

## 6.11 TRANSPORTATION AND TRAFFIC

This section describes the existing traffic in the project area, potential environmental impacts, recommended mitigation measures to help reduce or avoid impacts to traffic, and the level of significance after mitigation. The analysis in this section is supported by traffic data collection and calculations which are included as Appendix M of the Draft Environmental Impact Report (DEIR).

### 6.11.1 EXISTING CONDITIONS

This section summarizes existing traffic conditions in the project area and on the road system that provides access to and from Scholl Canyon Landfill (SCLF).

#### 6.11.1.1 General Characteristics of Scholl Canyon Landfill

The SCLF is located in the eastern portion of the City of Glendale and is operated by the Sanitation Districts of Los Angeles County (Sanitation Districts). The normal hours of operation at the SCLF can typically extend from 6:00 A.M. to 8:00 P.M. The SCLF Solid Waste Facility Permit allows the site to be open to the public for disposal of refuse and other permitted materials from 8:00 A.M. to 5:00 P.M., six days a week (Monday through Saturday) with the exception of certain holidays. After the SCLF closes to the public, refuse spreading and compaction operations are completed (usually by 6:00 P.M.). The existing permits allow a daily maximum of 3,400 tons per day (TPD) of refuse waste and an unlimited amount of green waste. When the Notice of Preparation (NOP) was circulated for the DEIR, the landfill accepted approximately 1,400 TPD of refuse waste or approximately 41 percent of the permitted refuse waste acceptance. Consequently, the baseline truck traffic is based on the acceptance of 1,400 TPD. Assuming the baseline tonnage continues into the future, the currently permitted landfill capacity is estimated to be exhausted in 2020. As such, 2020 is used as an interim year in the analysis of both Variations 1 and 2.

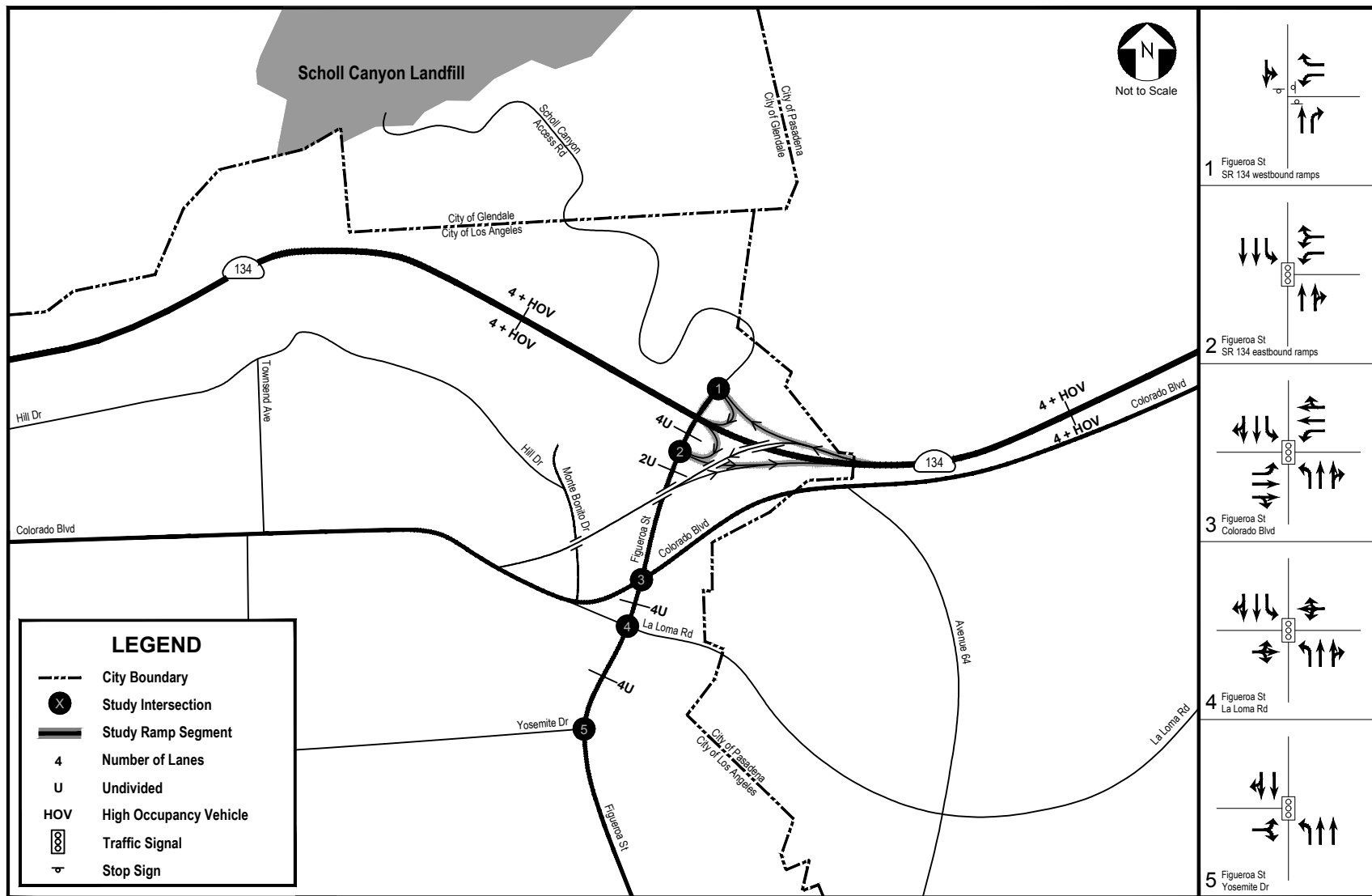
#### 6.11.1.2 Existing Circulation Network

The SCLF is served by an extensive existing roadway system which provides access to the landfill and to other existing developments and inter-regional traffic throughout the area. Figure 6.11-1 shows the surrounding roadway network, including locations of traffic control devices, lane configurations at key intersections and the number of lanes on major roads.

##### Current Roadway Characteristics

State Route (SR) 134 (SR-134) is a ten-lane east-west Freeway that provides regional access to the project site by providing access ramps at Figueroa Street. SR-134 at Figueroa Street has four mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction. SR-134 is a part of the Congestion Management Program (CMP) highway network. Based on the latest traffic counts maintained by the California Department of Transportation (Caltrans), the annual average daily traffic (AADT) near Figueroa Street is 212,000 (Caltrans 2009).

Figueroa Street is a Secondary Highway between SR-134 westbound ramps and SR-134 eastbound ramps and is a Collector Street between SR-134 eastbound ramps and Colorado Boulevard per the City of Los Angeles General Plan Circulation Element. Figueroa Street has a two-way left-turn lane (TWLTL) median between SR-134 westbound ramps and La Loma Road. Parking is only permitted on the west side of Figueroa Street between SR-134 eastbound ramps and Colorado Boulevard and on both sides of the street south of Colorado Boulevard. The posted speed limit is 35 miles per hour (mph).



Source: AECOM, 2011.

**Figure 6.11-1  
Existing Circulation Network**

Colorado Boulevard is a four-lane east-west Major Highway – Class II as classified by the City of Los Angeles and is a four-lane east-west Principal Arterial as classified by the City of Pasadena. Colorado Boulevard has a raised median east of Figueroa Street and a TWLTL median west of Figueroa Street. Parking is permitted on both sides of Colorado Boulevard east of Figueroa Boulevard and is not permitted west of Figueroa Street. The posted speed limit is 35 mph.

La Loma Road is a two-lane east-west Collector as classified by the City of Pasadena. The La Loma Road has no median, and parking is permitted on both sides of the road. The posted speed limit is 25 mph.

Yosemite Drive is a two-lane east-west Collector Street that terminates at Figueroa Street. Yosemite Drive has no median, and parking is permitted on both sides of the road. The posted speed limit is 25 mph.

The following describes the current intersection lane configuration and intersection control in the project area. The intersections are indexed as listed below and shown in Figure 6.11-1 to identify the intersections on the circulation network.

- Figueroa Street at SR-134 westbound ramps is an all-way stop-controlled (AWSC) three-legged intersection. One exclusive left-turn lane is provided on the westbound approach. One exclusive right-turn lane is provided on the northbound and westbound approaches. No marked crosswalks are provided at the intersection.
- Figueroa Street at SR-134 eastbound ramps is a signalized three-legged intersection. One exclusive left-turn lane is provided on the southbound approach. The westbound approach consists of one left-turn lane and one shared left-/right-turn lane. Marked crosswalks are available on the north and east legs of the intersection.
- Figueroa Street at Colorado Boulevard is a signalized four-legged intersection. One exclusive left-turn lane is provided on all approaches. Marked crosswalks are available on all legs of the intersection.
- Figueroa Street at La Loma Road is a signalized four-legged intersection. One exclusive left-turn lane is provided on the northbound and southbound approaches. Marked crosswalks are available on all legs of the intersection.
- Figueroa Street at Yosemite Drive is a signalized three-legged intersection. One exclusive left-turn lane is provided on the northbound approach. Marked crosswalks are available on all legs of the intersection.

#### 6.11.1.3 Existing Vehicular Traffic Volumes

Existing traffic counts were conducted on a typical weekday (Thursday) in September 2010 while nearby schools were in session. Intersection turning movement counts were conducted at the study intersections during the circulation network A.M. peak period of 7:00 A.M. to 9:00 A.M., the SCLF peak period of 1:00 P.M. to 3:00 P.M. and the circulation network P.M. peak period of 4:00 P.M. to 6:00 P.M. In order to accurately reflect the baseline truck traffic associated with the 1,400 TPD, truck traffic observed in 2006

was added to the 2010 counts. To account for the waste truck volumes, a passenger car equivalence (PCE) factor of 3.0, consistent with the Highway Capacity Manual (HCM 2000), was applied to the all truck trips to account for the effects of their larger sizes and slower movements on traffic operations. This assumption is very conservative because many of the trucks using the landfill are the size of a pickup and closer to a PCE of 1.0. Figure 6.11-2 summarizes the existing traffic volumes for existing conditions. Existing traffic volumes are included in Appendix M (Attachment A) of the DEIR.

#### 6.11.1.4 Existing Level of Service

This section summarizes the existing level of service (LOS) for the intersections and ramp segments within the project area. Refer to Section 6.11.3.8 (Level of Service) for a description of LOS definitions for each type of transportation facility.

##### Intersections

As shown in Table 6.11-1, all intersections currently operate at acceptable LOS C or better for existing conditions for all analysis periods, with the exception of Figueroa Street at SR-134 westbound ramps. At this location, current weekday A.M. peak hour operates at unacceptable LOS E, although the other time periods operate acceptably (SCLF peak hour operates at LOS A and P.M. peak hour operates at LOS C). The detailed LOS calculation worksheets are included in Appendix M (Attachment B) of the DEIR.

**TABLE 6.11-1. INTERSECTION LEVELS OF SERVICE – EXISTING CONDITIONS**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>1</sup>	<b>0.965</b>	<b>E</b>	0.501	A	0.711	C
2	Figueroa Street at SR-134 eastbound ramps	0.619	B	0.470	A	0.588	A
3	Figueroa Street at Colorado Boulevard	0.695	B	0.436	A	0.585	A
4	Figueroa Street at La Loma Road	0.651	B	0.473	A	0.717	C
5	Figueroa Street at Yosemite Drive	0.691	B	0.467	A	0.747	C

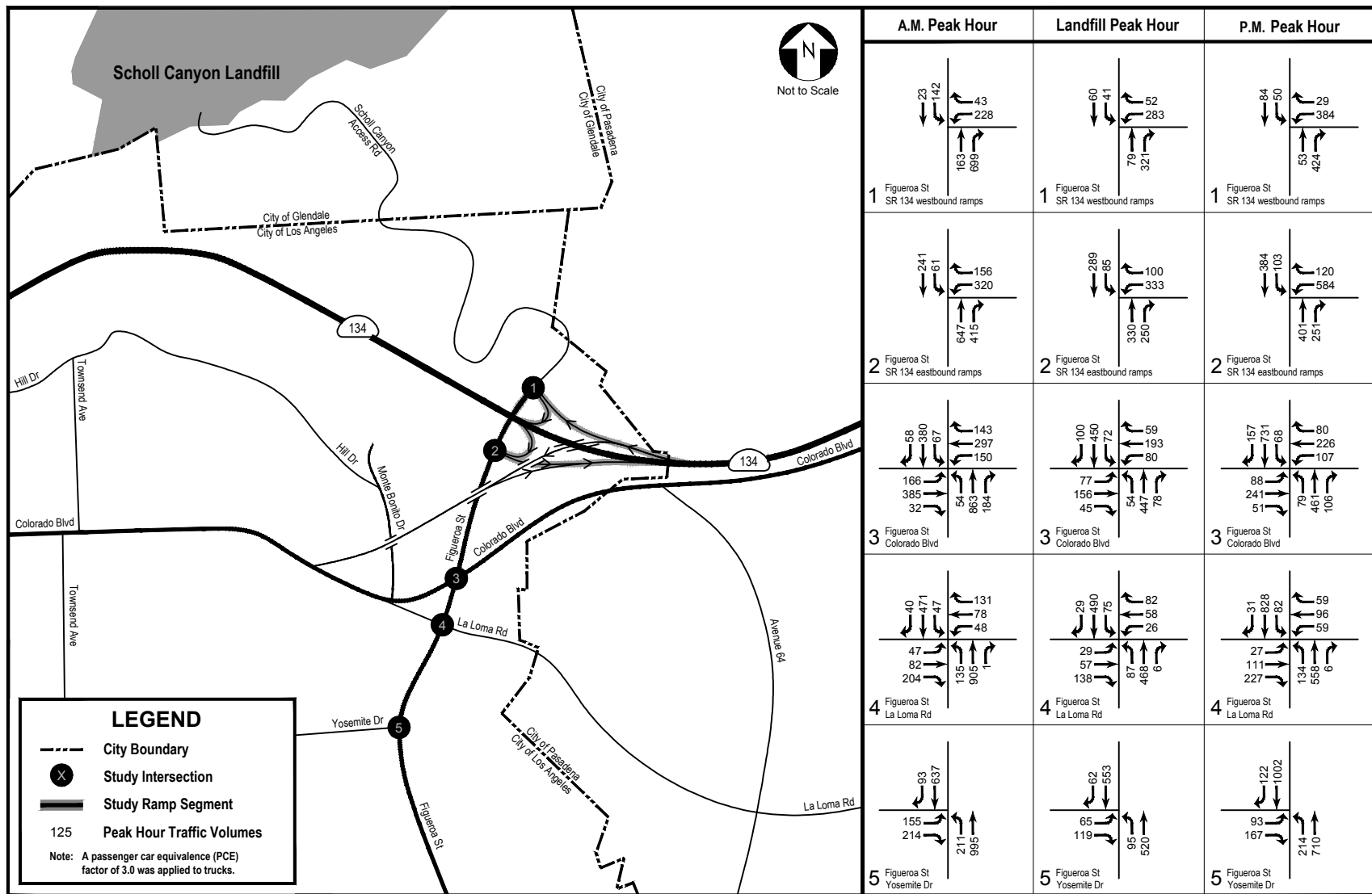
Source: AECOM, 2011.

Notes:

**Bold** items indicate intersection operates at below-standard LOS.

<sup>1</sup> Unsignalized intersection

ICU – Intersection Capacity Utilization. Methodology described in Section 6.11.3.8.



Source: AECOM, 2011.

**Figure 6.11-2**  
**Existing Traffic Volumes**

### Ramp Segments

As shown in Table 6.11-2, all ramp segments currently operate at acceptable LOS A for existing conditions for all three study periods. With these conditions, the ramp segments experience little to no delay. It should be noted that the on-ramps are not metered during the circulation network off-peak periods (i.e., during the SCLF peak hour period). When not metered, the available capacity increases as vehicles are not required to stop.

**TABLE 6.11-2. RAMP SEGMENT LEVELS OF SERVICE – EXISTING CONDITIONS**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY (vphpl)	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	705	0.470	A	N/A	N/A	N/A	443	0.295	A
	Non-Metered <sup>1</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	334	0.148	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	243	0.162	A	298	0.198	A	397	0.265	A
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	473	0.526	A	N/A	N/A	N/A	298	0.331	A
	Non-Metered <sup>[1]</sup> One Lane	1,500	N/A	N/A	N/A	298	0.199	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	352	0.235	A	414	0.276	A	657	0.438	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> The on-ramps are not metered during the circulation network off-peak periods.

VPHPL – vehicles per hour per lane

V/C – volume to capacity ratio

### 6.11.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, implementation of the proposed project would result in a significant adverse impact on the environment related to transportation and traffic if it would:

- 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.
- 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.

### 6.11.3 METHODOLOGY

The following section describes the transportation and circulation methodology used to forecast project traffic and to analyze potential impacts on the circulation system in the project area.

The Los Angeles County Metropolitan Transportation Authority (Metro) has established LOS E or better as the acceptable LOS for transportation facilities on the CMP highway network. Any transportation facility on the CMP highway network operating at LOS F is considered to be deficient.

The City of Los Angeles does not specify a target LOS for transportation facilities. In general, a transportation facility in an urbanized area is typically designed to operate at LOS D or better. For this traffic analysis, LOS D or better is designated as the acceptable LOS for intersections in the City of Los Angeles. Any intersection in the City of Los Angeles operating at LOS E or F was considered to be deficient.

A significant adverse traffic impact would occur on a CMP highway network if implementation of the proposed project would result in the following:

- The ramp segment to operate at an unacceptable LOS and an increase in the V/C ratio of greater than or equal to 0.02 (based on Los Angeles County CMP Guidelines).

A significant adverse traffic impact would occur in the City of Los Angeles if implementation of the proposed project would result in one or more of the following at any signalized intersections (based on City of Los Angeles and County of Los Angeles Guidelines):

- The intersection to operate at LOS C with the proposed project and an increase in the ICU of greater than or equal to 0.04.
- The intersection to operate at LOS D with the proposed project and an increase in the ICU of greater than or equal to 0.02.
- The intersection to operate at LOS E or F with the proposed project and an increase in the ICU of greater than or equal to 0.01.

A significant adverse traffic impact would occur in the City of Los Angeles if implementation of the proposed project would result in one or more of the following at any unsignalized intersections (based on City of Los Angeles and County of Los Angeles Guidelines)

- The average delay per vehicle to increase by 10 or more seconds at an unsignalized intersection that operates at LOS C with the project.
- The average delay per vehicle to increase by 7.5 or more seconds at an unsignalized intersection that operates at LOS D with the project.
- The average delay per vehicle to increase by 5 or more seconds at an unsignalized intersection that operates at LOS E or LOS F with the project.

The proposed project could also incur a significant adverse traffic impact if the LOS changes from acceptable LOS A through D at no project conditions to unacceptable LOS E/F with the proposed project at signalized and unsignalized intersections, regardless of ICU or delay increases.

### 6.11.3.1 Assumptions

The following six assumptions (based on information provided by the Sanitation Districts) were made in this traffic analysis. To be conservative, these assumptions are based on the 85<sup>th</sup> percentile day (out of 100 days, the 85<sup>th</sup> highest day in terms of truck trips) rather than the average day.

- Refuse truck trips would increase in proportion to the increase in refuse tonnage accepted (3,400 TPD proposed/1,400 TPD baseline = 2.4 increase factor).
- Soil vehicle trips would match the overall site needs for soil accounting for soil already stockpiled on site and soil generated by future excavation (see Section 6.11.3.4).
- Green waste truck trips would increase at a rate of one percent per year (the approximate population growth rate of the region).
- Employee trips would increase per estimated staffing needs (see Section 6.11.3.4).
- The employees would arrive and leave outside of the circulation network A.M. and P.M. peak periods.
- The projected truck trip distributions during the day and at various intersections would remain the same as existing conditions.
- The SCLF peak period between 1:00 P.M. and 3:00 P.M. would remain the same as existing conditions.

### 6.11.3.2 Traffic Counts

AECOM conducted traffic counts through a subcontract with National Data & Surveying Services. The intersection turning counts were taken on Thursday, September 16, 2010. The detailed traffic counts are provided in Appendix M (Attachment A) of the DEIR.

### 6.11.3.3 Future Background Traffic Volumes

The year 2020 is used as an interim year in the analysis of both Variations 1 and 2. Future background traffic volumes for years 2020, 2034 (horizon year for Variation 1) and 2040 (horizon year for Variation 2) were determined by applying an ambient growth rate factor and adding cumulative project traffic. Cumulative project traffic is traffic generated by other projects that currently do not exist but which will exist when the proposed project is complete and in operation.

Based on discussions with City of Glendale and City of Pasadena staff, the Cities of Glendale and Pasadena collectively did not have any cumulative projects near SCLF that would add a substantial amount of traffic to the project area. The City of Los Angeles provided a cumulative project list. From this list, there were six cumulative projects that could add traffic to the project area. Section 7.2 (Cumulative Projects in the Scholl Canyon Project Area) of the DEIR provides a description and the current status of the cumulative projects. Cumulative projects were evaluated by (1) proximity to the project site and (2) likelihood of the cumulative project traffic utilizing any of the project area intersections. Based on this evaluation and the current status of the cumulative projects and discussions with city staff, the cumulative projects were estimated to add only nominal traffic to the project area. Therefore, no additional manual assignment of traffic through the analysis locations was necessary for



this analysis. With the absence of substantial cumulative projects in the project area, a general ambient growth rate is appropriate for capturing and estimating future traffic conditions in the project area.

The ambient growth factors listed in the following table are from Exhibit D-1 in the 2010 CMP for the City of Glendale and were used in this traffic analysis. The growth factors of 1.055 (from 2010 to 2030) and 1.068 (from 2010 to 2040) percent per year were utilized to obtain the appropriate growth rates for 2034 and 2040 (Variations 1 and 2, respectively).

<b>Time</b>	<b>CMP Growth Factor</b>
2010 to 2020	1.027
2010 to 2030	1.055
2010 to 2035	1.068
2010 to 2034	1.065 (by interpolation)
2010 to 2040	1.081 (by extrapolation)

#### 6.11.3.4 Project Trip Generation

Project trip generation is defined as the number of trips that originate or terminate at a project site. The amount of trips generated at the SCLF is dependent on the amount of waste and other materials accepted at the landfill on a daily basis and the number of employees. When the NOP was circulated, the landfill accepted an annual average of approximately 1,400 TPD of refuse waste.

In 2006 on the 85<sup>th</sup> percentile day, the landfill generated 1,056 daily round truck trips for refuse, 338 daily round trips for soil and 288 daily round trips for green waste for a total of 1,682 daily round truck trips. Under the same conditions, the landfill employed 31 workers that generated 62 daily round trips. This corresponds to a total raw trip generation of 1,744 for existing conditions as shown in Table 6.11-3.

For projects in which trucks are the main source of traffic, a PCE factor of 3.0 is applied to the larger trucks to account for the effects of their larger sizes and slower movements on traffic operations. A PCE factor of 1.0 was applied to smaller trucks and vehicles such as flatbed pick-up trucks and employee vehicles. In 2006, 55% of refuse and green waste traffic consisted of smaller vehicles (PCE = 1.0) and the remaining traffic was categorized as larger trucks (PCE = 3.0). This distribution results in a weighted average (or aggregate) PCE of 1.9, which was applied to both refuse and green waste vehicles. All soil trips were assigned a PCE factor of 3.0.

To forecast worst-case trip generation for the proposed project Variations, it was assumed that the SCLF would accept its maximum permitted tonnage of 3,400 TPD and that the number of round trips would increase by 2.4 (3,400 TPD future/1,400 TPD baseline). For soil, a soil balance was prepared in which soil currently stockpiled was subtracted from future soil needs to determine the amount of imported soil required. For Variation 2, the amount of soil obtained from the hillside excavation was also subtracted from future soil need. The resulting soil need was distributed over the minimum years of operation (i.e., assuming the landfill receives maximum permitted tonnage every day) to arrive at a conservative daily amount. Ultimately, Variation 1 resulted in more soil trips per day and this number was conservatively used for future projections under both variations. Soil need at the site was estimated to increase to a maximum of 184 trips per day.

Green waste truck trips were projected by applying a one percent per year growth rate to the green waste accepted at the 85<sup>th</sup> percentile day in 2006. The growth in green waste trips was considered to be approximately the same for the two variation years. The Sanitation Districts estimate that the landfill would have 40 employees under either variation. Since employees are anticipated to arrive and leave

outside of the peak periods, employee traffic was not included in the peak hour analysis. See Table 6.11-3 for the projected raw trip and PCE generation for years 2020, 2034 and 2040.

**TABLE 6.11-3. SCHOLL CANYON LANDFILL TRIP GENERATION**

YEAR	TRIP GENERATOR	PCE <sup>1</sup>	TRIP GENERATION <sup>2</sup>							
			Daily		A.M. Peak Hour		Landfill Peak Hour		P.M. Peak Hour	
			Raw	PCE	Raw	PCE	Raw	PCE	Raw	PCE
Existing Conditions	Refuse Trucks	1.9	1,056	2,006	116	220	142	270	100	190
	Soil Trucks	3.0	338	1,014	48	144	48	144	48	144
	Green Waste Trucks	1.9	288	547	30	57	44	84	42	80
	Employees	1.0	62	62	0	0	0	0	0	0
	Total		1744	3,630	194	421	234	498	190	414
2020	Refuse Trucks	1.9	2,534	4,815	282	536	344	654	242	460
	Soil Trucks	3.0	472	1,416	68	204	68	204	68	204
	Green Waste Trucks	1.9	331	629	34	65	50	95	48	91
	Employees	1.0	80	80	0	0	0	0	0	0
	Total		3,417	6,940	384	805	462	953	358	755
2034 and 2040	Refuse Trucks	1.9	2,534	4,815	282	536	344	654	242	460
	Soil Trucks	3.0	472	1,416	68	204	68	204	68	204
	Green Waste Trucks	1.9	404	767	42	80	62	118	58	110
	Employees	1.0	80	80	0	0	0	0	0	0
	Total		3,490	7,079	392	820	474	976	368	774

Source: AECOM, 2011.

Notes:

<sup>1</sup> Aggregate PCE

<sup>2</sup> For refuse and green waste, peak hourly values were obtained from the 2006 data set. For soil, peak hourly values were estimated using the daily trip values and assuming that soil trucks arrive at the site over a 7-hour window within the 9-hour operations day.

### 6.11.3.5 Proposed Project Trip Distribution

Project trip distribution is defined as the general directions of project-related traffic on various road segments and intersections in the project area. As discussed previously, it was assumed that the truck distributions in the future will remain the same as existing conditions. To establish the existing truck trip distributions during the A.M., landfill and P.M. peak periods, National Data & Surveying Services tabulated the waste hauling trucks separately from the general traffic during their September 2010 traffic counts.

Analysis of the 2006 truck data maintained by the Sanitation Districts showed that approximately 35 percent of the truck trips originated in locations west of SCLF and that approximately 65 percent of the truck trips originated in locations east of SCLF. This distribution was assumed to remain consistent with current 2010 conditions. The locations west of SCLF include the City of Glendale, parts of the City of La Cañada-Flintridge and the unincorporated communities of La Crescenta and Montrose. The locations east of SCLF include the Cities of Pasadena, San Marino, Sierra Madre, South Pasadena, parts of the City of La Cañada-Flintridge, and the unincorporated communities of Altadena and East Pasadena.

Analysis of the traffic counts indicated that approximately 95 percent of the refuse trucks accessed SCLF via SR-134. The other five percent of the refuse trucks accessed SCLF via Figueroa Street and primarily served the local communities close to SCLF in the City of Pasadena.

The traffic counts, however, also showed that the trip distribution percentages varied throughout the day. In general, the majority of the refuse trucks in the morning originated in locations west of SCLF, and the majority of the refuse trucks in the afternoon originated in locations east of SCLF. Figure 6.11-3 shows the proposed trip distributions for the waste trucks accessing SCLF based on the existing trip distributions. It should be noted that green waste trucks are assumed to follow the same distribution patterns as the refuse trucks.

Trip distribution of the SCLF employees is based on the general locations of other land uses to which employee trips would originate. Project trip distribution was based on local and sub-regional traffic routes to and from the project site. As such, approximately 40 percent of employee trips would originate from the west via the SR-134 eastbound, 40 percent from the east via the SR-134 westbound, and 20 percent from the south via Figueroa Street. Although employee trips were not included in the analysis, Figure 6.11-4 shows the proposed trip distributions for the SCLF employees for disclosure purposes. As such, no trips are shown in Figure 6.11-4 since all employee trips were assumed to occur outside the peak hours.

#### 6.11.3.6 Proposed Project Trip Assignment

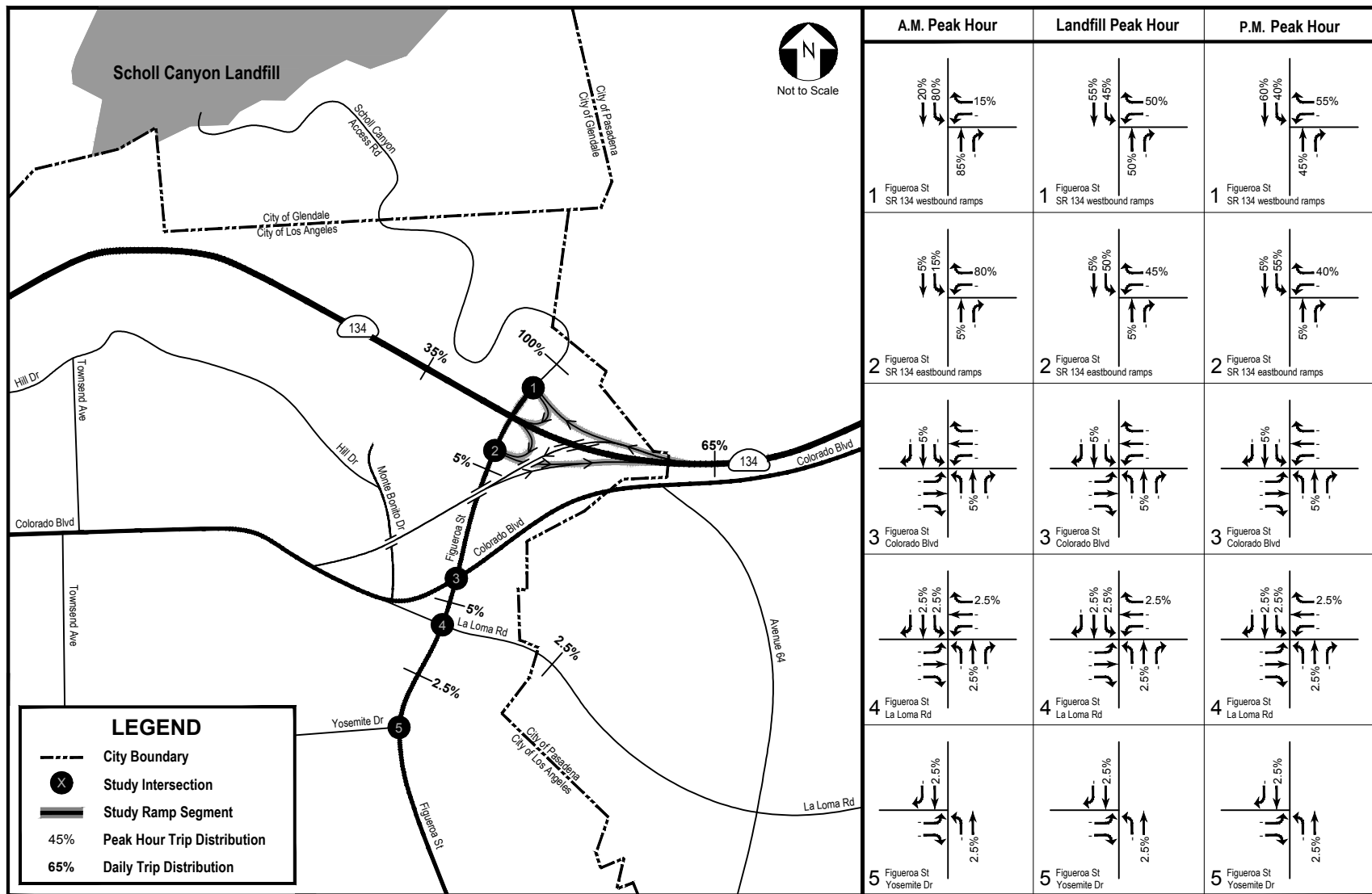
Project trip assignment is defined as the specific routes or travel paths the project-related traffic will use based on the project trip distribution. The major factors affecting route selection are the minimum-time path and minimum-distance path. Often, the minimum-time and minimum-distance paths are the same. When the two paths are different, the minimum-time path will usually take precedence, assuming all other factors are equal. Project trips were assigned to the road system based on the pattern of existing trip distribution for the waste trucks and employees. The results of the project trip assignments for year 2020 are shown in Figure 6.11-5. The results of the project trip assignments for years 2034 and 2040 are shown in Figure 6.11-6.

#### 6.11.3.7 Project Area

The project area for the traffic analysis of the proposed project was determined based on the proposed trip generation, existing trip distribution and the proposed trip assignment discussed above. Initially, the project area included the intersections of Figueroa Street at SR-134 westbound ramps, Figueroa Street at SR-134 eastbound ramps and Figueroa Street at Colorado Boulevard. After analyzing the traffic counts, the project area was expanded to include the intersections of Figueroa Street at La Loma Road and Figueroa Street at Yosemite Drive because the traffic counts showed that the refuse trucks traveled on Figueroa Street south of Colorado Boulevard.

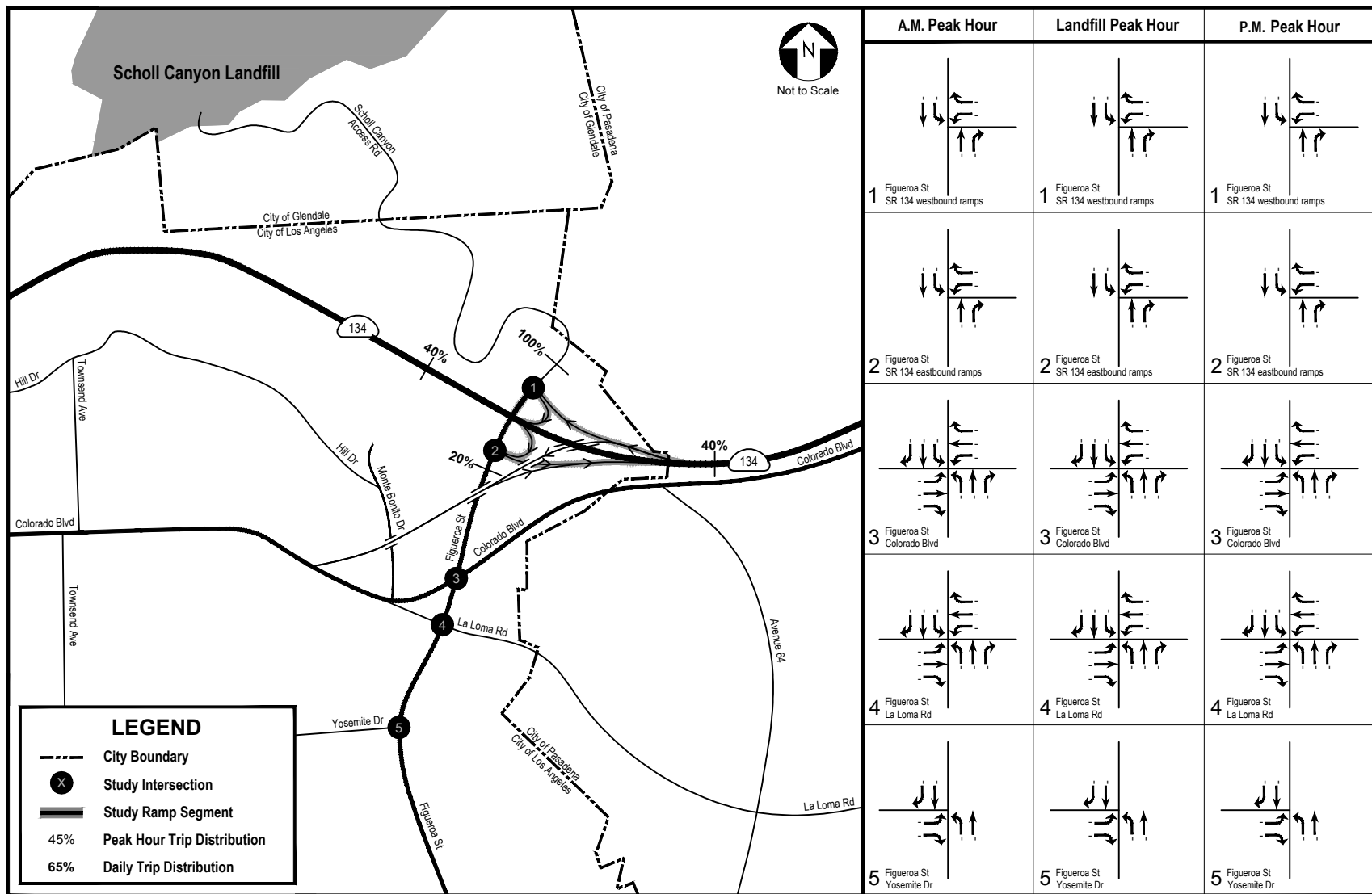
#### 6.11.3.8 Level of Service

The concept of LOS was developed to evaluate the operating conditions of the circulation network. The HCM defines LOS as a qualitative measure which describes the operational conditions of a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience. LOS is rated A through F, with LOS A representing the best operating conditions and LOS F representing the worst. Specific criteria are used to define LOS for different types of facilities as discussed below. These criteria can also vary among cities and transportation agencies.



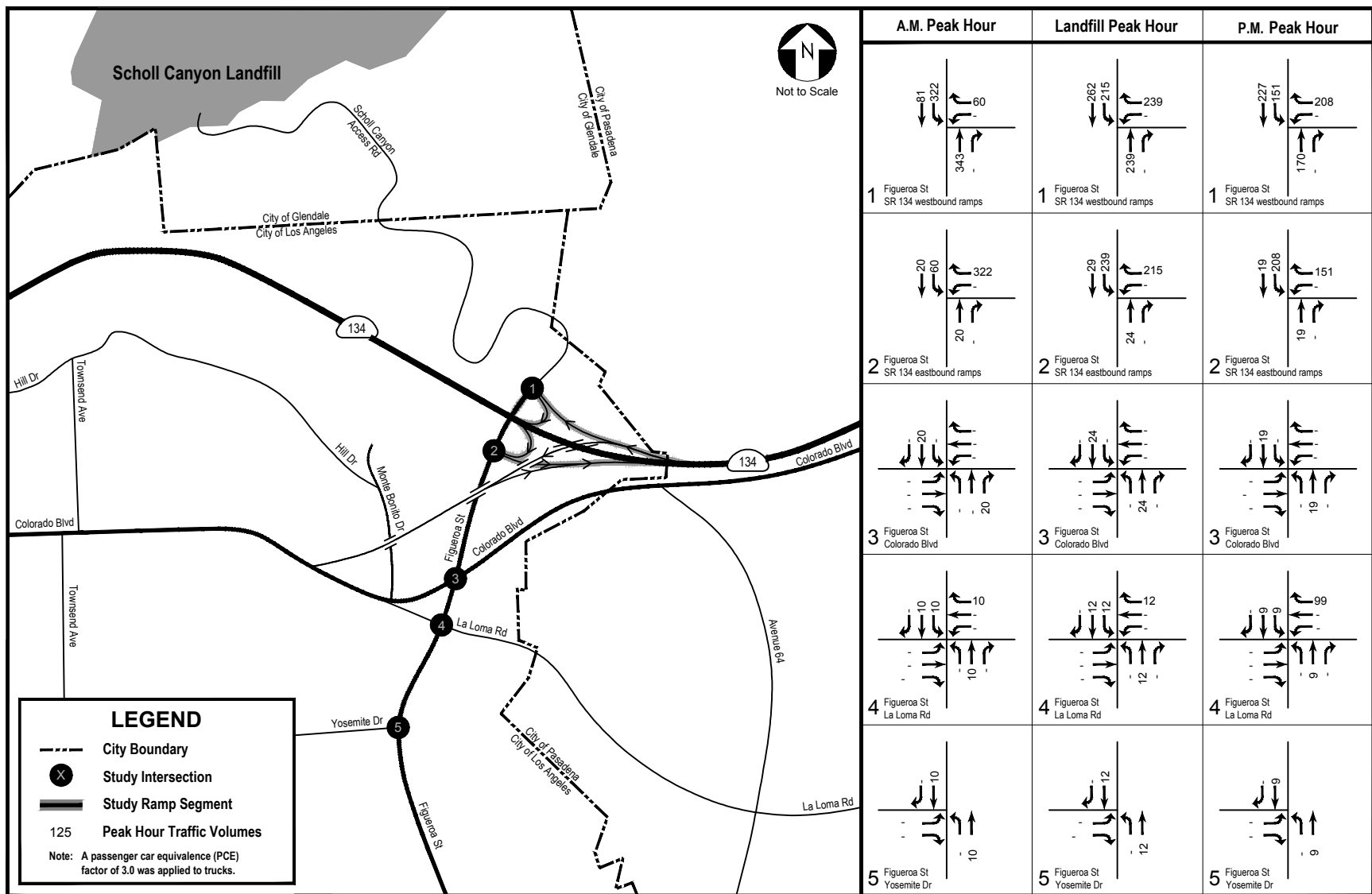
Source: AECOM, 2011.

**Figure 6.11-3**  
**Proposed Project Trip Distribution - Waste Trucks**



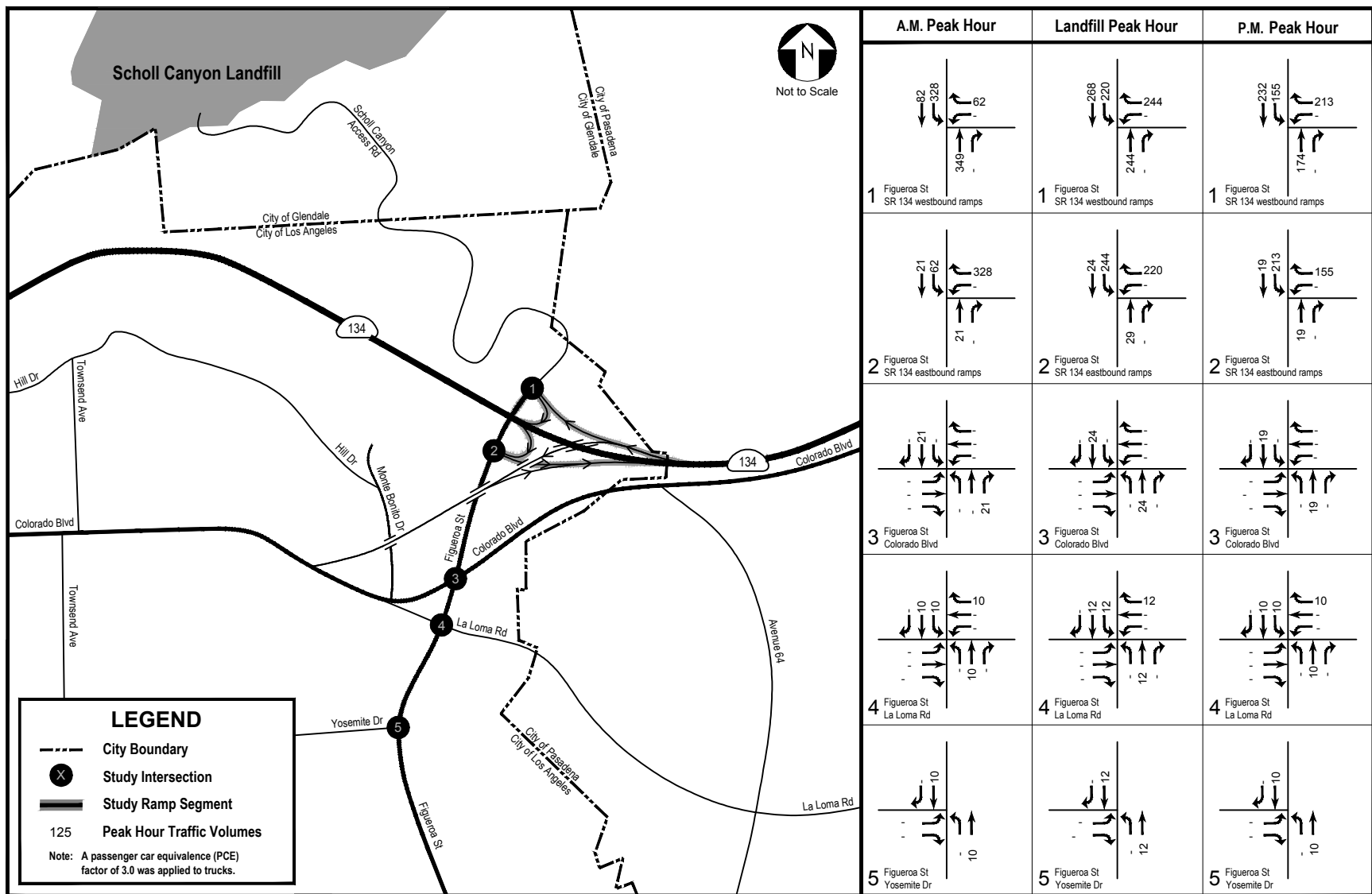
Source: AECOM, 2011.

**Figure 6.11-4**  
**Proposed Project Trip Distribution - Employees**



Source: AECOM, 2011.

**Figure 6.11-5**  
**Proposed Project Trip Assignment - 2020**



Source: AECOM, 2011.

**Figure 6.11-6**  
**Proposed Project Trip Assignment - 2034 and 2040**

### Intersections

Intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology adopted by the City of Los Angeles. The ICU value is a quantitative ratio which compares intersection volume to capacity. Based on the ICU, intersection LOS is defined as shown in Table 6.11-4.

**TABLE 6.11-4. LEVEL OF SERVICE CRITERIA – INTERSECTIONS**

LOS	DESCRIPTION	ICU
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	0.000 – 0.600
B	VERY GOOD. An occasional approach is fully utilized; mainly drivers begin to feel somewhat restricted within groups of vehicles.	0.601 – 0.700
C	GOOD. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	0.701 – 0.800
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	0.801 – 0.900
E	POOR. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	0.901 – 1.000
F	FAILURE. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	Greater than 1.000

Source: Los Angeles Department of Transportation, *Los Angeles Department of Transportation Traffic Study Policies and Procedures*, 2002.

The ICU methodology for this analysis used standard parameters currently followed by the City of Los Angeles. These standard parameters include default saturation flow rates defined as the maximum number of vehicles that can pass through a lane per hour of green time at a signalized intersection. The parameters also include clearance interval defined as a percentage of the overall intersection capacity utilized by vehicles to clear the intersection during the amber or yellow signal. The City of Los Angeles uses a default saturation flow rate of 1,600 vehicles per hour per lane (vphpl) for all through and turn lanes. However, the default saturation flow rate for dual left turn lanes is 2,880 vehicles. A clearance interval of 10 percent was used for all intersections.

As requested by Caltrans, intersections at Caltrans ramps were also analyzed using the HCM methodology for signalized and unsignalized intersections. The HCM establishes a procedure for calculating the control delay measured in seconds per vehicle (sec/veh) at signalized and unsignalized intersections. The LOS criteria based on the HCM methodology for signalized and unsignalized intersections are shown in Table 6.11-5.

**TABLE 6.11-5. LEVEL OF SERVICE CRITERIA BASED ON THE HIGHWAY CAPACITY MANUAL METHODOLOGY – INTERSECTIONS AT CALTRANS RAMPS**

LOS	DESCRIPTION	CONTROL DELAY (sec/veh) <sup>1</sup>	
		Signalized	Unsignalized
A	Very low delay. Most vehicles do not stop at the intersection.	≤ 10	≤ 10
B	More vehicles stop than with LOS A, causing higher delays.	>10 – 20	>10 – 15
C	The number of vehicles stopping becomes significant, though many still pass through the intersection without stopping.	> 20 – 35	> 15 – 25
D	The influence of congestion becomes more noticeable. Many vehicles stop and the proportion of vehicles not stopping declines.	> 35 – 55	> 25 – 35
E	Results in delay considered to be unacceptable.	> 55 – 80	> 35 – 50



**TABLE 6.11-5. LEVEL OF SERVICE CRITERIA BASED ON THE HIGHWAY CAPACITY MANUAL METHODOLOGY – INTERSECTIONS AT CALTRANS RAMP**

LOS	DESCRIPTION	CONTROL DELAY (sec/veh) <sup>1</sup>	
		Signalized	Unsignalized
F	Considered unacceptable to most drivers, often occurs with oversaturation, when arriving traffic exceeds the capacity at the intersection.	> 80	> 50

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

Notes:

<sup>1</sup> sec/veh: seconds per vehicle.

### Ramp Segments

The maximum hourly ramp capacities are based on the ramp configurations. The factors affecting the on-ramp capacities include the number of merging lanes with the mainline freeway, the number of metered lanes and if a preferential HOV lane exists at the meter. The factors affecting the off-ramp capacities include the number of diverging lanes with the mainline freeway and the number of auxiliary lanes. In general, the capacity of a metered on-ramp is 900 vphpl, and the capacity of a non-metered on-ramp or off-ramp is 1,500 vphpl.

In this analysis, LOS for ramp segments was calculated by comparing the A.M., landfill and P.M. peak hour traffic volumes to the segment capacity. This comparison yields a volume-to-capacity ratio (V/C ratio) from which the LOS is determined. Table 6.11-6 shows the maximum hourly ramp capacities for the ramp configurations and different LOS designations.

**TABLE 6.11-6. LEVEL OF SERVICE CRITERIA – MAXIMUM HOURLY TRAFFIC FOR RAMP SEGMENTS**

RAMP CONFIGURATION	LOS A (V/C=0.6)	LOS B (V/C=0.7)	LOS C (V/C=0.8)	LOS D (V/C=0.9)	LOS E (V/C=1.0)	LOS F (V/C>1.0)
<b>Non-Metered On-Ramps</b>						
– One merge lane	900	1,050	1,200	1,350	1,500	> 1,500
– Two lanes that tapers to one merge lane (1.5 lanes)	1,350	1,575	1,800	2,025	2,250	> 2,250
– Two merge lanes	1,800	2,100	2,400	2,700	3,000	> 3,000
<b>Metered On-Ramps</b>						
– One merge lane with one mixed-flow lane at the meter	540	630	720	810	900	> 900
– One merge lane with one mixed-flow lane and one HOV preferential lane at the meter (1.2 lanes)	648	756	864	972	1,080	> 1,080
– One merge lane with two mixed-flow lanes at the meter (1.5 lanes)	900	1,050	1,200	1,350	1,500	> 1,500
– Two merge lanes with two mixed-flow lanes at the meter	1,080	1,260	1,440	1,620	1,800	> 1,800
<b>Off-Ramps</b>						
– One diverge lane	900	1,050	1,200	1,350	1,500	> 1,500
– Two diverge lanes with one auxiliary lane (1.5 lanes)	1,350	1,575	1,800	2,025	2,250	> 2,250
– Two diverge lanes with two auxiliary lanes	1,800	2,100	2,400	2,700	3,000	> 3,000

Source: AECOM, 2011.

### 6.11.3.9 Signal Warrant Analysis

Traffic signal warrants (minimum criteria warranting further consideration of a traffic signal) were used in this analysis to evaluate the need for signalization and were based on the methodology described in the *California Manual on Uniform Traffic Control Devices (CA MUTCD)* (Caltrans, 2006). The *CA MUTCD* provides eight warrants for evaluating the installation of traffic signals. Warrant 3, Part B (Peak Hour Warrant) is commonly used in conjunction with peak-hour intersection analysis. The Peak Hour Warrant is satisfied if the peak-hour volumes on the major (total for both approaches) and minor (highest approach) streets exceed the minimum threshold volumes prescribed by the warrant. The minimum threshold volumes depend on the lane configurations of the major and minor streets. As a general industry standard or practice for installation of traffic signals, the minimum threshold volume is 100 vehicles per hour on the minor approach (with one lane per direction) if the major street has two or more lanes per direction and a peak-hour volume of at least 1,700 vehicles per hour in both directions. In this case, the major street approach is Figueroa Street so any minor cross street with Figueroa Street carrying a per hour volume of 100 or more is likely to warrant installation of a traffic signal.

### 6.11.4 IMPACTS

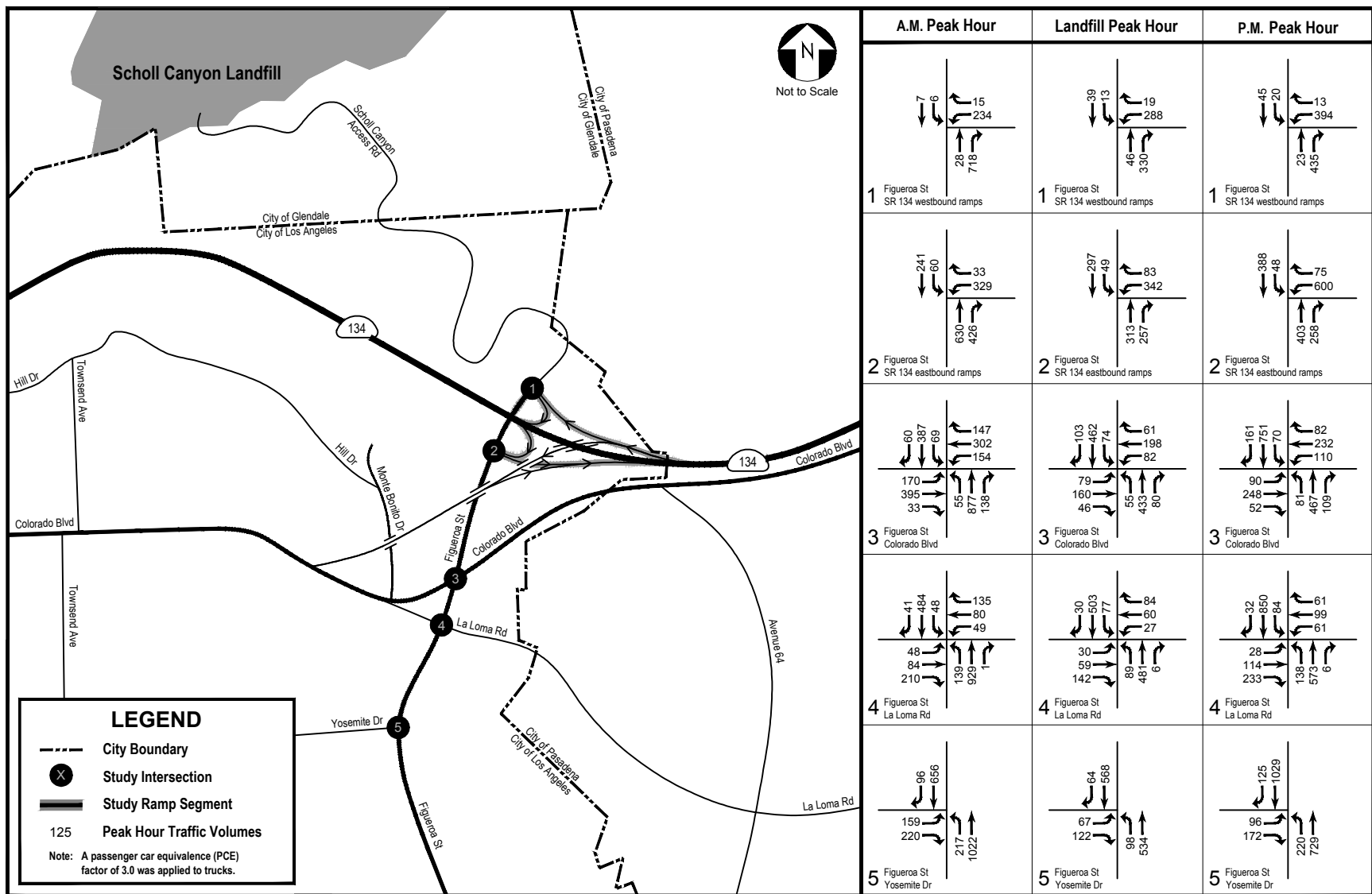
#### 6.11.4.1 Variation 1

#### 2020 Interim Year

The interim year 2020 (without existing truck operation) was analyzed to determine the effects of the full project (6,940 daily PCE trips with 805, 953 and 755 PCE trips during the A.M., landfill and P.M. peak hours, respectively). As discussed in Section 6.11.3.3 (Future Background Traffic Volumes), traffic volumes for 2020 without the proposed project were calculated by applying a growth rate of 1.027 percent per year to the existing 2010 traffic volumes and adding cumulative project traffic. As noted above, existing trucks were subtracted from existing 2010 traffic volumes to reflect the expiration of the current permit. The cumulative projects in the Cities of Glendale, Los Angeles and Pasadena would not add cumulative project traffic to the project area. Figures 6.11-7 and 6.11-8 show the traffic volumes in 2020 without and with Variation 1, respectively.

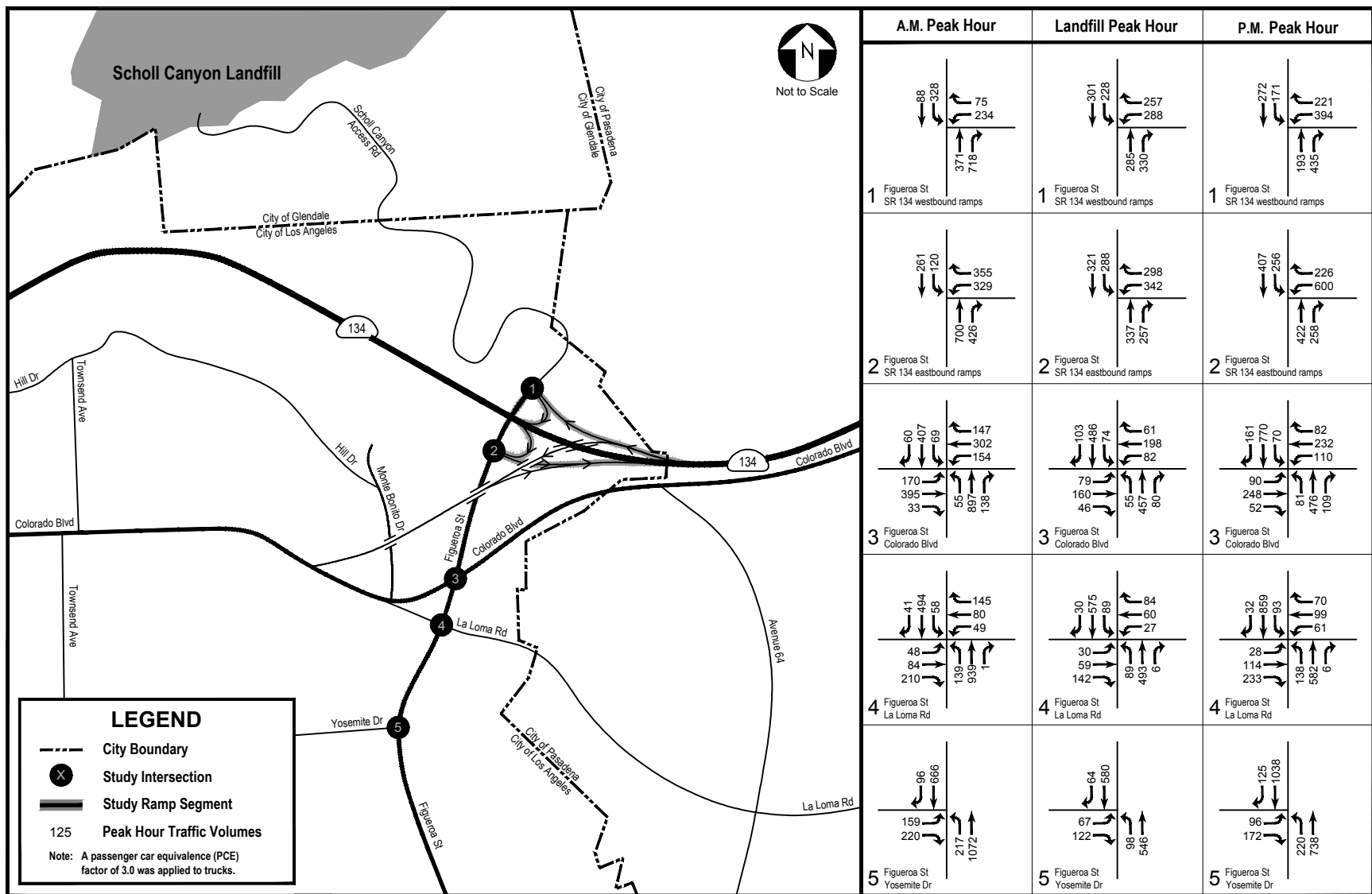
#### *Intersections*

As shown in Table 6.11-7, all intersections would operate at acceptable LOS C or better in 2020 without Variation 1 with the exception of Figueroa Street at SR-134 westbound ramps. During the A.M. peak hour, this location operates at an ICU of 0.931, which is an unacceptable LOS E. The detailed LOS calculation worksheets are included in Appendix M (Attachment C) of the DEIR.



Source: AECOM, 2011.

**Figure 6.11-7**  
**Traffic Volumes - 2020 without the Project**



Source: AECOM, 2011.

**Figure 6.11-8**  
**Traffic Volumes - 2020 with the Project**

**TABLE 6.11-7. INTERSECTION LEVELS OF SERVICE – 2020 WITHOUT VARIATION 1 (NO PROJECT ALTERNATIVE)<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>0.931</b>	<b>E</b>	0.495	A	0.706	C
2	Figueroa Street at SR-134 eastbound ramps	0.596	A	0.442	A	0.548	A
3	Figueroa Street at Colorado Boulevard	0.707	C	0.437	A	0.598	A
4	Figueroa Street at La Loma Road	0.665	B	0.483	A	0.734	C
5	Figueroa Street at Yosemite Drive	0.708	C	0.477	A	0.766	C

Source: AECOM, 2011.

Notes:

**Bold** items indicate intersection will operate at below-standard LOS.<sup>1</sup> 2020 without Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.<sup>2</sup> Unsignalized intersection

As shown in Table 6.11-8, all project area intersections would continue to operate at acceptable LOS C or better in 2020 with Variation 1 during all of the peak hours with the exception of Figueroa Street at the SR-134 westbound ramps. At this location, the weekday A.M. peak hour conditions would worsen from LOS E to LOS F and the landfill and P.M. peak hours would worsen from acceptable conditions to LOS F and LOS E, respectively. The detailed LOS calculation worksheets are included in Appendix M (Attachment D) of the DEIR.

**TABLE 6.11-8. INTERSECTION LEVELS OF SERVICE – 2020 WITH VARIATION 1<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>1.101</b>	<b>F</b>	<b>0.983</b>	<b>E</b>	0.861	D
2	Figueroa Street at SR-134 eastbound ramps	0.749	C	0.666	B	0.731	C
3	Figueroa Street at Colorado Boulevard	0.713	C	0.444	A	0.604	B
4	Figueroa Street at La Loma Road	0.674	B	0.487	A	0.737	C
5	Figueroa Street at Yosemite Drive	0.711	C	0.481	A	0.768	C

Source: AECOM, 2011.

Notes:

**Bold** items indicate intersection will operate at below-standard LOS.<sup>1</sup> 2020 with Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.<sup>2</sup> Unsignalized intersection

As shown in Table 6.11-9, implementation of Variation 1 would create a significant adverse impact to the intersections of Figueroa Street at SR-134 westbound ramps (during the A.M. and landfill peak hours) and Figueroa Street at SR-134 eastbound ramps (during all peak hours) because the increase in ICU

would be greater than the threshold of significance based on final intersection LOS. Implementation of Variation 1 would not create a significant adverse impact to the other three intersections.

**TABLE 6.11-9. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY – 2020**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp.?	Final LOS	Change in ICU	Sig. Adv. Imp.?
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	F	0.170	Yes	E	0.488	Yes	D	0.155	No
2	Figueroa Street at SR-134 eastbound ramps	C	0.153	Yes	C	0.224	Yes	C	0.183	Yes
3	Figueroa Street at Colorado Boulevard	C	0.006	No	A	0.007	No	B	0.006	No
4	Figueroa Street at La Loma Road	B	0.009	No	A	0.004	No	C	0.003	No
5	Figueroa Street at Yosemite Drive	C	0.003	No	A	0.004	No	C	0.002	No

Source: AECOM, 2011.

Notes:

**Bold** items indicate implementation of Variation 1 will create a significant adverse impact to this intersection.

<sup>1</sup> Sig. Adv. Imp.: Significant Adverse Impact.

<sup>2</sup> Unsignalized intersection

### Ramp Segments

As shown in Table 6.11-10, all ramp segments would operate at acceptable LOS A in 2020 without Variation 1.

**TABLE 6.11-10. RAMP SEGMENT LEVELS OF SERVICE – 2020 WITHOUT VARIATION 1 (NO PROJECT ALTERNATIVE)<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	724	0.483	A	N/A	N/A	N/A	455	0.303	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	343	0.152	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	250	0.173	A	306	0.204	A	408	0.272	A
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	486	0.540	A	N/A	N/A	N/A	306	0.340	A
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	306	0.204	A	N/A	N/A	N/A

**TABLE 6.11-10. RAMP SEGMENT LEVELS OF SERVICE – 2020 WITHOUT VARIATION 1 (NO PROJECT ALTERNATIVE)<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	362	0.241	A	425	0.283	A	675	0.450	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2020 without Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-11, all ramp segments would operate at acceptable LOS C or better in 2020 with Variation 1. The worst location would be the SR-134 westbound on-ramp at Figueroa Street which would operate at an acceptable LOS C during the A.M. peak hour.

**TABLE 6.11-11. RAMP SEGMENT LEVELS OF SERVICE – 2020 WITH VARIATION 1<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	1,046	0.697	B	N/A	N/A	N/A	606	0.404	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	558	0.248	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	309	0.206	A	545	0.363	A	615	0.410	A
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	546	0.606	B	N/A	N/A	N/A	514	0.571	A
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	545	0.363	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	684	0.456	A	640	0.426	A	826	0.550	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2020 with Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-12, implementation of Variation 1 would not create a significant adverse impact to the ramp segments because the ramp segments will operate at an acceptable LOS in 2020.

**TABLE 6.11-12. RAMP SEGMENT SIGNIFICANT ADVERSE IMPACT SUMMARY – 2020**

RAMP SEGMENT	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
	Unacc. LOS? <sup>1</sup>	Change in V/C	Sig. Adv. Imp.? <sup>2</sup>	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?
SR-134 westbound on-ramp at Figueroa Street	No	0.214	No	No	0.106	No	No	0.101	No
SR-134 westbound off-ramp at Figueroa Street	No	0.033	No	No	0.159	No	No	0.138	No
SR-134 eastbound on-ramp at Figueroa Street	No	0.066	No	No	0.159	No	No	0.231	No
SR-134 eastbound off-ramp at Figueroa Street	No	0.215	No	No	0.143	No	No	0.100	No

Source: AECOM, 2011.

Notes:

<sup>1</sup> Unacc. LOS: Unacceptable LOS<sup>2</sup> Sig. Adv. Imp.: Significant Adverse Impact*Other Traffic Issues*

Several other traffic issues which were a result of observations made during the course of this analysis or issues raised by community members or others are discussed in the following sections.

**CMP Traffic Analysis**

A CMP Traffic Analysis is required when a project will, during the circulation network A.M. or P.M. peak hour, add 50 or more trips to a CMP intersection, 50 or more trips to a CMP ramp segment or 150 or more trips to a CMP freeway segment in either direction. The CMP highway network in the vicinity of the SCLF is SR-134 and the SR-134 ramps at Figueroa Street. There are no CMP intersections in the vicinity of the SCLF.

Since there are no CMP intersections within the project area, a CMP Traffic Analysis for intersections is not required.

A CMP Traffic Analysis for freeways is not required because Variation 1 would not add more than 150 net trips to the freeway circulation network. As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks access SCLF via a CMP freeway, SR-134. Even with the projected SCLF closure date in 2020, 95 percent of refuse trucks that access SCLF via SR-134 would still access the freeway circulation network to travel to other landfills and/or refuse transfer locations. These refuse trucks would have to travel greater distances to dispose of their waste. Therefore, the closure of SCLF would not result in a net benefit for the freeway circulation network.

The other 5 percent of trips that do not access the freeway circulation network because they primarily serve the local community would have to access the freeway circulation network to travel to other landfill and/or refuse transfer locations with the closure of the SCLF. Based on the SCLF trip generation on the 85<sup>th</sup> percentile day in 2020, the freeway circulation network would have a net increase of 347 PCE daily trips with 40, 48 and 38 PCE trips during the A.M., landfill and P.M. peak hours, respectively. The net trips added to the freeway circulation network during the A.M. and P.M. peak hours would be less than the minimum 150 trips required for a CMP Traffic Analysis for freeways. Therefore, a CMP Traffic Analysis for freeways is not required.



A CMP Traffic Analysis for ramp segments is required and was discussed previously (refer to Ramp Segments above). As shown previously, implementation of Variation 1 would not create a significant adverse impact to the ramp segments in 2020 because all ramp segments would operate at acceptable LOS C or better.

#### Signal Warrant Analysis

The Peak Hour Warrant was used to analyze the need for a traffic signal at the unsignalized intersection of Figueroa Street at SR-134 westbound ramps under 2020 with Variation 1 conditions. The signal warrant analysis showed that a traffic signal is not warranted for existing conditions. However, the signal warrant analysis showed that a traffic signal would be warranted in 2020 with Variation 1. The detailed signal warrant analyses are included in Appendix M (Attachment K) of the DEIR.

#### City of Pasadena Road Segment Analysis

The City of Pasadena requested that the road segment of Avenue 64 between Colorado Boulevard and Ninthsdale Road be included in the traffic analysis. Avenue 64 between Colorado Boulevard and Ninthsdale Road is a north-south Minor Arterial located approximately 0.5 miles east of Figueroa Street in the City of Pasadena.

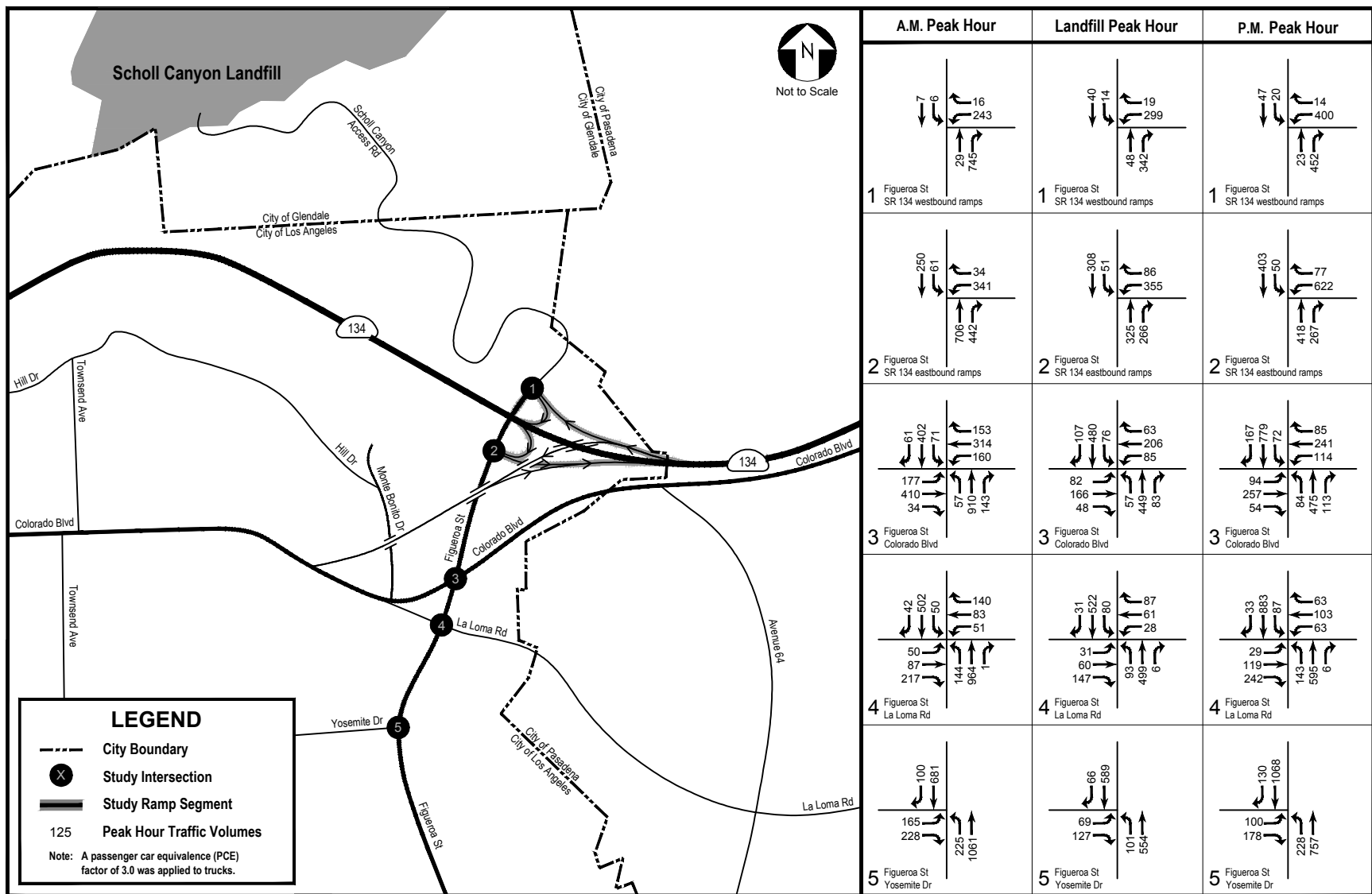
As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks accessed SCLF via SR-134 under 2020 with Variation 1 scenario. The other 5 percent of the refuse trucks accessed SCLF via Figueroa Street, which primarily served the local communities close to SCLF in the City of Pasadena. Avenue 64 between Colorado Boulevard and Ninthsdale Road is not on one of the primary routes to SCLF. Therefore, refuse trucks on this road segment would be there to serve the local community and the amount of such traffic would not change with or without the project. Implementation of Variation 1 would not create a significant adverse impact to Avenue 64 between Colorado Boulevard and Ninthsdale Road in the 2020 interim year.

#### 2034 Horizon Year

As discussed in Section 6.11.3.3 (Future Background Traffic Volumes), traffic volumes for 2034 without Variation 1 were calculated by applying a growth factor of 1.065 to the existing 2010 traffic volumes and adding cumulative project traffic. The cumulative projects in the Cities of Glendale, Los Angeles and Pasadena would not add cumulative project traffic to the project area. Figures 6.11-9 and 6.11-10 show the traffic volumes in 2034 without and with Variation 1, respectively.

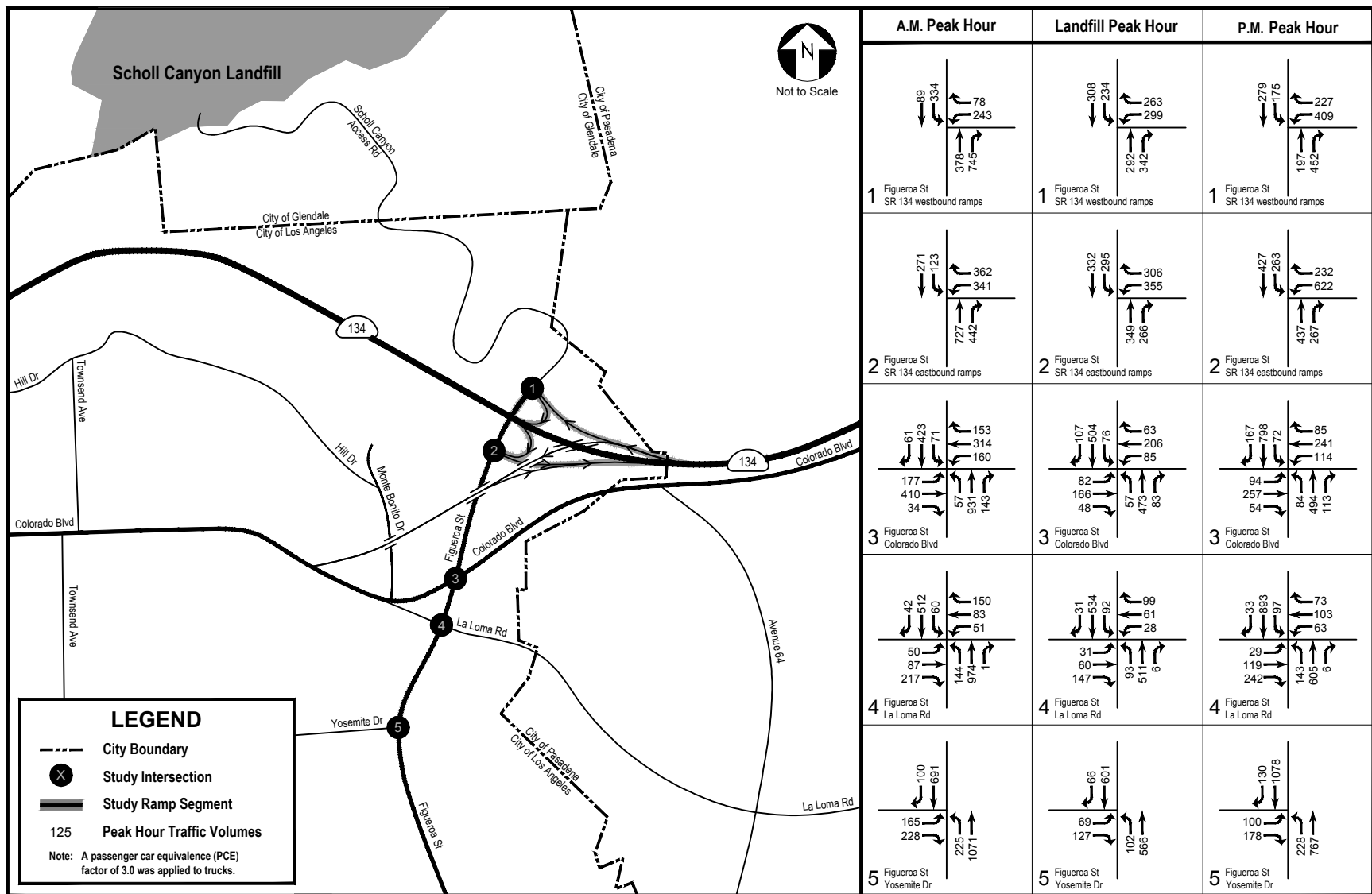
#### *Intersections*

As shown in Table 6.11-13, all intersections would operate at acceptable LOS C or better in 2034 without Variation 1 with the exception of the unsignalized intersection of Figueroa Street at the SR-134 westbound ramp, which would operate at LOS E in the A.M. peak hour. The detailed LOS calculation worksheets are included in Appendix M (Attachment E) of the DEIR.



Source: AECOM, 2011.

**Figure 6.11-9**  
**Traffic Volumes - 2034 without the Project**



Source: AECOM, 2011.

**Figure 6.11-10**  
**Traffic Volumes - 2034 with the Project**

**TABLE 6.11-13. INTERSECTION LEVELS OF SERVICE – 2034 WITHOUT VARIATION 1<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>0.974</b>	<b>E</b>	0.516	A	0.739	C
2	Figueroa Street at SR-134 eastbound ramps	0.614	B	0.455	A	0.564	A
3	Figueroa Street at Colorado Boulevard	0.730	C	0.450	A	0.617	B
4	Figueroa Street at La Loma Road	0.687	B	0.497	A	0.759	C
5	Figueroa Street at Yosemite Drive	0.730	C	0.491	A	0.790	C

Source: AECOM, 2011.

Notes:

**Bold** items indicate intersection will operate at below-standard LOS.<sup>1</sup> 2034 without Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.<sup>2</sup> Unsignalized intersection

As shown in Table 6.11-14, all project area intersections would continue to operate at acceptable LOS D or better in 2034 with Variation 1 during all of the peak hours with the exception of Figueroa Street at the SR-134 westbound ramps. At this location, operating conditions would be an unacceptable LOS F during all three peak hours. The detailed LOS calculation worksheets are included in Appendix M (Attachment F) of the DEIR.

**TABLE 6.11-14. INTERSECTION LEVELS OF SERVICE – 2034 WITH VARIATION 1<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>1.156</b>	<b>F</b>	<b>1.017</b>	<b>F</b>	0.893	D
2	Figueroa Street at SR-134 eastbound ramps	0.769	C	0.684	B	0.752	C
3	Figueroa Street at Colorado Boulevard	0.737	C	0.462	A	0.623	B
4	Figueroa Street at La Loma Road	0.696	B	0.501	A	0.762	C
5	Figueroa Street at Yosemite Drive	0.733	C	0.495	A	0.793	C

Source: AECOM, 2011.

Notes:

**Bold** items indicate intersection will operate at below-standard LOS.<sup>1</sup> 2034 with Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.<sup>2</sup> Unsignalized intersection

As shown in Table 6.11-15, implementation of Variation 1 would create a significant adverse impact to the intersections of Figueroa Street at SR-134 westbound ramps (during all peak hours) and Figueroa Street at SR-134 eastbound ramps (during the A.M. and P.M. peak hours) because the increase in ICU

would be greater than the threshold of significance based on final intersection LOS. Implementation of Variation 1 would not create a significant adverse impact to the remaining three intersections.

**TABLE 6.11-15. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY – 2034**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU	Sig. Adv. Imp. <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp. <sup>2</sup>	Final LOS	Change in ICU	Sig. Adv. Imp. <sup>2</sup>
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	F	0.182	Yes	F	0.501	Yes	D	0.154	Yes
2	Figueroa Street at SR-134 eastbound ramps	C	0.155	Yes	B	0.229	No	C	0.188	Yes
3	Figueroa Street at Colorado Boulevard	C	0.007	No	A	0.012	No	B	0.006	No
4	Figueroa Street at La Loma Road	B	0.009	No	A	0.004	No	C	0.003	No
5	Figueroa Street at Yosemite Drive	C	0.003	No	A	0.004	No	C	0.003	No

Source: AECOM, 2011.

Notes: **Bold** items indicate implementation of Variation 1 will create a significant adverse impact to this intersection.

<sup>1</sup> Sig. Adv. Imp.: Significant Adverse Impact.

<sup>2</sup> Unsignalized intersection

### Ramp Segments

As shown in Table 6.11-16, all ramp segments would operate at acceptable LOS A or better in 2034 without Variation 1.

**TABLE 6.11-16. RAMP SEGMENT LEVELS OF SERVICE – 2034 WITHOUT VARIATION 1<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	751	0.500	A	N/A	N/A	N/A	472	0.315	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	356	0.158	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	259	0.172	A	318	0.212	A	423	0.282	A
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	503	0.558	A	N/A	N/A	N/A	317	0.351	A
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	317	0.211	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	375	0.250	A	441	0.294	A	699	0.466	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2034 without Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.

<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-17, all ramp segments would operate at acceptable LOS C or better in 2034 with Variation 1. The worst location would be the SR-134 westbound on-ramp at Figueroa Street which would operate at an acceptable LOS C during the A.M. peak hour.

**TABLE 6.11-17. RAMP SEGMENT LEVELS OF SERVICE – 2034 WITH VARIATION 1<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	1079	0.719	C	N/A	N/A	N/A	627	0.41 <sub>8</sub>	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	576	0.252	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	321	0.214	A	562	0.375	A	636	0.42 <sub>4</sub>	A
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	565	0.628	B	N/A	N/A	N/A	530	0.58 <sub>9</sub>	B
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	561	0.374	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	703	0.469	A	661	0.440	A	854	0.56 <sub>9</sub>	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2034 with the Project includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.

<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-18, implementation of Variation 1 would not create a significant adverse impact to the ramp segments because the ramp segments would operate at an acceptable LOS in 2034.

**TABLE 6.11-18. RAMP SEGMENT SIGNIFICANT ADVERSE IMPACT SUMMARY – 2034**

RAMP SEGMENT	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
	Unacc. LOS? <sup>1</sup>	Change in V/C	Sig. Adv. Imp.? <sup>2</sup>	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?
SR-134 westbound on-ramp at Figueroa Street	No	0.219	No	No	0.094	No	No	0.103	No
SR-134 westbound off-ramp at Figueroa Street	No	0.042	No	No	0.163	No	No	0.142	No
SR-134 eastbound on-ramp at Figueroa Street	No	0.070	No	No	0.163	No	No	0.238	No
SR-134 eastbound off-ramp at Figueroa Street	No	0.219	No	No	0.146	No	No	0.103	No

Source: AECOM, 2011.

Notes:

<sup>1</sup> Unacc. LOS: Unacceptable LOS

<sup>2</sup> Sig. Adv. Imp.: Significant Adverse Impact

### *Other Traffic Issues*

Several other traffic issues which were a result of observations made during the course of this analysis or issues raised by community members or others are discussed in the following sections.

#### *CMP Traffic Analysis*

As stated previously, a CMP Traffic Analysis is required when a proposed project during the circulation network A.M. or P.M. peak hour will add 50 or more trips to a CMP intersection, 50 or more trips to a CMP ramp segment or 150 or more trips to a CMP freeway segment in either direction. The CMP highway network in the vicinity of SCLF is SR-134 and the SR-134 ramps at Figueroa Street. There are no CMP intersections in the vicinity of SCLF.

Since there are no CMP intersections within the vicinity of SCLF, a CMP Traffic Analysis for intersections is not required.

A CMP Traffic Analysis for freeways is not required because Variation 1 would not add more than 150 net trips to the freeway circulation network. As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks access SCLF via a CMP freeway, SR-134. Even with the projected SCLF closure date in 2020, 95 percent of refuse trucks that access SCLF via SR-134 would still access the freeway circulation network to travel to other landfills and/or refuse transfer locations. These refuse trucks would have to travel greater distances to dispose of their waste. Therefore, the closure of SCLF would not result in a net benefit for the freeway circulation network.

The other 5 percent of trips that do not access the freeway circulation network because they primarily serve the local community would have to access the freeway circulation network to travel to other landfill and/or refuse transfer locations with the closure of SCLF. Based on the SCLF trip generation on the 85<sup>th</sup> percentile day in 2034, the freeway circulation network would have a net increase of 354 PCE daily trips with 41, 49 and 39 PCE trips during the A.M., landfill and P.M. peak hours, respectively. The net trips added to the freeway circulation network during the A.M. and P.M. peak hours would be less than the minimum 150 trips required for a CMP Traffic Analysis for freeways. Therefore, a CMP Traffic Analysis for freeways is not required.

A CMP Traffic Analysis for ramp segments is required and was discussed previously (refer to Ramp Segments above). As shown previously, implementation of the Variation 1 would not create a significant adverse impact to the ramp segments in 2034 because all ramp segments would operate at acceptable LOS C or better.

#### *Signal Warrant Analysis*

The Peak Hour Warrant was used to analyze the need for a traffic signal at the unsignalized intersection of Figueroa Street at SR-134 westbound ramps under 2034 with Variation 1 conditions. The signal warrant analysis showed that a traffic signal is not warranted for existing conditions. However, the signal warrant analysis showed that a traffic signal would be warranted in 2034 with Variation 1. The detailed signal warrant analyses are included in Appendix M (Attachment K) of the DEIR.

#### *City of Pasadena Road Segment Analysis*

The City of Pasadena requested that the road segment of Avenue 64 between Colorado Boulevard and Ninthsdale Road be included in the traffic analysis. Avenue 64 between Colorado Boulevard and

Ninthsdale Road is a north-south Minor Arterial located approximately 0.5 miles east of Figueroa Street in the City of Pasadena.

As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks accessed SCLF via SR-134 under 2034 with Variation 1 scenario. The other 5 percent of the refuse trucks accessed SCLF via Figueroa Street, which primarily served the local communities close to SCLF in the City of Pasadena. Avenue 64 between Colorado Boulevard and Ninthsdale Road is not on one of the primary routes to SCLF. Therefore, refuse trucks on this road segment would be there to serve the local community and the amount of such traffic would not change with or without the project. Implementation of Variation 1 would not create a significant adverse impact to Avenue 64 between Colorado Boulevard and Ninthsdale Road in the 2034 horizon year.

#### 6.11.4.2 Variation 2

##### 2020 Interim Year

The interim year 2020 (without existing truck operation) was analyzed to determine the effects of the full project (6,940 daily PCE trips with 805, 953 and 755 PCE trips during the A.M., landfill and P.M. peak hours, respectively). As discussed in Section 6.11.3.3 (Future Background Traffic Volumes), traffic volumes for 2020 without the proposed project were calculated by applying a growth factor of 1.027 to the existing 2010 traffic volumes and adding cumulative project traffic. As noted above, existing trucks were subtracted from existing 2010 traffic volumes to reflect the expiration of the current permit. The cumulative projects in the Cities of Glendale, Los Angeles and Pasadena would not add cumulative project traffic to the project area. Refer to Figures 6.11-7 and 6.11-8 for the traffic volumes in 2020 without and with Variation 2, respectively.

##### *Intersections*

As shown in Table 6.11-19, all intersections would operate at acceptable LOS C or better in 2020 without Variation 2 with the exception of Figueroa Street at SR-134 westbound ramps. During the A.M. peak hour, this location operates at an ICU of 0.931, which is an unacceptable LOS E. The detailed LOS calculation worksheets are included in Appendix M (Attachment C) of the DEIR.

**TABLE 6.11-19. INTERSECTION LEVELS OF SERVICE – 2020 WITHOUT VARIATION 2<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>0.931</b>	<b>E</b>	0.495	A	0.706	C
2	Figueroa Street at SR-134 eastbound ramps	0.596	A	0.442	A	0.548	A
3	Figueroa Street at Colorado Boulevard	0.707	C	0.437	A	0.598	A
4	Figueroa Street at La Loma Road	0.665	B	0.483	A	0.734	C
5	Figueroa Street at Yosemite Drive	0.708	C	0.477	A	0.766	C

Source: AECOM, 2011.

Notes: **Bold** items indicate intersection will operate at below-standard LOS.

<sup>1</sup> 2020 without Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.

<sup>2</sup> Unsignalized intersection



As shown in Table 6.11-20, all project area intersections would continue to operate at acceptable LOS C or better in 2020 with Variation 2 during all of the peak hours with the exception of Figueroa Street at the SR-134 westbound ramps. At this location, the weekday A.M. peak hour conditions would worsen from LOS E to LOS F and the landfill and P.M. peak hours would worsen from acceptable conditions to LOS F and LOS E, respectively. The detailed LOS calculation worksheets are included in Appendix M (Attachment D) of the DEIR.

**TABLE 6.11-20. INTERSECTION LEVELS OF SERVICE – 2020 WITH VARIATION 2<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>1.101</b>	<b>F</b>	<b>0.983</b>	<b>E</b>	0.861	D
2	Figueroa Street at SR-134 eastbound ramps	0.749	C	0.666	B	0.731	C
3	Figueroa Street at Colorado Boulevard	0.713	C	0.444	A	0.604	B
4	Figueroa Street at La Loma Road	0.674	B	0.487	A	0.737	C
5	Figueroa Street at Yosemite Drive	0.711	C	0.481	A	0.768	C

Source: AECOM, 2011.

Notes: **Bold** items indicate intersection will operate at below-standard LOS.

<sup>1</sup> 2020 with Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.

<sup>2</sup> Unsignalized intersection

As shown in Table 6.11-21, implementation of Variation 2 would create a significant adverse impact to the intersections of Figueroa Street at SR-134 westbound ramps (during the A.M. and landfill peak hours) and Figueroa Street at SR-134 eastbound ramps (during all peak hours) because the increase in ICU would be greater than the threshold of significance based on final intersection LOS. Implementation of Variation 2 would not create a significant adverse impact to the other three intersections.

**TABLE 6.11-21. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY – 2020**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp.?	Final LOS	Change in ICU	Sig. Adv. Imp.?
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>F</b>	<b>0.170</b>	<b>Yes</b>	<b>E</b>	<b>0.488</b>	<b>Yes</b>	D	0.155	No
2	Figueroa Street at SR-134 eastbound ramps	C	<b>0.153</b>	<b>Yes</b>	C	<b>0.224</b>	<b>Yes</b>	C	<b>0.183</b>	<b>Yes</b>
3	Figueroa Street at Colorado Boulevard	C	0.006	No	A	0.007	No	B	0.006	No
4	Figueroa Street at La Loma Road	B	0.009	No	A	0.004	No	C	0.003	No
5	Figueroa Street at Yosemite Drive	C	0.003	No	A	0.004	No	C	0.002	No

Source: AECOM, 2011.

Notes: **Bold** items indicate implementation of Variation 2 will create a significant adverse impact to this intersection.

<sup>1</sup> Sig. Adv. Imp.: Significant Adverse Impact

<sup>2</sup> Unsignalized intersection

*Ramp Segments*

As shown in Table 6.11-22, all ramp segments would operate at acceptable LOS A in 2020 without Variation 2.

**TABLE 6.11-22. RAMP SEGMENT LEVELS OF SERVICE – 2020 WITHOUT VARIATION 2<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	724	0.483	A	N/A	N/A	N/A	455	0.303	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	343	0.152	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	250	0.173	A	306	0.204	A	408	0.272	A
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	486	0.540	A	N/A	N/A	N/A	306	0.340	A
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	306	0.204	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	362	0.241	A	425	0.283	A	675	0.450	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2020 without Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.

<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-23, all ramp segments would operate at acceptable LOS C or better in 2020 with the proposed project. The worst location would be the SR-134 westbound on-ramp at Figueroa Street which would operate at an acceptable LOS C during the A.M. peak hour.

**TABLE 6.11-23. RAMP SEGMENT LEVELS OF SERVICE – 2020 WITH VARIATION 2<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	1,046	0.697	B	N/A	N/A	N/A	606	0.404	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	558	0.248	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	309	0.206	A	545	0.363	A	615	0.410	A

**TABLE 6.11-23. RAMP SEGMENT LEVELS OF SERVICE – 2020 WITH VARIATION 2<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	546	0.606	B	N/A	N/A	N/A	514	0.571	A
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	545	0.363	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	684	0.456	A	640	0.426	A	826	0.550	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2020 with Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-24, implementation of Variation 2 would not create a significant adverse impact to the ramp segments because the ramp segments will operate at an acceptable LOS in 2020.

**TABLE 6.11-24. RAMP SEGMENT SIGNIFICANT ADVERSE IMPACT SUMMARY – 2020**

RAMP SEGMENT	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
	Unacc. LOS? <sup>1</sup>	Change in V/C	Sig. Adv. Imp.? <sup>2</sup>	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?
SR-134 westbound on-ramp at Figueroa Street	No	0.214	No	No	0.106	No	No	0.101	No
SR-134 westbound off-ramp at Figueroa Street	No	0.033	No	No	0.159	No	No	0.138	No
SR-134 eastbound on-ramp at Figueroa Street	No	0.066	No	No	0.159	No	No	0.231	No
SR-134 eastbound off-ramp at Figueroa Street	No	0.215	No	No	0.143	No	No	0.100	No

Source: AECOM, 2011.

Notes:

<sup>1</sup> Unacc. LOS: Unacceptable LOS<sup>2</sup> Sig. Adv. Imp.: Significant Adverse Impact

### *Other Traffic Issues*

Several other traffic issues which were a result of observations made during the course of this analysis or issues raised by community members or others are discussed in the following sections.

### **CMP Traffic Analysis**

A CMP Traffic Analysis is required when a project during the circulation network A.M. or P.M. peak hour will add 50 or more trips to a CMP intersection, 50 or more trips to a CMP ramp segment or 150 or more trips to a CMP freeway segment in either direction. The CMP highway network in the vicinity of the

SCLF is SR-134 and the SR-134 ramps at Figueroa Street. There are no CMP intersections in the vicinity of the SCLF.

Since there are no CMP intersections within the project area, a CMP Traffic Analysis for intersections is not required.

A CMP Traffic Analysis for freeways is not required because Variation 2 would not add more than 150 net trips to the freeway circulation network. As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks access SCLF via a CMP freeway, SR-134. Even with the projected SCLF closure date in 2020, 95 percent of refuse trucks that access SCLF via SR-134 would still access the freeway circulation network to travel to other landfills and/or refuse transfer locations. These refuse trucks would have to travel greater distances to dispose of their waste. Therefore, the closure of the SCLF would not result in a net benefit for the freeway circulation network.

The other 5 percent of trips that do not access the freeway circulation network because they primarily serve the local community would have to access the freeway circulation network to travel to other landfill and/or refuse transfer locations with the closure of the SCLF. Based on the SCLF trip generation on the 85<sup>th</sup> percentile day in 2020, the freeway circulation network would have a net increase of 347 PCE daily trips with 40, 48 and 38 PCE trips during the A.M., landfill and P.M. peak hours, respectively. The net trips added to the freeway circulation network during the A.M. and P.M. peak hours would be less than the minimum 150 trips required for a CMP Traffic Analysis for freeways. Therefore, a CMP Traffic Analysis for freeways is not required.

A CMP Traffic Analysis for ramp segments is required and was discussed previously (refer to Ramp Segments above). As shown previously, implementation of the Variation 2 would not create a significant adverse impact to the ramp segments in 2020 because all ramp segments would operate at acceptable LOS C or better.

#### Signal Warrant Analysis

The Peak Hour Warrant was used to analyze the need for a traffic signal at the unsignalized intersection of Figueroa Street at SR-134 westbound ramps under 2020 with Variation 2 conditions. The signal warrant analysis showed that a traffic signal is not warranted for existing conditions. However, the signal warrant analysis showed that a traffic signal would be warranted in 2020 with Variation 2. The detailed signal warrant analyses are included in Appendix M (Attachment K) of the DEIR.

#### City of Pasadena Road Segment Analysis

The City of Pasadena requested that the road segment of Avenue 64 between Colorado Boulevard and Ninthsdale Road be included in the traffic analysis. Avenue 64 between Colorado Boulevard and Ninthsdale Road is a north-south Minor Arterial located approximately 0.5 miles east of Figueroa Street in the City of Pasadena.

As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks accessed SCLF via SR-134 under 2020 with Variation 2 scenario. The other 5 percent of the refuse trucks accessed SCLF via Figueroa Street, which primarily served the local communities close to SCLF in the City of Pasadena. Avenue 64 between Colorado Boulevard and Ninthsdale Road is not on one of the primary routes to SCLF. Therefore, refuse trucks on this road segment would be there to serve the local community and the amount of such traffic would not change with or without the project. Implementation of Variation 2 would not create a significant adverse impact to Avenue 64 between Colorado Boulevard and Ninthsdale Road in the 2020 interim year.

## 2040 Horizon Year

As discussed in Section 6.11.3.3 (Future Background Traffic Volumes), traffic volumes for 2040 without Variation 2 were calculated by applying a growth factor of 1.081 to the existing 2010 traffic volumes and adding cumulative project traffic. However, the cumulative projects in the Cities of Glendale, Los Angeles and Pasadena would not add cumulative project traffic to the project area. Figures 6.11-11 and 6.11-12 show the traffic volumes in 2040 without and with Variation 2, respectively.

### Intersections

As shown in Table 6.11-25, all intersections would operate at acceptable LOS C or better in 2040 without Variation 2 with the exception of the unsignalized intersection of Figueroa Street at the SR-134 westbound ramp, which would operate at unacceptable LOS E in the A.M. peak hour. The detailed LOS calculation worksheets are included in Appendix M (Attachment G) of the DEIR.

**TABLE 6.11-25. INTERSECTION LEVELS OF SERVICE – 2040 WITHOUT VARIATION 2<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>0.991</b>	<b>E</b>	0.525	A	0.752	C
2	Figueroa Street at SR-134 eastbound ramps	0.622	B	0.460	A	0.571	A
3	Figueroa Street at Colorado Boulevard	0.739	C	0.460	A	0.624	B
4	Figueroa Street at La Loma Road	0.696	B	0.503	A	0.768	C
5	Figueroa Street at Yosemite Drive	0.740	C	0.496	A	0.800	D

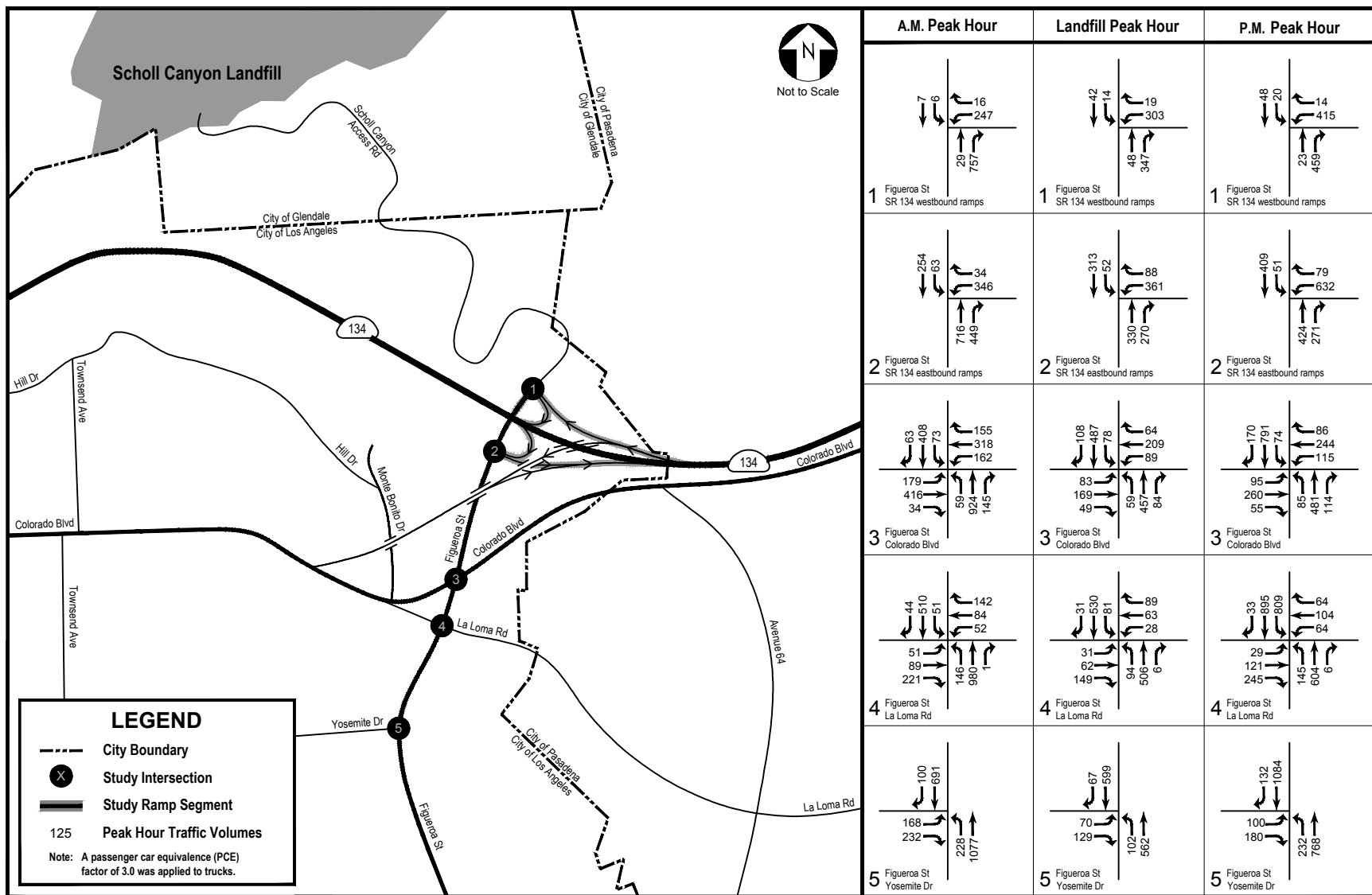
Source: AECOM, 2011.

Notes: **Bold** items indicate intersection will operate at below-standard LOS.

<sup>1</sup> 2040 without Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.

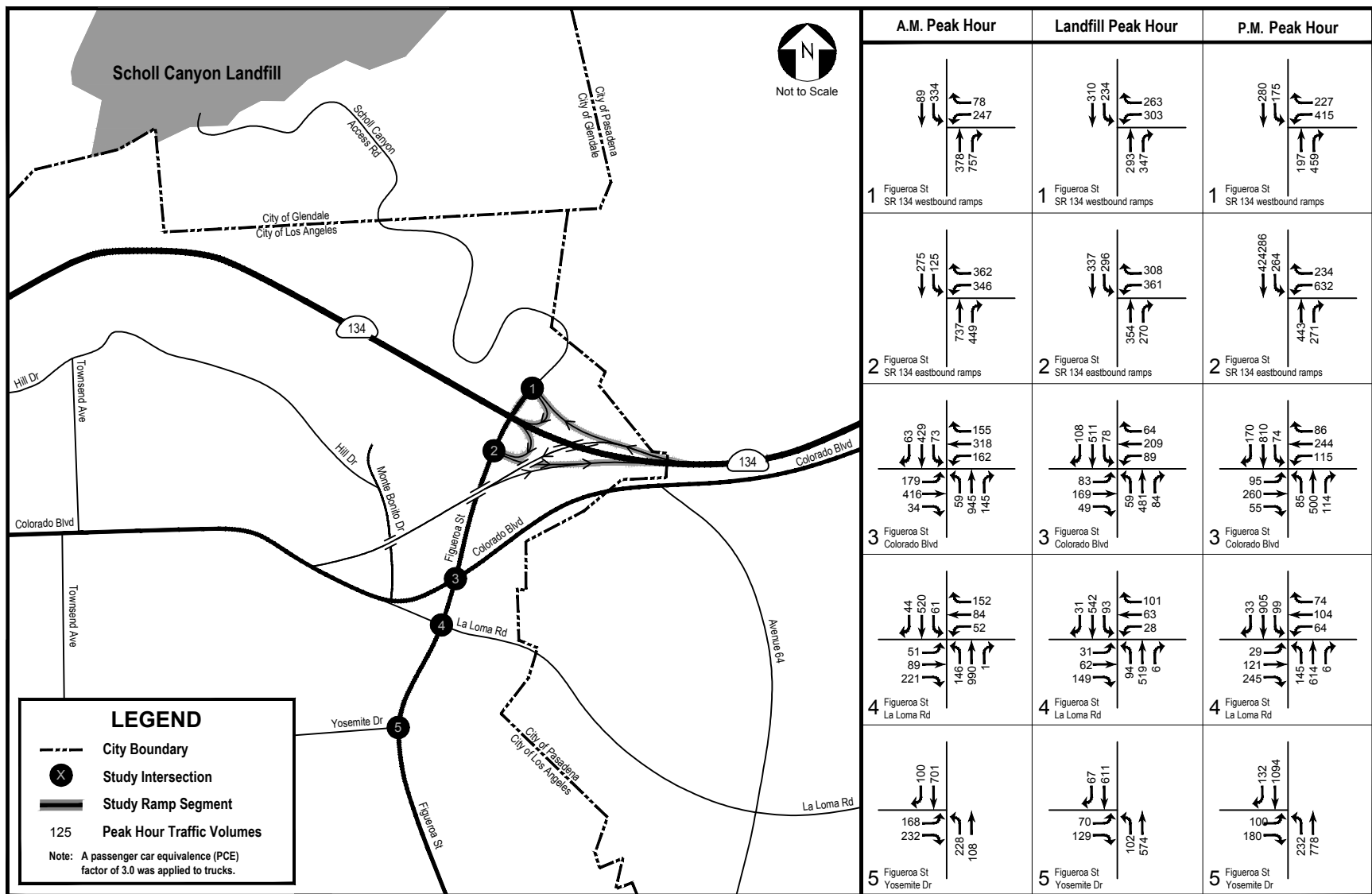
<sup>2</sup> Unsignalized intersection

As shown in Table 6.11-26, all project area intersections would continue to operate at acceptable LOS D or better in 2040 with Variation 2 during all of the peak hours with the exception of Figueroa Street at the SR-134 westbound ramps. At this location, operating conditions would be unacceptable LOS F during all three peak hours. The detailed LOS calculation worksheets are included in Appendix M (Attachment H) of the DEIR.



Source: AECOM, 2011.

**Figure 6.11-11**  
**Traffic Volumes - 2040 without the Project**



Source: AECOM, 2011.

**Figure 6.11-12**  
**Traffic Volumes - 2040 with the Project**

**TABLE 6.11-26. INTERSECTION LEVELS OF SERVICE – 2040 WITH VARIATION 2<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>1.177</b>	<b>F</b>	<b>1.023</b>	<b>F</b>	0.897	D
2	Figueroa Street at SR-134 eastbound ramps	0.775	C	0.689	B	0.759	C
3	Figueroa Street at Colorado Boulevard	0.746	C	0.467	A	0.630	B
4	Figueroa Street at La Loma Road	0.705	C	0.507	A	0.771	C
5	Figueroa Street at Yosemite Drive	0.743	C	0.500	A	0.803	D

Source: AECOM, 2011.

Notes: **Bold** items indicate intersection will operate at below-standard LOS.<sup>1</sup> 2040 with Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.<sup>2</sup> Unsignalized intersection

As shown in Table 6.11-27, implementation of Variation 2 would create a significant adverse impact to the intersections of Figueroa Street at SR-134 westbound ramps (during all peak hours) and Figueroa Street at SR-134 eastbound ramps (during the A.M. and P.M. peak hours) because the increase in ICU would be greater than the threshold of significance based on the final intersection LOS. Implementation of Variation 2 would not create a significant adverse impact to the remaining three intersections.

**TABLE 6.11-27. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY – 2040**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU or delay	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU or delay	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU or delay	Sig. Adv. Imp.? <sup>1</sup>
1	Figueroa Street at SR-134 westbound ramps <sup>2</sup>	<b>F</b>	<b>0.186</b>	<b>Yes</b>	<b>F</b>	<b>0.498</b>	<b>Yes</b>	D	<b>0.145</b>	<b>Yes</b>
2	Figueroa Street at SR-134 eastbound ramps	C	<b>0.153</b>	<b>Yes</b>	B	0.229	No	C	<b>0.188</b>	<b>Yes</b>
3	Figueroa Street at Colorado Boulevard	C	0.007	No	A	0.007	No	B	0.006	No
4	Figueroa Street at La Loma Road	C	0.009	No	A	0.004	No	C	0.003	No
5	Figueroa Street at Yosemite Drive	C	0.003	No	A	0.004	No	D	0.003	No

Source: AECOM, 2011.

Notes:

**Bold** items indicate implementation of Variation 2 will create a significant adverse impact to this intersection.<sup>1</sup> Sig. Adv. Imp.: Significant Adverse Impact<sup>2</sup> Unsignalized intersection



*Ramp Segments*

As shown in Table 6.11-28, all ramp segments would operate at acceptable LOS A or better in 2040 without Variation 2.

**TABLE 6.11-28. RAMP SEGMENT LEVELS OF SERVICE – 2040 WITHOUT VARIATION 2<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	763	0.509	A	N/A	N/A	N/A	479	0.319	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	361	0.160	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	263	0.175	A	322	0.215	A	429	0.286	A
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	512	0.569	A	N/A	N/A	N/A	322	0.358	A
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	322	0.215	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	380	0.253	A	449	0.299	A	711	0.474	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2040 without Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, but without the proposed SCLF project traffic.

<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-29, all ramp segments would operate at acceptable LOS C or better in 2040 with Variation 2. The worst location would be the SR-134 westbound on-ramp at Figueroa Street which would operate at an acceptable LOS C during the A.M. peak hour.

**TABLE 6.11-29. RAMP SEGMENT LEVELS OF SERVICE – 2040 WITH VARIATION 2<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 westbound on-ramp at Figueroa Street	Metered 1.5 Lanes	1,500	1091	0.727	C	N/A	N/A	N/A	634	0.423	A
	Non-Metered <sup>2</sup> 1.5 Lanes	2,250	N/A	N/A	N/A	581	0.258	A	N/A	N/A	N/A
SR-134 westbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	325	0.217	A	566	0.377	A	642	0.428	A

**TABLE 6.11-29. RAMP SEGMENT LEVELS OF SERVICE – 2040 WITH VARIATION 2<sup>1</sup>**

RAMP SEGMENT	RAMP CONDITIONS	CAPACITY	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
			PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS	PCE Vol.	V/C	LOS
SR-134 eastbound on-ramp at Figueroa Street	Metered One Lane	900	574	0.638	B	N/A	N/A	N/A	535	0.594	B
	Non-Metered <sup>2</sup> One Lane	1,500	N/A	N/A	N/A	566	0.377	A	N/A	N/A	N/A
SR-134 eastbound off-ramp at Figueroa Street	Non-Metered One Lane	1,500	708	0.472	A	669	0.446	A	866	0.577	A

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2040 with Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.<sup>2</sup> The on-ramps are not metered during the circulation network off-peak periods.

As shown in Table 6.11-30, implementation of Variation 2 would not create a significant adverse impact to the ramp segments because the ramp segments would operate at an acceptable LOS in 2040.

**TABLE 6.11-30. RAMP SEGMENT SIGNIFICANT ADVERSE IMPACT SUMMARY – 2040**

RAMP SEGMENT	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
	Unacc. LOS? <sup>1</sup>	Change in V/C	Sig. Adv. Imp.? <sup>2</sup>	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?	Unacc. LOS	Change in V/C	Sig. Adv. Imp.?
SR-134 westbound on-ramp at Figueroa Street	No	0.218	No	No	0.098	No	No	0.104	No
SR-134 westbound off-ramp at Figueroa Street	No	0.042	No	No	0.162	No	No	0.142	No
SR-134 eastbound on-ramp at Figueroa Street	No	0.069	No	No	0.162	No	No	0.236	No
SR-134 eastbound off-ramp at Figueroa Street	No	0.219	No	No	0.147	No	No	0.103	No

Source: AECOM, 2011.

Notes:

<sup>1</sup> Unacc. LOS: Unacceptable LOS.<sup>2</sup> Sig. Adv. Imp.: Significant Adverse Impact.

### *Other Traffic Issues*

Several other traffic issues which were a result of observations made during the course of this analysis or issues raised by community members or others are discussed in the following sections.

#### **CMP Traffic Analysis**

As discussed previously, a CMP Traffic Analysis is required when a proposed project during the circulation network A.M. or P.M. peak hour will add 50 or more trips to a CMP intersection, 50 or more trips to a CMP ramp segment or 150 or more trips to a CMP freeway segment in either direction. The CMP highway network in the vicinity of SCLF is SR-134 and the SR-134 ramps at Figueroa Street. There are no CMP intersections in the vicinity of SCLF.

Since there are no CMP intersections within the vicinity of SCLF, a CMP Traffic Analysis for intersections is not required.

A CMP Traffic Analysis for freeways is not required because Variation 2 would not add more than 150 net trips to the freeway circulation network. As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks access SCLF via a CMP freeway, SR-134. Even with the projected SCLF closure date in 2020, 95 percent of refuse trucks that access SCLF via SR-134 would still access the freeway circulation network to travel to other landfills and/or refuse transfer locations. These refuse trucks would have to travel greater distances to dispose of their waste. Therefore, the closure of SCLF would not result in a net benefit for the freeway circulation network.

The other 5 percent of trips that do not access the freeway circulation network because they primarily serve the local community would have to access the freeway circulation network to travel to other landfill and/or refuse transfer locations with the closure of SCLF. Based on the SCLF trip generation on the 85<sup>th</sup> percentile day in 2040, the freeway circulation network would have a net increase of 354 PCE daily trips with 41, 49 and 39 PCE trips during the A.M., landfill and P.M. peak hours, respectively. The net trips added to the freeway circulation network during the A.M. and P.M. peak hours would be less than the minimum 150 trips required for a CMP Traffic Analysis for freeways. Therefore, a CMP Traffic Analysis for freeways is not required.

A CMP Traffic Analysis for ramp segments is required and was discussed previously (refer to Ramp Segments above). As shown previously, implementation of Variation 2 would not create a significant adverse impact to the ramp segments in 2040 because all ramp segments would operate at acceptable LOS C or better.

#### Signal Warrant Analysis

The Peak Hour Warrant was used to analyze the need for a traffic signal at the unsignalized intersection of Figueroa Street at SR-134 westbound ramps under 2040 with Variation 2 conditions. The signal warrant analysis showed that a traffic signal is not warranted for existing conditions. However, the signal warrant analysis showed that a traffic signal would be warranted in 2040 with Variation 2. The detailed signal warrant analyses are included in Appendix M (Attachment K) of the DEIR.

#### City of Pasadena Road Segment Analysis

The City of Pasadena requested that the road segment of Avenue 64 between Colorado Boulevard and Ninthsdale Road be included in the traffic analysis. Avenue 64 between Colorado Boulevard and Ninthsdale Road is a north-south Minor Arterial located approximately 0.5 miles east of Figueroa Street in the City of Pasadena.

As discussed in Section 6.11.3.5 (Proposed Project Trip Distribution), approximately 95 percent of the refuse trucks accessed SCLF via SR-134 under 2040 with Variation 2 scenario. The other 5 percent of the refuse trucks accessed SCLF via Figueroa Street, which primarily served the local communities close to SCLF in the City of Pasadena. Avenue 64 between Colorado Boulevard and Ninthsdale Road is not on one of the primary routes to SCLF. Therefore, refuse trucks on this road segment would be there to serve the local community and the amount of such traffic would not change with or without the project. Implementation of Variation 2 would not create a significant adverse impact to Avenue 64 between Colorado Boulevard and Ninthsdale Road in the 2040 horizon year.

### Clay Trips Associated with Conceptual Liner

It should be noted that in order to construct the liner system within the 13 acre horizontal expansion area under Variation 2, there will be the need to import clay (approximately 64,742 cubic yards). Construction of the liner system would generate a maximum of 150 clay truck trips per day over a two-month period, expected to occur concurrently with operation of the SCLF (Variation 2). The delivery of clay will occur throughout the day and be limited to off-peak commute hours to the extent feasible. Due to the distance of the assumed clay liner source (Santa Clarita), it is anticipated that trips to and from the SCLF would not occur during the weekday A.M. and P.M. peak commute hours. However, a portion of the 150 daily clay trips may occur during the landfill peak hour.

With over 3,000 daily green waste, soil, and refuse truck trips expected to occur with operation of Variation 2, the trips associated with the clay delivery would only represent an increase of 5 percent to the daily activity during days which the clay is delivered. The addition of up to 150 daily clay trips to the landfill peak hour, even in the unlikely event that all 150 trips occur during the landfill peak hour, would not result in any new significant impacts beyond those disclosed previously. Furthermore, the construction related activity associated with the liner would be isolated, temporary, and short in duration when compared to operation of Variation 2.

#### 6.11.5 MITIGATION MEASURES

The fair-share contributions identified in the following mitigation measures were calculated based on the methodology presented in the *Guide for the Preparation of Traffic Impact Studies* (Caltrans, 2002). For details, please refer to Appendix M (Attachment N) of the DEIR.

##### 6.11.5.1 Variation 1

The following mitigation measures address the significant adverse impacts to the intersections created with implementation of Variation 1 under 2020 and 2034 conditions.

T-1 Figueroa Street at SR 134 westbound ramps. To mitigate the impacts associated with implementation of Variation 1 under the 2020 interim and 2034 horizon years, the following improvements would be needed, pursuant to Caltrans approval: stripe one southbound left-turn lane, signalize the intersection, provide a protected southbound left-turn phase, and provide protected northbound right-turn phase that is overlapped with the westbound approach phase.

Assuming existing operations continue through 2020 and 2034 (resulting in a net increase of project trips above existing), the Sanitation Districts would be responsible for its fair-share contribution of 63 percent towards construction costs associated with those improvements.

T-2 Figueroa Street at SR 134 eastbound ramps. To mitigate the impacts associated with implementation of Variation 1 under the 2020 and 2034 horizon years, the following improvements would be needed, pursuant to Caltrans approval: in the northbound approach, restripe the existing painted median to provide an additional northbound through lane and convert the existing northbound shared-through right-turn lane into an exclusive right-turn only lane, resulting in two northbound through lanes and an exclusive right-turn lane. The existing painted median would be shifted approximately 9 feet west of its current alignment. In order to minimize the offset of the northbound receiving lanes, the entire southbound approach would need to be shifted approximately 10 feet to the west. Adequate width is provided on the southbound approach such that a southbound left and two southbound through lanes can be maintained with

the 10 foot westward shift. The two southbound through lanes would merge into one southbound through past the SR-134 EB Ramps, similar to the current configuration.

Assuming existing operations continue through 2020 and 2034 (resulting in a net increase of project trips above existing), the Sanitation Districts would be responsible for its fair-share contribution of 55 and 52 percent, respectively, towards construction costs associated with those improvements.

#### 6.11.5.2 Variation 2

The following mitigation measures address the significant adverse impacts to the intersections created with implementation of Variation 2 under 2020 and 2040 conditions.

- T-3 Figueroa Street at SR 134 westbound ramps. To mitigate the impacts associated with implementation of Variation 2 under the 2020 interim and 2040 horizon years, the following improvements would be needed, pursuant to Caltrans approval: stripe one southbound left-turn lane, signalize the intersection, provide a protected southbound left-turn phase, and provide protected northbound right-turn phase that is overlapped with the westbound approach phase.

Assuming existing operations continue through 2020 and 2040 (resulting in a net increase of project trips above existing), the Sanitation Districts would be responsible for its fair-share contribution of 63 and 62 percent, respectively, towards construction costs associated with those improvements.

- T-4 Figueroa Street at SR 134 eastbound ramps. To mitigate the impacts associated with implementation of Variation 2 under the 2020 and 2040 horizon years, the following improvements would be needed, pursuant to Caltrans approval: in the northbound approach, restripe the existing painted median to provide an additional northbound through lane and convert the existing northbound shared-through right-turn lane into an exclusive right-turn only lane, resulting in two northbound through lanes and an exclusive right-turn lane. The existing painted median would be shifted approximately 9 feet west of its current alignment. In order to minimize the offset of the northbound receiving lanes, the entire southbound approach would need to be shifted approximately 10 feet to the west. Adequate width is provided on the southbound approach such that a southbound left and two southbound through lanes can be maintained with the 10 foot westward shift. The two southbound through lanes would merge into one southbound through past the SR-134 EB Ramps, similar to the current configuration.

Assuming existing operations continue through 2020 and 2040 (resulting in a net increase of project trips above existing), the Sanitation Districts would be responsible for its fair-share contribution of 55 and 50 percent, respectively, towards construction costs associated with those improvements.

### 6.11.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

#### 6.11.6.1 Variation 1

Implementation of the mitigation measures described above will ensure that potential significant adverse impacts related to transportation and traffic are reduced to below a level significance.

### Intersections

As shown in Tables 6.11-31 and 6.11-32, the intersections of Figueroa Street at SR-134 westbound ramps and Figueroa Street at SR-134 eastbound ramps would operate at acceptable LOS D or better in 2020 and 2034 with the recommended mitigation measures. The detailed LOS calculation worksheets are included in Appendix M (Attachment L) of the DEIR.

**TABLE 6.11-31. INTERSECTION LEVELS OF SERVICE  
2020 WITH VARIATION 1 WITH THE RECOMMENDED MITIGATION MEASURES<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps	0.754	C	0.601	B	0.574	A
2	Figueroa Street at SR-134 eastbound ramps	0.663	B	0.641	B	0.679	B

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2020 with Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.

**TABLE 6.11-32. INTERSECTION LEVELS OF SERVICE  
2034 WITH VARIATION 1 WITH THE RECOMMENDED MITIGATION MEASURES<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps	0.774	C	0.616	B	0.588	A
2	Figueroa Street at SR-134 eastbound ramps	0.680	B	0.658	B	0.699	B

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2034 with Variation 1 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.

As shown in Tables 6.11-33 and 6.11-34, implementation of mitigation measures T-1 and T-2 in 2020 and 2034 would reduce the significant adverse impacts of the intersections to below a level of significance for all of the peak hours, respectively.

**TABLE 6.11-33. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY  
2020 WITH VARIATION 1 WITH THE RECOMMENDED MITIGATION MEASURES**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp.?	Final LOS	Change in ICU	Sig. Adv. Imp.?
1	Figueroa Street at SR-134 westbound ramps	C	-0.347	No	B	-0.382	No	A	-0.287	No
2	Figueroa Street at SR-134 eastbound ramps	B	-0.086	No	B	-0.025	No	B	-0.052	No

Source: AECOM, 2011.

Notes:

**Bold** items indicate implementation of Variation 1 will create a significant adverse impact to this intersection.

<sup>1</sup> Sig. Adv. Imp.: Significant Adverse Impact

**TABLE 6.11-34. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY  
2034 WITH VARIATION 1 WITH THE RECOMMENDED MITIGATION MEASURES**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>
1	Figueroa Street at SR-134 westbound ramps	C	-0.382	No	B	-0.401	No	B	-0.305	No
2	Figueroa Street at SR-134 eastbound ramps	B	-0.089	No	B	-0.026	No	B	-0.053	No

Source: AECOM, 2011.

Notes:

**Bold** items indicate implementation of Variation 1 will create a significant adverse impact to this intersection.<sup>1</sup> Sig. Adv. Imp.: Significant Adverse ImpactIntersection Analysis Based on HCM Methodology

It should be noted that the intersections of Figueroa Street at SR-134 westbound ramps and Figueroa Street at SR-134 eastbound ramps (Caltrans facilities) were also analyzed based on the HCM methodology. With implementation of the recommended mitigation measures, these intersections would operate at an acceptable LOS. The detailed LOS calculation worksheets are included in Appendix M (Attachments I, J and M) of the DEIR.

## 6.11.6.2 Variation 2

Implementation of the mitigation measures described above will ensure that potential significant adverse impacts related to transportation and traffic are reduced to below a level significance.

Intersections

As shown in Tables 6.11-35 and 6.11-36, the intersections of Figueroa Street at SR-134 westbound ramps and Figueroa Street at SR-134 eastbound ramps would operate at acceptable LOS C or better in 2020 and 2040 with the recommended mitigation measures. The detailed LOS calculation worksheets are included in Appendix M (Attachment L) of the DEIR.

**TABLE 6.11-35. INTERSECTION LEVELS OF SERVICE  
2020 WITH VARIATION 2 WITH THE RECOMMENDED MITIGATION MEASURES<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps	0.754	C	0.601	B	0.574	A
2	Figueroa Street at SR-134 eastbound ramps	0.663	B	0.641	B	0.679	B

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2020 with Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.

**TABLE 6.11-36. INTERSECTION LEVELS OF SERVICE  
2040 WITH VARIATION 2 WITH THE RECOMMENDED MITIGATION MEASURES<sup>1</sup>**

INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figueroa Street at SR-134 westbound ramps	0.782	C	0.619	B	0.592	A
2	Figueroa Street at SR-134 eastbound ramps	0.685	B	0.663	B	0.705	C

Source: AECOM, 2011.

Notes:

<sup>1</sup> 2040 with Variation 2 includes existing traffic, ambient growth, cumulative projects traffic, and the proposed SCLF project traffic.

As shown in Tables 6.11-37 and 6.11-38, implementation of mitigation measures T-3 and T-4 in 2020 and 2040 would reduce the significant adverse impacts to intersections to below a level of significance for all of the peak hours, respectively.

**TABLE 6.11-37. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY  
2020 WITH VARIATION 2 WITH THE RECOMMENDED MITIGATION MEASURES**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp.?	Final LOS	Change in ICU	Sig. Adv. Imp.?
1	Figueroa Street at SR-134 westbound ramps	C	-0.347	No	B	-0.382	No	A	-0.287	No
2	Figueroa Street at SR-134 eastbound ramps	B	-0.086	No	B	-0.025	No	B	-0.052	No

Source: AECOM, 2011.

Notes:

**Bold** items indicate implementation of Variation 2 will create a significant adverse impact to this intersection.<sup>1</sup> Sig. Adv. Imp.: Significant Adverse Impact**TABLE 6.11-38. INTERSECTION SIGNIFICANT ADVERSE IMPACT SUMMARY  
2040 WITH VARIATION 2 WITH THE RECOMMENDED MITIGATION MEASURES**

INDEX	INTERSECTION	A.M. PEAK HOUR			LANDFILL PEAK HOUR			P.M. PEAK HOUR		
		Final LOS	Change in ICU	Sig. Adv. Imp.? <sup>1</sup>	Final LOS	Change in ICU	Sig. Adv. Imp.?	Final LOS	Change in ICU	Sig. Adv. Imp.?
1	Figueroa Street at SR-134 westbound ramps	C	-0.395	No	B	-0.404	No	A	-0.305	No
2	Figueroa Street at SR-134 eastbound ramps	B	-0.090	No	B	-0.026	No	C	-0.054	No

Source: AECOM, 2011.

Notes: **Bold** items indicate implementation of Variation 2 will create a significant adverse impact to this intersection.<sup>1</sup> Sig. Adv. Imp.: Significant Adverse Impact

#### Intersection Analysis Based on HCM Methodology

It should be noted that the intersections of Figueroa Street at SR-134 westbound ramps and Figueroa Street at SR-134 eastbound ramps (Caltrans facilities) were also analyzed based on the HCM



methodology. With implementation of the recommended mitigation measures, these intersections would operate at an acceptable LOS. The detailed LOS calculation worksheets are included in Appendix M (Attachments I, J and M) of the DEIR.

#### 6.11.6.3 EXISTING PLUS PROJECT CONDITIONS

Per CEQA requirements, an existing plus project scenario has been included for disclosure purposes only. The basis of impacts and mitigations are based on 2020, 2034, and 2040 with project scenarios. The full project trip generation (acceptance of 3,400 TPD) was added to existing traffic volumes to determine existing plus project conditions. The level of service analysis is summarized in Table 6.11-39 below.

**TABLE 6.11-39. INTERSECTION LEVELS OF SERVICE – EXISTING WITH VARIATION 1**

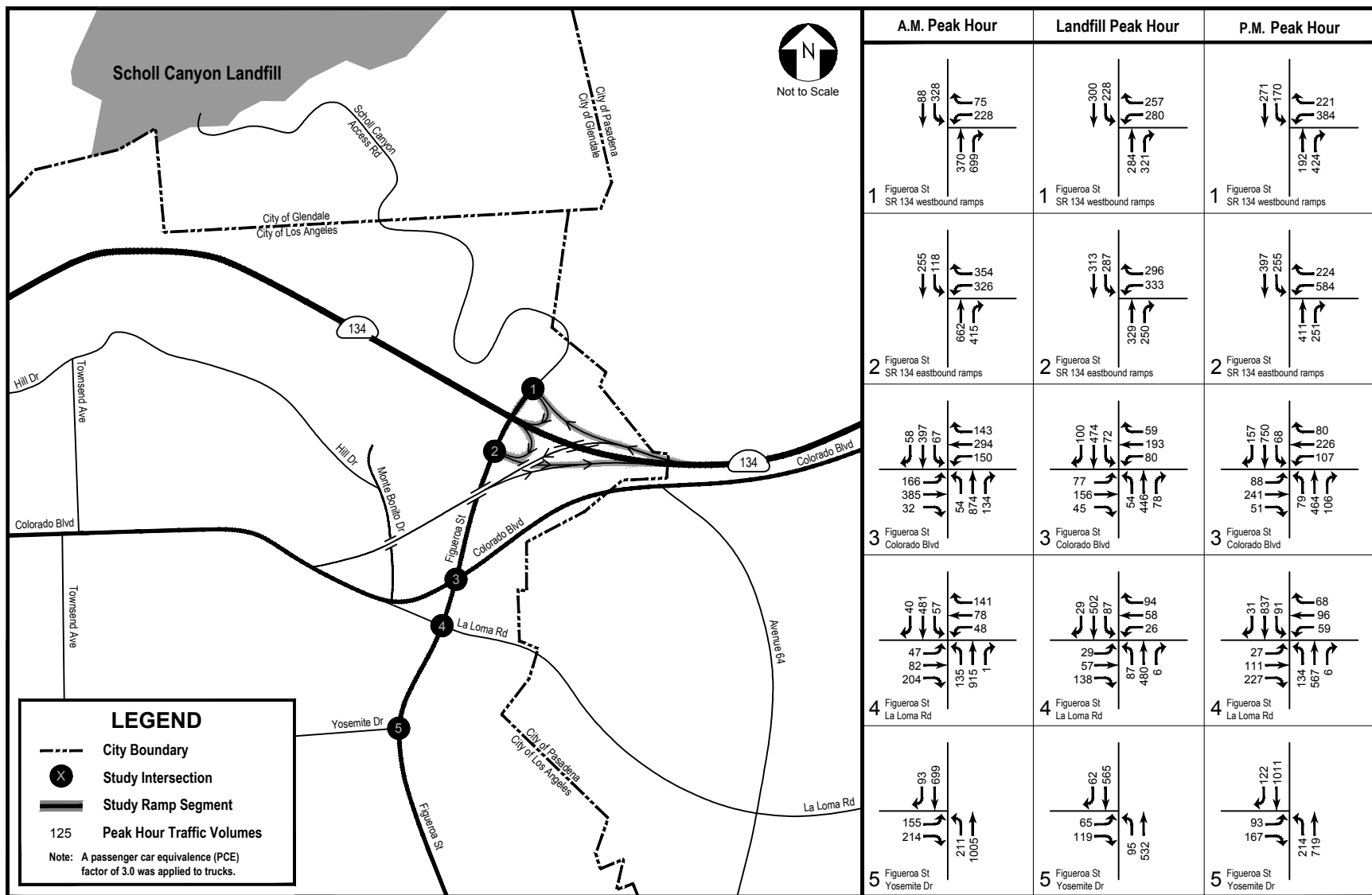
INDEX	INTERSECTION	A.M. PEAK HOUR		LANDFILL PEAK HOUR		P.M. PEAK HOUR	
		ICU	LOS	ICU	LOS	ICU	LOS
1	Figuerroa Street at SR-134 westbound ramps <sup>1</sup>	<b>1.066</b>	<b>F</b>	<b>0.977</b>	<b>E</b>	0.852	D
2	Figuerroa Street at SR-134 eastbound ramps	0.738	C	0.657	B	0.719	C
3	Figuerroa Street at Colorado Boulevard	0.697	B	0.440	A	0.591	A
4	Figuerroa Street at La Loma Road	0.660	B	0.477	A	0.720	C
5	Figuerroa Street at Yosemite Drive	0.694	B	0.470	A	0.750	C

Source: AECOM, 2011.

Notes: **Bolded** items indicate intersection will operate at below-standard LOS.

<sup>1</sup> Unsignalized intersection

As shown in Table 6.11-39, the existing plus project scenario results in slightly better level of service than 2020 with project traffic conditions. The existing plus project traffic volumes are essentially the 2020 with project traffic volumes, without the growth factors. Figure 6.11-13 shows the resulting existing plus project volumes.



Source: AECOM, 2011.

**Figure 6.11-13**  
**Traffic Volumes - Existing with the Project**