%	23%	51%

Note - occupancy rate includes cars parked legally and illegally





## MEMORANDUM

Date: October 3, 2016

To: Gilbert Ruiz, ICF Inc.

From: Netai Basu

**Subject: *Trip Generation Analysis – Venice Auxiliary Pumping Plant Project***

LA15-2780.00

---

This technical memorandum summarizes the results of a trip generation analysis for the proposed Venice Auxiliary Pumping Plant project (VAPP). This memorandum includes several sections. The first section provides the project background, a description of related infrastructure projects, and construction information for the proposed VAPP project. That is followed by a description of the street system in the vicinity of the project. Estimates of construction-period and permanent trip generation are made and their significance assessed. The memorandum concludes with a summary of the key conclusions.

### PROJECT BACKGROUND

The City of Los Angeles owns and operates the Venice Pumping Plant (VPP) near the Ballona Lagoon and Grand Canal. The VPP is the largest of the City's five pumping stations and is considered a critical facility to convey sewage from the tributary area, as there are currently no diversions to bypass the pumping plant. The facility collects sewage from the coastal areas of the City through one existing 48-inch pipeline (force main) and transports it south to the Hyperion Treatment Plant in Playa Del Rey. The Venice Auxiliary Pumping Plant (VAPP) project is intended to provide additional, dependable pumping capacity to accommodate peak wet-weather flows.

The proposed VAPP site is located in the Ballona West neighborhood just west of the Venice Grand Canal, on the northeast corner of Hurricane Street & Canal Court. The area surrounding VAPP is a mix of predominantly single-family and multi-family residential. Washington Boulevard, located approximately 0.4 mile north of the project site, is the nearest commercial corridor. Figure 1 displays the project site within the surrounding neighborhood.



**Figure 1 – VAPP Project Location Map**



## RELATED PROJECTS

### ***Venice Dual Force Main Project***

A second 54-inch pipeline, known as the Venice Dual Force Main Project (VDFM), is planned for construction to convey flows from VPP and VAPP to a discharge vault nearly two miles to the southeast near the intersection of Vista Del Mar & Gills Street. To minimize impacts to the surrounding community, streamline construction activities, and minimize overall project cost, the City is planning to schedule construction of the VAPP immediately following completion of the VDFM project. Construction of the VDFM is anticipated to begin in January 2017. Although work on the overall VDFM project will continue until December 2019, construction in the vicinity of Hurricane Street is scheduled to be completed by the end of 2017.

### ***Manifold Project***

Construction of the VPP manifold connecting the existing VPP and proposed VDFM project within Hurricane Street was completed in August 2015. With the Venice manifold in place, both the VPP and proposed VAPP will be able to tie-in, thereby forming one system with one control facility.



## EXISTING STREET SYSTEM

Below is a brief description of the major streets serving the proposed project site. Sidewalks are generally available in the vicinity of the project area. Table 1 displays the operational characteristics of the local street system.

- Canal Court – Canal Court is a short undivided alleyway that runs between Driftwood Street to the north and the Ballona Lagoon to the south. Parking is not permitted along Canal Street.
- Galleon Street – Galleon Street is a short undivided local street that runs east/west between Pacific Avenue and Esplanade, just west of the Venice Canal/Ballona Lagoon. Parking is permitted on both sides of the street, though some restrictions are present along several properties.
- Hurricane Street – Hurricane Street is a short undivided local street that runs east/west between Ocean Front Walk and Esplanade, just west of the Venice Canal/Ballona Lagoon. The street terminates adjacent to the project site and parking is permitted on both sides of the street.
- Lincoln Boulevard (SR 1) – SR 1 is an arterial street that runs north/south in the study area and it generally provides four travel lanes. Metered parking is available on both sides of the street and the speed limit is 35 MPH.
- Marquesas Way – Marquesas Way is a short 4-lane secondary street that runs east/west and connects Via Dolce and Via Marina. Parking is permitted on the east side of the street and the speed limit is 25 MPH.
- Pacific Avenue – Pacific Avenue is a 2-lane secondary arterial that runs north/south between Barnard Way to the north and Via Marina to the south. Between Washington Boulevard and Hurricane Street, parking is restricted along the east side of the street but it is unrestricted on the north side. The posted speed limit within this segment is 30 MPH.
- Via Marina – Via Marina is a 4-lane street that runs north/south between Washington Boulevard and Pacific Avenue. No parking is allowed on either side of the street and the speed limit is 40 MPH.
- Via Dolce – Via Dolce is a secondary arterial that runs north/south between Washington Boulevard and Marquesas Way. It includes two northbound lanes and one southbound lane, plus bicycle lanes. Parking is allowed on both sides of the street and the speed limit is 35 MPH.
- Washington Boulevard – Washington Boulevard is a Major Highway Class II arterial street that runs east/west between Venice Beach and the City of Whittier. It generally provides four travel lanes plus bicycle lanes. Metered parking is generally available on both sides of the street. The speed limit is 35 MPH.



The City of Los Angeles allows major and secondary arterials to be used as truck routes. The City's policy is to allow trucks to also travel in a "reasonable fashion" to and from a work site, including over collector and local streets.

### **EXISTING TRANSIT SYSTEM**

Transit service within the study area is provided as follows:

- Metro Lines 108 and 358 operate on Pacific Avenue between Via Marina and Washington Boulevard and along Washington Boulevard between Pacific Avenue and Palawan Way. The lines run between Marina del Rey and Pico Rivera, with Line 358 providing limited stop service during the peak periods.
- Culver City Bus Line 1 provides service on Washington Boulevard between Venice and the West Los Angeles Transit Center.
- Commuter Express Line 437 is operated by LAODT and runs on Via Dolce and Pacific Avenue in the project area. This line runs between Marina del Rey and downtown Los Angeles.

### **PROJECT TRAFFIC PROJECTIONS – CONSTRUCTION-PERIOD**

The traffic projections for the proposed project were developed using three steps: estimating the trip generation of the project, determining trip distribution, and assigning the project traffic to the roadway system. The information used in this analysis was provided by the Los Angeles Bureau of Engineering (LABOE) and the project team.

Construction of the project is planned to begin in March 2018 and is expected to take approximately two years to complete, ending in 2020. The construction involves several key phases, which may overlap, as described below:

1. Stages 1-2: Mobilization, Site Preparation, and Excavation – three to four months (155 days), including approximately two to three months of soil hauling;
2. Stage 3: Pump Station Foundation/Electrical – nine to 10 months;
3. Stage 4: Diversion Structure – four to six months; and
4. Stages 5-6: Pump Station Integration/Finishing – two to four months.

Construction activities will be limited to the hours from 8:00 AM to 6:00 PM on weekdays and Saturdays. No construction is permitted on Sundays and holidays. Soil trucks are proposed to be at the project site only between 9:00 AM and 4:00 PM. The use of the pile driver, grader and jackhammer construction equipment would only occur between 9:00 AM to 3:30 PM. Workers would park at an off-site location and be shuttled to and from the project site each work day. While no specific off-site location has been identified at this time, it would likely lie within five miles of the project site. The selected contractor would be required to identify and secure a suitable location. Worker shuttles are generally expected to depart the site between 5:00 and 6:00 PM. On days when soil export is occurring, workers would all be on-site before soil trucks begin



to arrive and would remain on-site until after the last soil export truck departs. Table 2 presents the estimated vehicle trip generation at the project site during the analyzed peak hours and on a typical weekday.

### ***Soil Haul Trucks***

Figure 1 shows the three laydown areas that will be used during construction for material and equipment storage: Laydown Area 1 is at 128 Hurricane Street, Laydown Area 2 occupies two County-owned properties at 3819 and 3821 Via Dolce that lie directly east of the VAPP site across the Grand Canal, and Laydown Area 3 is a City-owned property at 9940 Jefferson Boulevard in Culver City. Peak hauling activity is anticipated to occur during Stages 1 and 2 when the site preparation and excavation occur and during Stage 3, when soil will be needed to backfill the site once the major infrastructure is in place. It is anticipated that the site excavation would involve the removal of approximately 10,000 cubic yards (CY) of earth over a 2- to 3-month period during Stages 1 and 2. Approximately 2,300 CY would be stockpiled at Laydown Area 1 and approximately 7,700 CY would be transported off-site and stockpiled at Laydown Area 3. It is expected that approximately half of this soil (3,850 CY) will be returned to the project site and used as backfill. Upon project completion, the remaining 3,850 CY of soil stockpiled at Laydown Area 3 would be exported to an area landfill, such as Sunshine Canyon. These activities are estimated to generate up to 24 truckloads of soil per day. This equates to 48 1-way trips (24 inbound, 24 outbound) on the peak days of activity. Applying a Passenger Car Equivalent (PCE) factor of 2.0 for these heavy trucks to account for their influence on the traffic stream (that is, they occupy additional road space and have different operating capabilities compared with passenger cars), these 48 1-way trips would be 96 1-way PCE trips.

The capacity of soil hauling trucks used is expected to be seven CY or 10 CY. If each truck were to carry seven CY of soil and, the 10,000 CY of export soil would require a total of approximately 1,430 truckloads or 2,860 1-way trips. The larger trucks would require approximately 1,000 truckloads or 2,000 1-way trips. Of this, approximately 1,540 or 2,200 1-way truck trips would occur between the project site and Laydown Area 3 to export 7,700 CY of soil, the difference being whether trucks used have a capacity of seven CY or 10 CY. Under the scenario which includes return of up to half of that soil as backfill at the project site, an additional 770 to 1,100 1-way truck trips would occur.

To account for the possibility of less-than-full loads, soil expansion or other factors, as many as 35% more total soil-hauling truck trips may be required, yielding estimates of up to approximately 2,970 or 2,080 1-way truck trips to export soil (with seven or 10 CY trucks) and up to 1,486 or 1,040 1-way truck trips to import soil (with seven or 10 CY trucks).

### ***Equipment and Delivery Trucks***

In addition to soil haul trucks, the project would generate equipment and delivery truck trips during each phase of construction. Such trips are estimated to be two per day (four PCE trips per



day) and could include cranes, bulldozers, excavators, and other large items of machinery. These materials would be delivered to the site and stored on-site.

### ***Construction Employees***

The number of construction workers would vary throughout the construction period. During Stages 1 and 2 and Stage 4, approximately eight workers would be on-site each day. Stage 3 would require up to 20 workers on-site daily. Stages 5 and 6 would require approximately six workers per day. Parking for all construction workers will be provided off-site and they would be transported to/from the project site by 10- to 15-passenger shuttles or vans. The off-site location for workers traveling to the site via shuttle is currently unknown but is assumed to be within five miles and lie south of the project site.

### ***Construction Period Trip Generation Estimates***

Based on the aforementioned information, a construction period trip generation analysis was conducted to estimate daily peak PCE trips. It was found that the soil hauling during Stages 1 to 3 would generate the highest number of daily trips to and from the site. During the initial phase, as shown in Table 2, a maximum net increase of 104 daily 1-way PCE trips is estimated to and from the site, composed of 48 1-way soil truck trips, four 1-way delivery trips and two 1-way worker shuttle trips. During Stage 3, up to 58 daily vehicle trips would occur, composed of 48 1-way soil truck trips, four 1-way delivery trips and four 1-way worker shuttle trips, as shown in Table 2. Considering the PCE factor of 2.0 for the truck trips, this stage of construction would result in up to 108 daily PCE trips. The soil hauling trips would be spread across the day and are estimated to occur at up to three loads per hour (six 1-way trips). Employee shuttle trips would occur before soil hauling activities begin each day, and after they end. As such, site-generated traffic would be quite low during the weekday AM and PM peak hours.

### ***Potential Haul Routes***

Trucks traveling to and from the site will use a specific haul route, which will be defined once the storage site for the export soil has been definitely identified. Laydown Area 3 is a City-owned property at 9940 Jefferson Boulevard. Access to Laydown Area 3 would follow Hurricane Street, Canal Court, Galleon Street, Pacific Avenue, Washington Boulevard, Lincoln Boulevard, and other streets such as Slauson Avenue, Sepulveda Boulevard and Jefferson Boulevard. The final haul route will be selected in consultation with LADOT and Culver City.



## NEIGHBORHOOD STREET IMPACTS

This section assesses the likelihood of potential traffic impacts from construction activity on local streets within the study area. The City of Los Angeles has established threshold criteria to determine significant traffic impacts of a proposed project in its jurisdiction. Although the methodologies and the criteria to calculate volume-to-capacity (V/C) ratios for intersections are intended by LADOT to identify potential traffic impacts during operation, they can also be applied to construction periods.

Under the City of Los Angeles guidelines, a project would be considered to significantly impact a local residential street if the projected increase in daily traffic volumes is as follows:

<b>Projected Average Daily Traffic with Project (Final ADT)</b>	<b>Project-Related Increase in ADT</b>
0 to 999	120 or more
1,000 to 1,999	12% or more of final ADT
2,000 to 2,999	10% or more of final ADT
3,000 or more	8% or more of final ADT

Based on these guidelines, VAPP construction activity would not result in any significant traffic impacts on study area streets because the maximum number of daily project trips is estimated to be 108 1-way trips, which is below the minimum threshold volume considered significant.

## PROJECT IMPACT ANALYSIS – OPERATIONAL PERIOD

Once VAPP becomes operational, site-generated traffic is not expected to change. The current staffing level, two employees at all times, working in three eight-hour shifts each day, will be maintained. Thus, no additional traffic would be generated the impact would be considered less than significant.

## CMP AND FREEWAY ANALYSIS

*2010 Congestion Management Program (CMP) for Los Angeles County* (Metro, July 2010) provides procedures for conducting transportation impact analyses for the regional transportation system. The CMP requires that when an environmental impact report is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use these facilities. The CMP guidelines require that the first issue addressed is the determination of the geographic scope of the study area. The criteria for determining the study area for CMP arterial monitoring intersections and for freeway monitoring locations are:



- All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic.
- All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The CMP arterial monitoring intersection nearest to the project site is located at Lincoln and SR 90. Based on the project trip generation previously presented, the proposed project would not add more than 50 vehicles per hour (vph) at any CMP monitoring intersections during the peak hours, nor more than 150 1-way trips on a CMP freeway monitoring station. Thus, no further CMP analysis is required and these impacts are considered less than significant.

### **SUMMARY AND CONCLUSIONS**

Fehr & Peers conducted a trip generation assessment for the VAPP Project to evaluate the potential for the project to significantly impact traffic conditions, according to the City's adopted thresholds of significance. The key findings and conclusions of the study are summarized below:

- Construction of the proposed project would occur in six stages, which would result in temporary increases in traffic at the site for approximately 24 months between 2018 and 2020. The greatest number of daily trips would occur during Stages 1 and 2 when soil would be excavated from the site and exported, and in Stage 3 when a portion of it would be returned to the site as backfill. During each of these stages, an estimated 24 truckloads of soil would be taken from or delivered to the site per day.
- PCE factors were applied to the estimated number of soil and delivery truck trips to develop project trip generation estimates with PCE, and the estimated PCE trips were used in the traffic impact analysis. Trip generation estimates included employee trips, delivery truck trips and soil hauling truck trips. It is estimated that construction of the proposed project would generate up to 104 1-way daily PCE trips at the project site during Stages 1 and 2 and up to 108 1-way daily PCE trips during Stage 3. Daily trips during Stages 4 through 6 would be considerably lower.
- Traffic impacts during construction were found to be less than significant, based on the volume of traffic generated.

**TABLE 1  
EXISTING SURFACE STREET CHARACTERISTICS**

Street	From	To	Through Lanes		Median Type	Bicycle Facility	Speed Limit
			NB/EB	SB/WB			
Canal Court	Ballona Lagoon	Galleon Street	1	1	--	--	25
Galleon Street	Esplanade	Pacific Avenue	1	1	--	--	25
Hurricane Street	Esplanade	Pacific Avenue	1	1	--	--	25
Marquesas Way	Via Dolce	Via Marina	2	2	DY	--	25
Pacific Avenue	Washington Boulevard	Lighthouse Street	1	1	--	--	25
Via Dolce	Washington Boulevard	Marquesas Way	2	1	DY	LANES	35
Via Marina	Washington Boulevard	Marquesas Way	2	2	RM	--	40
Washington Boulevard	Pacific Avenue	Lincoln Boulevard	2	2	DY	LANES	35

Notes: RM = Raised Median      DY = Double Yellow Centerline

**TABLE 2  
DAILY TRIP GENERATION ESTIMATES BY CONSTRUCTION STAGE  
VENICE AUXILIARY PUMPING PLANT**

Stage	Stage Name	Duration [Days]	Daily Workers by Phase	Worker Trips at Site per Day *	Soil Haul Truck Trips per Day **	Other Truck Trips per Day	Total Daily 1-Way Vehicle Trips	Total Daily 1-Way PCE Trips
1-2	Mobilization/Site Prep	30	3	4		2	6	8
	Excavation/Shoring	95	8	4	48	2	54	104
3	Pump Station Foundation	50	20	8		2	10	12
	Pump Station and	245	20	8	48	2	58	108
4	Diversion Structure	64	8	4		2	6	8
5-6	Pump Station Integration	85	6	4		2	6	8

\* Assumes that employees will be shuttled to/from the project site after parking off-site. Capacity of shuttle is assumed to be 15 passengers or less.

\*\* 10,000 cubic yards of soil will be exported during Stages 1 and 2, including 2,300 CY to Laydown Area 1 and 7,700 CY to Laydown Area 3.

If needed, up to 3,850 CY will be imported (returned) to the site for backfill. The balance of the exported soil is expected to be used as cover at an area landfill.