4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the proposed project for the issue areas that were identified through the Initial Study and NOP process as having the potential to experience significant impacts. "Significant effect" is defined by the State *CEQA Guidelines §15382* as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant."

The assessment of environmental effects contained in each issue area begins with a discussion of the setting. Following the setting is a discussion of the project's impacts. Within the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria used for this analysis to determine whether potential impacts are significant. The next subsection describes the impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. The significance of the project's environmental impacts was identified based on the following classifications:

> ***Class I, Significant and Unavoidable:*** *An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved.*
>
> ***Class II, Less than Significant with Mitigation Incorporated:*** *An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made.*
>
> ***Class III, Not Significant:*** *An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.*
>
> ***Class IV, Beneficial:*** *An impact that would reduce existing environmental problems or hazards.*

The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other future development in the area.

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4.1 AIR QUALITY

This section analyzes the proposed project's temporary and long-term impacts to local and regional air quality.

4.1.1 Setting

a. Climate and Meteorology. West Hollywood is located in the western portion of Los Angeles County. Average daytime temperatures range from highs of 84 degrees Fahrenheit in July, August, and September to 68 degrees in January and February. Overnight low temperatures vary from an average of 48 degrees in January and February to 70 degrees in August. High temperatures occur when Santa Ana wind conditions create an offshore flow. Santa Ana winds are strong northerly or northeasterly winds that originate from the desert of the Great Basin and predominantly occur from September through March. Usually warm, dry, and full of dust, these winds are particularly strong in passes and at the mouths of canyons. Sustained winds of 60 miles per hour, with higher gusts, are common for these conditions. On average, Santa Ana wind conditions occur five to ten times per year, with each event lasting up to a few days. Annual precipitation in West Hollywood averages around 15 inches. Rainfall occurs almost exclusively from late October to early April.

b. Air Pollution Regulation. The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate emissions of airborne pollutants and have established ambient air quality standards for the protection of public health. The U.S. Environmental protection Agency (EPA) is the federal agency designated to administer federal air quality regulation, while the California Air Resources Board (ARB) is the state equivalent and operates under the auspices of the California Environmental Protection Agency (CalEPA). Local control in air quality management is provided through county-level or regional (multi-county) air pollution control districts (APCDs). The ARB establishes statewide air quality standards and is responsible for control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 15 air basins statewide. West Hollywood is located in the South Coast Air Basin (the Basin) which is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

Federal and state ambient air quality standards have been established for six criteria pollutants, including ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb). Table 4.1-1 lists the current federal and state standards for these criteria pollutants. California air quality standards are identical to or stricter than federal standards for all criteria pollutants. California has also set ambient standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 4.1-1
Current Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	California Standard
Ozone	0.070 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.100 ppm (1-hr avg) 0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.03 ppm (annual avg)
Sulfur Dioxide	0.075 ppm (1-hr avg)	0.25 ppm (1-hr avg) 0.04 ppm (24-hr avg)
Lead	0.15 $\mu g/m^3$ (3-mo avg)	1.5 $\mu g/m^3$ (30-day avg)
Particulate Matter (PM_{10})	150 $\mu g/m^3$ (24-hr avg)	50 $\mu g/m^3$ (24-hr avg) 20 $\mu g/m^3$ (annual avg)
Particulate Matter ($PM_{2.5}$)	12 $\mu g/m^3$ (annual avg) 35 $\mu g/m^3$ (24-hr avg)	12 $\mu g/m^3$ (annual avg)

ppm= parts per million $\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, May 2015

Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and volatile organic compounds (VOC).[1] Nitrogen oxides are formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide (CO) is a colorless, odorless, poisonous gas. The major source of CO in California is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary sources being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase

[1] *Volatile organic compounds (VOC) are also referred to as reactive organic gases (ROG) or reactive organic compounds (ROC)*

in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10}, $PM_{2.5}$ and acid rain.

Suspended Particulates. PM_{10} is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM_{10} and $PM_{2.5}$ are by-products of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and remain there and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

The California Air Resources Board (CARB) currently recommends that local agencies avoid siting new sensitive land uses, including residences, within 500 feet of a freeway (CARB, *Air Quality and Land Use Handbook*, April 2005). The recommendation is based on research showing that concentrations of traffic related pollutants decline with distance from major roads, primarily in the first 300 - 500 feet. These recommendations are strictly advisory, and local agencies are expected to balance them with other considerations, which presumably include the land use context and local land use priorities, including housing needs. The handbook also notes that the relative exposure and health risk drops substantially within the first 300 feet, and that the impact of traffic emissions is on a gradient that at some point becomes indistinguishable from the regional air pollution problem.

c. Current Air Quality. The local air quality management agency, the SCAQMD, is required to monitor air pollutant levels to assure that the ambient air quality standards are met and, in the event they are not, to develop strategies to meet these standards. Depending on whether each standard is met or exceeded, the local air basin is classified as being in "attainment" or "non-attainment" with that standard. The South Coast Air Basin (Basin), in which the project site is located, is a non-attainment area for the federal standards for ozone, $PM_{2.5}$ and lead and the state standards for ozone PM_{10}, $PM_{2.5}$, NO_2 and lead.

The South Coast Air Basin monitoring station located nearest to the project site is the Veteran's Administration Hospital in West Los Angeles, approximately 6 miles west of the site. However, particulate matter data is not available from the West Los Angeles monitoring station; therefore, data for this pollutant has been taken from the Los Angeles-North Main Street station, located in downtown Los Angeles. Table 4.1-2 provides the number of days each of the standards has been exceeded at these stations.

Table 4.1-2
Ambient Air Quality Data

Pollutant	2013	2014	2015
[a]Ozone, ppm - Worst Hour	0.088	0.116	0.102
Number of days of State exceedances (>0.09 ppm)	0	1	2
[a]Ozone, ppm – Worst 8 Hours	0.076	0.095	0.073
Number of days of State exceedances (>0.07 ppm)	1	6	3
Number of days of Federal exceedances (>0.075 ppm)	0	4	0
[a]Carbon Monoxide, ppm - Worst 8 Hours	N/A	N/A	N/A
Number of days of State/Federal exceedances (>9.0 ppm)	N/A	N/A	N/A
[a]Nitrogen Dioxide, ppm - Worst Hour	0.051	0.063	0.067
Number of days of State exceedances (>0.25 ppm)	0	0	0
[b]Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours	74.5	86.8	88.5
Number of samples of State exceedances (>50 $\mu g/m^3$)	20	38	30
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
[b]Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours	43.1	59.9	56.4
Number of samples of Federal exceedances (>35 $\mu g/m^3$)	1	6	7

[a] West Los Angeles-VA Hospital Monitoring Station
[b] Los Angeles-North Main Street Monitoring Station
Source: CARB Air Quality Data Statistics. Top four Summary. Accessed June 2016.
http://www.arb.ca.gov/adam/topfour/topfour1.php
N/A = not available, insufficient data available to determine the value

As shown in Table 4.1-2, ozone, $PM_{2.5}$, and PM_{10} concentrations exceeded state and federal standards several times between 2013 and 2015. No exceedances of either the state or federal standards for NO_2 occurred. No information about CO was available on the ARB website; however, no exceedances of either the state or federal standards for CO occurred.

d. Sensitive Receptors in the Project Area. Certain population groups are more sensitive to air pollution than others. Sensitive receptors include children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases. Sensitive land uses would include those locations where such individuals are concentrated, such as hospitals, schools, residences, and parks with active recreational uses. Sensitive receptors located in the vicinity of the project site include residential uses and a school. The nearest sensitive receptors to the project site are the single-family and multi-family residences located between approximately 13 and 50 feet immediately north of the project site. Additional residences are located about 70 feet northeast of the project site across West Knoll Drive. Pacific Hills School is located approximately 650 feet northwest of the project site at 8628 Holloway Drive.

e. Air Quality Management. Under state law, the SCAQMD is required to prepare an overall plan for air quality improvement for pollutants for which the District is in non-attainment. Every few years, SCAQMD prepares an overall plan for the air quality improvement. Each iteration of the plan is an update of the previous plan and has a 20-year horizon. The Air Quality Management Plan (AQMP) was last updated in 2012. The 2012 AQMP incorporates new scientific data and notable regulatory actions that have occurred since adoption of the first AQMP in 1997. The AQMP is incorporated by reference and available online at http://www.aqmd.gov/aqmp/2012aqmp/index.htm.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to the Appendix G of the *CEQA Guidelines*, air quality impacts related to the proposed project would be considered significant if the project would:

- *Conflict with or obstruct implementation of the applicable air quality plan;*
- *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
- *Expose sensitive receptors to substantial pollutant concentrations; or*
- *Create objectionable odors affecting a substantial number of people*

The Initial Study (see Appendix A) concluded that only the second, third, and fourth criteria could be applicable to the project potentially resulting in a significant impact. The proposed project would result in less than significant impacts with respect to applicable air quality plans or odors. Hence, only impacts related to construction and long-term emissions and related exposure of sensitive receptors to pollutant concentrations are addressed in this section.

Construction activities facilitated by the proposed project would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. Some of this equipment would be used during grading activities as well as when structures are constructed. It is assumed that all construction equipment used would be diesel-powered. The regional construction emissions associated with development of the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 computer program by estimating the types and number of pieces of equipment that would be used on-site during each of the construction phases. Construction emissions are analyzed using the regional thresholds established by the SCAQMD and published in the CEQA Air Quality Handbook.

In certifying the Final Program EIR for the City of West Hollywood General Plan 2035 and Climate Action Plan, the City adopted mitigation measures 3.2-1 and 3.2-2 for the reduction of air pollution emissions during construction. These mitigation measures apply to all new development in the City. It is assumed that the proposed project would comply with these requirements. The requirements of these measures include the following:

3.2-1 The City shall implement the following measures to reduce the amount of fugitive dust that is re-entrained into the atmosphere from parking lots and construction sites.

- *Require the following measures to be taken during the construction of all projects to reduce the amount of dust and other sources of PM_{10}, in accordance with SCAQMD Rule 403:*
  - *Dust suppression at construction sites using vegetation, surfactants, and other chemical stabilizers*
  - *Wheel washers for construction equipment*
  - *Watering down of all construction areas*
  - *Limit speeds at construction sites to 15 miles per hour*
  - *Cover aggregate or similar material during transportation of material*
- *Adopt incentives, regulations, and/or procedures to reduce paved road dust emissions through targeted street sweeping of roads subject to high traffic levels and silt loadings.*

3.2-2 The City shall require each project applicant, as a condition of project approval, to implement the following measures to reduce exhaust emissions from construction equipment.

- *Commercial electric power shall be provided to the project site in adequate capacity to avoid or minimize the use of portable gas-powered electric generators and equipment.*
- *Where feasible, equipment requiring the use of fossil fuels (e.g., diesel) shall be replaced or substituted with electrically driven equivalents (provided that they are not run via a portable generator set).*
- *To the extent feasible, alternative fuels and emission controls shall be used to further reduce exhaust emissions.*
- *On-site equipment shall not be left idling when not in use.*
- *The hours of operation of heavy-duty equipment and/or the amount of equipment in use at any one time shall be limited.*
- *Staging areas for heavy-duty construction equipment shall be located as far as possible from sensitive receptors.*
- *Before construction contracts are issued, the project applicants shall perform a review of new technology, in consultation with SCAQMD, as it relates to heavy-duty equipment, to determine what (if any) advances in emissions reductions are available for use and are economically feasible. Construction contract and bid specifications shall require contractors to utilize the available and economically feasible technology on an established percentage of the equipment fleet. It is anticipated that in the near future, both NOX and PM10 control equipment will be available.*

Operational emissions associated with development facilitated by the proposed project were also estimated using CalEEMod. Operational emissions include mobile source emissions, energy emissions, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of on-site development. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coating. To determine whether a significant regional air quality impact would occur, the increase in emissions was compared with the SCAQMD's recommended regional thresholds for operational emissions.
The SCAQMD has developed specific numeric thresholds that apply to projects within the South Coast Air Basin. The SCAQMD has established the significance thresholds for both construction activities and project operations. These thresholds are shown in Table 4.1-3.

Table 4.1-3
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Operation Thresholds (lbs/day)**	**Construction Thresholds (lbs/day)**
NO_X	55	100
VOC	55	75
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3

Source: SCAQMD, http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2, March 2015.

In addition to the regional air quality thresholds shown in Table 4.1-3, the SCAQMD has also developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook*. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, etc. However, LSTs only apply to emissions produced on the project site, including idling emissions during both project construction and operation. LSTs have been developed for NO_X, CO, PM_{10} and $PM_{2.5}$. LSTs are not applicable to mobile sources off-site such as cars on a roadway (Final Localized Significance Threshold Methodology, SCAQMD, June 2003).

LSTs have been developed for emissions within areas up to 5 acres in size, with air pollutant modeling recommended for activity within larger areas. The SCAQMD provides lookup tables for project sites that measure 1, 2 or 5 acres. The project site measures approximately 1.27 acres and is located in Source Receptor Area 2 (SRA-2), which is designated by the SCAQMD as Northwest Coastal Los Angeles and includes the project site. The LST construction emission thresholds for a 1-acre site in SRA-2 are shown in Table 4.1-4. According to the SCAQMD's publication, *Final Localized Significant (LST) Thresholds Methodology* (2008), the use of LSTs is voluntary, to be implemented at the discretion of local agencies. LST's are provided for receptors at a distance of 82 to 1,640 feet (25 to 500 meters) from the project boundary. According to the LST methodology document, projects with boundaries located closer than 82 feet to the nearest receptor should use the LSTs for receptors located at 82 feet.

Table 4.1-4
SCAQMD LSTs for Construction

Pollutant	Allowable emissions from a one-acre site in SRA-2 for a receptor 82 feet away	
	Operation Thresholds (lbs/day)	Construction Thresholds (lbs/day)
Gradual conversion of NO_X to NO_2	103	103
CO	562	562
PM_{10}	1	4
$PM_{2.5}$	1	3

Source: http://www.aqmd.gov/CEQA/handbook/LST/appC.pdf, 2009.
Note: LSTs are provided for receptors at a distance of 82 to 1,640 feet away.

In addition, SCAQMD recommends that a local CO hotspot analysis be conducted if an intersection meets one of the following criteria: 1) the intersection is at LOS D or worse and where the project increases the volume to capacity ratio by 2 percent, or 2) the project decreases Levels of Service (LOS) at an intersection to D or worse. A CO hotspot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized CO "hotspots" can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal AAQS of 35.0 parts per million (ppm) or the state AAQS of 20.0 ppm. Potential carbon monoxide impacts at roadway intersections were estimated using the CALINE4 version 2.1 modeling program.

b. Project Impacts and Mitigation Measures.

Impact AQ-1 **Project construction would generate temporary increases in localized air pollutant emissions. Such emissions may result in temporary adverse impacts to local air quality, but are below SCAQMD thresholds. Therefore, air quality impacts associated with construction activities would be Class III, *less than significant*.**

The proposed project involves development of a mixed-use structure with 97 apartment units as well as retail, restaurant, office, live/work, hair salon, and parking uses on an approximately 1.27-acre site. Construction of the proposed project is expected to occur over 22 months. Estimated preliminary project grading would include approximately 49,800 cubic yards of exported earth material. Assuming approximately 16 cubic yards of material per truck trip, the proposed project would result in approximately 3,113 round-trip hauling truck trips.

Construction activities associated with demolition of existing uses and construction of the proposed mixed-use project would result in temporary air quality impacts. Ozone precursors NO_X and VOC, as well as CO, would be emitted by the operation of construction equipment such as graders, backhoes, and generators, while particulate matter (PM_{10} and $PM_{2.5}$) would be emitted by activities that disturb the soil, such as grading and excavation, road construction and building construction. Table 4.1-5 shows estimates of maximum daily construction emissions

associated with the proposed project. Lead emissions are not analyzed because pollutant quantities are negligible and there is no risk of exceeding the SCAQMD threshold of 3 pounds per day.

Table 4.1-5
Estimated Construction Maximum Daily Air Pollutant Emissions

	Maximum Emissions (lbs/day)[1]					
	VOC	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Maximum Daily Construction Emissions	25.6	39.1	29.8	7.7	4.1	0.07
SCAQMD Regional Thresholds	*75*	*100*	*550*	*150*	*55*	*150*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum Daily On-Site Construction Emissions	25.4	26.59	20.87	3.31	2.12	0.02
Local Significant Threshold [2] (on-site only)	*n/a*	*103*	*562*	*4*	*3*	*n/a*
Threshold Exceeded?	**n/a**	**No**	**No**	**No**	**No**	**n/a**

Source: Table 2.1, Overall Construction, Mitigated, CalEEMod winter calculations, see Appendix C
n/a = not applicable
[1] Totals include emissions associated with site grading, offsite earth export, and worker trips. Construction emissions assumed to comply with Mitigation Measures 3.2-1 and 3.2-2 of the Final Program EIR for the City of West Hollywood General Plan 2035 and Climate Action Plan, which apply to all development in the city. Architectural coating phase assumed to last 56 days, use non-VOC paint (<=5 g/L VOC) in accordance with project description green building features, and comply with SCAQMD Rule 1113.
[2] LSTs are for a one acre project in SRA-2 with the nearest sensitive receptor a distance of 82 feet from the site boundary.

As shown in Table 4.1-5, emissions of VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ would be below SCAQMD regional thresholds for all criteria pollutants. The LST thresholds only apply to those emissions which are generated by onsite construction activities, such as emissions from onsite grading, and do not apply to offsite mobile emissions. The 82 feet category was used to illustrate the closest possible receptor, as required by SCAQMD's *Final Localized Significant (LST) Thresholds Methodology* (2008). As indicated in Table 4.1-5, construction emissions would not exceed applicable LSTs. Impacts would be less than significant.

Mitigation Measures. Construction emissions associated with the proposed project would not exceed SCAQMD thresholds. No mitigation measures would be required.

Significance After Mitigation. The impact would be less than significant without mitigation.

Impact AQ-2 Operation of the proposed project would generate air pollutant emissions, but emissions would not exceed SCAQMD operational significance thresholds. Therefore, long-term regional air quality impacts would be Class III, *less than significant.*

The net increase in long-term emissions associated with the proposed project, as presented in Table 4.1-6, includes those emissions associated with vehicle trips (mobile emissions), the use of natural gas and electricity (energy emissions), and consumer products, architectural coatings, and landscaping equipment (area emissions). CalEEMod was used to calculate emissions based

on the proposed land uses for the site and the number of trips generated. Mobile emissions are based on the estimated amount of project-generated vehicle trips determined by the project traffic study (see Section 4.6, *Transportation and Circulation*).

Table 4.1-6 summarizes operational emissions resulting from the proposed project. Lead emissions are not analyzed because pollutant quantities are negligible and there is no risk of exceeding the SCAQMD threshold of 3 pounds per day. As shown, the project would generate a net increase in emissions of 6.72 pounds of VOC, 5.24 pounds of NO_X, 25.12 pounds of CO, 4.72 pounds of PM_{10}, and 1.61 pounds of $PM_{2.5}$ per day. No SCAQMD thresholds would be exceeded; therefore, impacts would be less than significant.

Table 4.1-6
Operational Emissions Associated with Proposed Project

	Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Proposed Project						
Area	6.98	0.11	9.08	0.05	0.05	<0.01
Energy	0.04	0.40	0.25	0.03	0.03	<0.01
Mobile	5.91	14.67	58.53	10.45	2.94	0.15
Subtotal	*12.93*	*15.16*	*67.89*	*10. 23*	*3.02*	*0.15*
Existing Uses to be Removed						
Area	(1.55)	(0.01)	(1.03)	(0.11)	(0.11)	(<0.01)
Energy	(0.02)	(0.22)	(0.17)	(0.02)	(0.02)	(<0.01)
Mobile	(4.63)	(9.69)	(41.57)	(5.38)	(1.52)	(0.08)
Subtotal	*(6.21)*	*(9.92)*	*(42.77)*	*(5.51)*	*(1.41)*	*(0.08)*
Total Net Emissions	**6.72**	**5.24**	**25.12**	**4.72**	**1.61**	**0.07**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*55*	*150*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Maximum Daily On-Site Operational Emissions (area emissions only)[1]	**5.43**	**0.1**	**8.05**	**(0.06)**	**(0.06)**	**<0.01**
Local Significant Threshold [2] (on-site only)	*n/a*	*103*	*562*	*1*	*1*	*n/a*
Threshold Exceeded?	***n/a***	***No***	***No***	***No***	***No***	***n/a***

Source: Table 2.2, "Overall Operational", CalEEMod winter calculations, see Appendix C
( ) indicates subtraction, Numbers may not add due to rounding
[1] On-site emissions include area emissions consumer products, architectural coatings, and landscaping equipment) only. Operational emissions due to vehicle idling on-site are not calculated in CalEEMod and are expected to be negligible.
[2] LSTs are for a one acre project in SRA-2 with the nearest sensitive receptor a distance of 82 feet from the site boundary

Mitigation Measures. Operational emissions associated with the proposed project would not exceed SCAQMD thresholds. Therefore, mitigation is not required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact AQ-3 Project-generated traffic could incrementally increase localized carbon monoxide (CO) levels. However, because the increase in CO levels at study area intersections as a result of the proposed project would not cause an exceedance of state or federal CO standards, this impact would be Class III, *less than significant*.

Areas with high vehicle density, such as congested intersections and parking garages, have the potential to create high concentrations of carbon monoxide (CO), known as CO "hot spots." Specifically, hot spots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal Ambient Air Quality Standard (AAQS) of 35.0 parts per million (ppm) or the state AAQS of 20.0 ppm. As discussed in Section 4.6, *Transportation and Circulation* and in the traffic study conducted by Fehr & Peers (see Appendix C), traffic at study area intersections would incrementally increase under the existing plus project and future plus project conditions. The CO levels at sensitive receptors located near these intersections could therefore increase incrementally.

SCAQMD recommends that a local CO hotspot analysis be conducted if an intersection meets one of the following criteria: 1) the intersection is at level of service (LOS) D or worse and where the project increases the volume to capacity ratio by 2 percent; or 2) the project decreases the LOS at an intersection to D or worse.

According to the traffic study (see Section 4.6, *Transportation and Circulation*), the intersection of Hancock Avenue and Holloway Drive (future PM peak hour conditions) meets one of the criteria and was analyzed for CO hot spots using the CALINE4 air quality model.

The results of the CO hot spot model for the proposed project are shown in Table 4.1-7 (more detailed results are contained in Appendix C). As shown, CO levels at this intersection would not exceed federal or state AAQS for CO. Therefore, impacts would be less than significant.

Table 4.1-7
Intersection LOS and CO Concentration

Intersection	Peak Hour	LOS		Peak Hour CO Levels With Project	Ambient Air Quality Standards Federal/ State	Exceeds State or Federal AAQS?
		Baseline	With Project			
Hancock Ave & Holloway Dr (future + project)	PM	F	F	3.2	35.0 ppm/ 20.0 ppm	No

Source: LOS data from Fehr & Peers, 2014; CO concentration data from CALINE4 version 2.1. See Appendix C.

Mitigation Measures. No mitigation measures would be required.

Significance after Mitigation. CO concentrations at study area intersections would remain below the state and federal CO standards; and therefore, impacts related to CO hot spots would be less than significant.

c. Cumulative Impacts. The South Coast Air Basin is a non-attainment area for the federal and state standards for ozone and $PM_{2.5}$ and the state standards for NO_2 and PM_{10}. Any growth within the Los Angeles metropolitan area would contribute to existing exceedances of ambient air quality standards when taken as a whole with existing development. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. The SCAQMD's approach to determining cumulative air quality impacts for criteria air pollutants is to first determine whether or not the proposed project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If the project does not exceed SCAQMD thresholds, then the lead agency needs to consider the additive effects of related projects only if the proposed project is part of an ongoing regulatory program or is contemplated in a program EIR, and the related projects are located within an approximately one mile of the project site. If there are related projects within the vicinity (one-mile radius) of the project site that are part of an ongoing regulatory program or are contemplated in a Program EIR, then the additive effect of the related projects should be considered.

The proposed project is not part of an ongoing regulatory program; therefore, the SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed in Impact AQ-1, daily emissions of construction-related pollutants would not exceed SCAQMD significance thresholds. As discussed in Impact AQ-2, the proposed project would result in an increase in daily operational emissions; however, this increase would not exceed the SCAQMD thresholds. In addition, as discussed in Impact AQ-3, project traffic would not create a CO hot spot at study area intersections.

By applying the SCAQMD cumulative air quality impact methodology, implementation of the proposed project would not result in an addition of criteria pollutants such that cumulative impacts, in conjunction with related projects, would occur. Because the proposed project would not generate emissions that exceed the SCAQMD's thresholds and the project is consistent with the AQMP, the project would not make a cumulatively considerable contribution with regard to criteria pollutants. Therefore the project's contribution to cumulative regional air quality impacts would not be cumulatively considerable.

4.2 GEOLOGY and HYDROLOGY

This section analyzes potential impacts to groundwater and impacts associated with geologic processes, including hazards associated with liquefaction and other soil-related risks. A geotechnical evaluation of the site was conducted for the proposed project by GeoDesign, Inc. The following analysis is based in part on the February 10, 2011, geotechnical report and the addendums to the geotechnical report dated February 25, 2013 (Addendum 1), May 22, 2014 (Addendum 2), December 11, 2014 (Addendum 3), and August 21, 2015 (Addendum 4), which can be found in Appendix D of this EIR. Rincon Consultants, Inc. also reviewed the Development Permit Application drawings prepared by DFH Architects May 23, 2016.

4.2.1 Setting

a. Site Geology. The project site is located in northwestern West Hollywood along the northern margin of the Los Angeles Basin. The City is located just south of the Hollywood Hills at the base of the Santa Monica Mountains and declines in elevation to the south. Geological materials at the site consist of Holocene and Pleistocene age alluvial fan deposits derived from the erosion of the Santa Monica Mountains. The alluvial fan deposits form alternating layers of silty sand and sand with lesser amounts of clayey sand, silt, and clay. Together, the Holocene and Pleistocene age alluvial fan sediments are approximately 600 feet thick at the site vicinity.

The project site is located in the northern-most portion of the Peninsular Ranges Geomorphic Province, near the Transverse Ranges Geomorphic Province to the north. The Peninsular Ranges is characterized by northwest-trending geologic structures in contrast to the Transverse Ranges which is characterized by east-west trending geologic structures. The boundary between the two geomorphic provinces is a system of faults that include the active Malibu Coast, Santa Monica, Hollywood, Raymond, and Sierra Madre fault zones.

The closest active fault to the site capable of surface rupture is the Hollywood Fault. Splays of the Hollywood Fault zone are located approximately 700 feet north of the site. The project site is not within an Alquist-Priolo Earthquake Fault Zone. The City has established a Fault Precaution (FP) zone along the Hollywood Fault zone. Fault Zone 1 requires a site-specific surface fault rupture evaluation and FP Zone 2 requires either a site-specific fault rupture evaluation or foundation strengthening to mitigate up to 2 inches of ground displacement. The project site is not located in FP Zone 1 or FP Zone 2 (GeoDesign, Inc., 2011).

The project site slopes south-southeast and ranges from an elevation of 261 feet above mean sea level (MSL) at the northernmost portion of the site to an elevation of 235 feet above MSL at the southeastern corner of the site.

b. Site Hydrogeology. The City of West Hollywood is within the Hollywood Groundwater Subbasin, which is part of the Los Angeles Groundwater Basin. The first groundwater encountered in this basin generally flows southward, away from the Santa Monica Mountains. There are different groundwater bearing zones within the basin. Deeper groundwater in the basin typically flows from east to west and the depth is as much as 660 feet (West Hollywood General Plan FEIR, 2010). Explorations by GeoDesign, Inc. in 2011 encountered groundwater at the project site at depths of 30 and 49 feet below ground surface. The differences

in depth to groundwater resulted from the variable ground surface elevations at the site. The depth to groundwater encountered in the exploration borings corresponds to elevations of 205 and 207 feet above mean sea level, respectively. Fluctuations in the elevation of groundwater are primarily due to seasonal and annual variations in rainfall and other factors not evident at the time of the measurements. Fluctuations also may occur across the site.

c. Seismic and Soil Hazards.

Liquefaction. Liquefaction is a temporary, but substantial, loss of shear strength in granular solids, such as sand, silt, and gravel, usually occurring during or after a major earthquake. This occurs when the shock waves from an earthquake of sufficient magnitude and duration compact and decrease the volume of the soil; if drainage cannot occur, this reduction in soil volume will increase the pressure exerted on the water contained in the soil, forcing it upward to the ground surface. This process can transform stable granular material into a fluid-like state. The potential for liquefaction to occur is greatest in areas with loose, granular, low-density soil, where the water table is within the upper 40 to 50 feet of the ground surface. Liquefaction can result in slope and foundation failure. Other effects of liquefaction include lateral spread, flow failures, ground oscillations, and loss of bearing strength. Liquefaction is intrinsically linked with the depth of groundwater below the site and the types of sediments underlying an area. According to the GeoDesign geotechnical report, there is the potential for liquefaction to occur at this site. The site is located in an area designated as having a potential for liquefaction as indicated on the State of California Seismic Hazard Zone map for the area.

Subsidence and Settlement. Subsidence involves deep seated settlement due to the withdrawal of fluid (oil, natural gas, or water). Seismically induced settlement occurs in loose to medium dense unconsolidated soil above groundwater. These soils compress (settle) when subject to seismic shaking. The settlement can be exacerbated by increased loading, such as from the construction of onsite buildings. Settlement can also result solely from human activities including improperly placed artificial fill, and structures built on soils or bedrock materials with differential settlement rates. This settlement can be mitigated prior to development through the removal and recompaction of loose soils.

Seismic-induced settlement or compaction of dry or moist, cohesionless soils can be an effect related to earthquake ground motion. Uniform settlement beneath a given structure would cause minimal damage; however, because of variations in distribution, density, and confining conditions of the soils, seismic-induced settlement is generally non-uniform and can cause serious structural damage. Dry and partially saturated soils as well as saturated granular soils are subject to seismic-induced settlement. According to the geotechnical report, the potential for dry seismic settlement is not present at this site with respect to the proposed development. The geotechnical study determined that there is a potential to have some liquefaction-related settlement at this site. The amount of liquefaction induced settlement ranges from 0 to 1.6 inches and is on the order of about 1 inch.

Lateral Spreading. As discussed in the geotechnical report, lateral spreading may occur when potentially liquefiable soils are present and exposed in conjunction with a sloping ground surface. If soils within the slope liquefy, the result may be temporary instability resulting in

movement of sediments within the slope and could include slope failure. For this to occur, the liquefiable soils need to be continuous and the toe of the slope needs to be unsupported.

The distance from the ground surface to potentially liquefiable sediments is below the lowest floor level of the proposed structure. The depth to the liquefiable sediments is about 30 feet below the ground surface measured at Santa Monica Boulevard adjacent to the site. These sediments are not exposed at the ground surface near the site. According to the GeoDesign geotechnical report, the potential for lateral spreading is not present at the site.

Landslides. Landslides occur when slopes become unstable and masses of earth material move downslope. Landslides are generally considered to be rapid events, often triggered during periods of rainfall or by earthquakes. Mudslides and slumps are a more shallow type of slope failure compared to landslides. These typically affect the upper soil horizons, and are not bedrock features. Historically, mudslides and slumps occur during or soon after periods of rainfall. Erosion can occur along manufactured slopes that are improperly designed or not adequately re-vegetated.

The size of a landslide can vary from minor rock falls to large hillside slumps. The underlying bedrock bedding planes, degree of water saturation of a material, steepness of a slope and the general strength of the soil all contribute to the stability of a hillside. Basal erosion caused by water or human-induced modifications to the natural contour of a hill, including grading, have the potential to destabilize a hillside.

The California Division of Mines and Geology (CDMG) prepared Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, 1997. This document provides recommendations to effectively reduce seismic hazards to acceptable levels, as defined in California Code of Regulations (CCR Title 14, Section 3721). For landslides, CDMG Special Publication 117 recommends that the following be performed:

- *A screening investigation to determine the possible presence of landslides.*
- *If the screening investigation identifies the likely presence of landslides, then perform a quantitative evaluation of earthquake-induced landslide potential. This task includes field exploration, site sampling, and geotechnical testing. A slope stability analysis might also be appropriate here.*
- *Evaluation of potential earthquake-induced landslide hazards.*
- *Mitigation of earthquake-induced landslide hazards.*

The geology of the Beverly Hills quadrangle has been mapped by Thomas Dibblee Jr. (Geologic Map of the Beverly Hills and Van Nuys (South ½) Quadrangles, 1991). The project site is included on that geologic map. Although landslides are identified on the map for portions of the Beverly Hills Quadrangle, no mapped landslides are shown as being present at the subject site. The geotechnical report did not identify any landslides present at the site. In addition, the Seismic Hazard Zone map for the Beverly Hills Quadrangle (State of California Official Map, released March 25, 1999) does not depict the site within an area having the potential to experience earthquake induced landslides. Based on the lack of any mapped landslides and the fact that the geotechnical report does not identify landslides affecting the site, the potential for a landslide hazard at this site is low.

Tsunamis and Seiches. Tsunamis are large ocean surges that are created as a result of a subsea earthquake or landslide. The waves created by the subsea earthquake or landslide travel across the ocean at high speeds (several hundreds of miles per hour). As the waves reach shore, their amplitudes increase. Once the waves reach land, they can cause widespread flooding. The areas susceptible to tsunamis are those near to the ocean and along low-lying river channels.

A seiche is a wave or series of waves that are produced within an enclosed or partially enclosed body of water (such as a lake or bay). Most seiches are created as landslides fall into the body of water and displace the water. The water then sloshes out of the bay or lake, creating the seiche. If a seiche overtops a dam, the water can erode the dam face to the point where the dam can fail.

The project site is located over 10 miles from the Pacific Ocean at elevations ranging over 200 feet above mean sea level. As such, the potential for a tsunami affecting the site is not present. The site does not lie in an area near any large bodies of water or bays that could be affected by a seiche. Therefore, the potential for a seiche at the site is not present.

4.2.2 Environmental Impact Analysis

a. Methodology and Significance Thresholds. This evaluation is based on review of existing information that has been developed for the project site, including a geotechnical evaluation and report prepared for the project by GeoDesign, Inc., the City of West Hollywood General Plan Safety and Noise Element and other available sources.

In accordance with Appendix G of the *CEQA Guidelines*, a project would result in a significant impact related to geology and soils if it would:

1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i) rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; or iv) landslides;*
2. *Result in substantial soil erosion or the loss of topsoil;*
3. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;*
4. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or*
5. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*

The Initial Study (Appendix A) determined that the proposed project could result in potentially significant impacts related to liquefaction (first criterion, part iii), landslides (first criterion, part iv), and geologic instability (third criterion). As such, an analysis of these issues is included in this section of the EIR.

In accordance with Appendix G of the *CEQA Guidelines,* hydrology and water quality effects are considered significant if the project would:

1. *Violate any water quality standards or waste discharge requirements.*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).*
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.*
4. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.*
5. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.*
6. *Otherwise substantially degrade water quality.*
7. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.*
8. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows.*
9. *Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.*
10. *Result in inundation by seiche, tsunami, or mudflow.*

The Initial Study (Appendix A) determined that the proposed project could result in potentially significant impacts related to the second criterion listed above. As such, an analysis of impacts related to possible groundwater withdrawal is included in this section of the EIR. Impacts related to all other criteria listed above were found to be less than significant and, therefore, are not further discussed in this section.

b. Project Impacts and Mitigation Measures.

Impact GEO-1 **Seismically-induced ground shaking could cause liquefiable sediments to lose supporting strength and liquefy, resulting in loss of property or risk to human health and safety. The geotechnical evaluation performed for the proposed project includes mitigation measures to prevent soil-related hazards from adversely affecting the proposed structure. In addition, the proposed project would be required to comply with California Building Code (CBC) requirements. Impacts would be Class II, *less than significant with mitigation incorporated.***

The project site is located in an area designated as having the potential for liquefaction as indicated on the State of California Seismic Hazard Zone map for the area. GeoDesign, Inc. evaluated the liquefaction potential of soils on-site as part of its 2011 geotechnical report and May 2014 addendum to the report. The analysis found that potentially liquefiable soils are present at the project site. The report calculated that up to 1.6 inches of settlement could occur, which could cause damage to building foundations. Therefore, the potential for liquefaction and associated settlement exists at the site and impacts would be potentially significant.

Mitigation Measures. The following measure would reduce seismic-related soil hazard impacts to a less than significant level:

GEO-1 **Geotechnical Design Considerations.** The following foundation design considerations related to soil engineering, which are also included in Section 7.1 of the 2011 geotechnical report prepared by GeoDesign, Inc. and updated in the 2014 report addendum, must be incorporated into the proposed project grading and building plans, revised as needed for compliance with current California Building Code (CBC). Design and construction of the building shall be engineered to withstand the expected ground acceleration and potential liquefaction that may occur at this site. These include, but are not limited to:

- *Foundation Design. The proposed structure shall be supported on a mat foundation system bearing in the underlying dense native soils, and designed using an allowable bearing pressure of 6,000 pounds per square foot and a subgrade modulus of reaction equivalent to 300 pounds per square inch. Lateral loading must be designed to withstand a passive pressure of 300 pounds per square foot per foot of embedment where the concrete is put directly against the undisturbed native dense soils. A coefficient of friction of 0.3 shall be used to calculate resistance to sliding for footings bearing on native soils. The lateral bearing pressure described in the geotechnical report takes into consideration the hydrostatic pressure generated if the groundwater table rises to its historic high. Any changes to the building or foundation design that result in changes to the foundation load shall be provided to a City-approved geotechnical engineer for their evaluation and approval.*

Further, the construction shall comply with applicable provisions of the current CBC. The design of the foundation shall be reviewed and approved by the City Engineer prior to the issuance of the building permit.

Significance After Mitigation. The probability of a larger than expected earthquake occurring cannot be eliminated. Any structure built in California is susceptible to failure due to seismic activity. However, structural failure due to seismic ground shaking resulting in liquefaction of the sediments would be reduced to a less than significant level by implementing Mitigation Measure GEO-1.

Impact GEO-2 **The proposed project would require the excavation into an existing hillside. Landslides or slope failure could occur. With implementation of mitigation measures contained in the geotechnical report and mandatory compliance with CBC requirements, impacts would be Class II,** ***less than significant with mitigation incorporated.***

As discussed in the GeoDesign, Inc. geotechnical report, the geologic investigation of the project site encountered native stiff sandy clay in the portion of the hillside on-site that is to be excavated. The project involves cutting into the hillside to build a structure of five above-ground floors and one level of underground parking below the elevation of Santa Monica Boulevard. The site topography rises to the north, away from Santa Monica Boulevard.

According to Addendum 4 of the geotechnical report (August 21, 2015), the lowest finished floor level for the proposed project would be at approximately 222.2 MSL. The mat foundation would be on the order of two to three feet thick and the bottom of the mat would be established approximately four feet below the lowest finish floor level. Therefore, the bottom of the mat foundation would be established at 218.2 feet above MSL. Santa Monica Boulevard adjacent to the site is at an elevation of about 235 MSL. The top of the hillside at the northern boundary of the project site is at an elevation of about 255 MSL. Thus, when measured from the top of the hill to the base of the building, excavation would be up to 36.8 (255 minus 218.2) vertical feet. The base of the building would be about 16.8 (235 minus 218.2) feet below the adjacent surface grade of Santa Monica Boulevard.

The GeoDesign, Inc. geotechnical report states that shoring of the hillside cut would be necessary to maintain the integrity of the slope that is to be cut. Because the site is sloped, the north wall of the street level and second level would be notched into the hillside and would be below the ground surface. In addition, the subterranean parking level would be below the ground surface. Shoring may include soldier piles, lagging, and tie-back structures. The geotechnical report provides recommendations to design the shoring system; however, the shoring contractor would be responsible for the proper design of that shoring, which would be reviewed by the geotechnical engineer for conformance with the recommendations.

Mitigation Measure. Implementation of GEO-1 above and the following measure would reduce impacts to a less than significant level.

GEO-2 **Geotechnical Recommendations for Foundation Construction.** The applicant shall comply with all recommendations contained in the 2011 geotechnical report and 2014 addendum to the report prepared for the project site by GeoDesign, Inc. These include, but are not limited to, the following:

- *Shoring Design. All recommendations presented in the geotechnical report pertaining to the shoring design considerations shall be followed. Soldier piles, lagging, and tie backs shall be designed to withstand the earth pressure resulting from adjacent soils, traffic loading, and temporary equipment used to excavate the slopes and drive the shoring. For soldier piles driven below the groundwater table, special provisions shall be*

followed to ensure that caving is minimized. The shoring contractor shall provide its design to a City-approved geotechnical engineer for review and comment prior to commencement of shoring. Lagging deflection and tie back resistance strength shall be measured in the field to ensure that these features are able to withstand the earth pressures that they will undergo.

- *Foundation Observations. All foundation excavations shall be observed by a City-approved geotechnical engineer to verify penetration into the recommended bearing materials. The observation shall be performed prior to the placement of reinforcement. All foundation pile excavations shall be performed under the continuous observation by City-approved geotechnical engineer to verify penetration into firm undisturbed natural soils. Foundations shall be deepened if necessary to extend into satisfactory soils, or proper compaction shall be performed to ensure that the foundation slab is built upon dense compact material. Foundation excavations shall be cleaned of all loose soils prior to placing steel and concrete. Any required foundation backfill shall be mechanically compacted, flooding is not permitted.*

- *Construction Monitoring. Compliance with the design concepts, specifications or recommendations during construction requires review by City-approved geotechnical engineer. All foundations shall be observed by a city-approved geotechnical engineer prior to placing concrete or steel. Any fill which is placed shall be observed, tested, and verified if used for engineering purposes. It is the responsibility of the contractor to ensure that all excavations and trenches are properly sloped or shored. All temporary excavations shall be cut and maintained in accordance with applicable OSHA rules and regulations.*

Recommendations contained in the geotechnical report shall be reviewed and approved by the Community Development Department and incorporated into final grading and structural design plans, as deemed appropriate by the Community Development Department. In addition, all onsite structures shall be required to comply with applicable provisions of the California Building Code.

Significance After Mitigation. Implementation of Mitigation Measures GEO-1 and GEO-2 would ensure that the project is consistent with the project-specific design recommendations included in the Geotechnical Study. This would ensure that the project is designed to withstand potential slope instability. Further, the measures would ensure that the proper construction techniques occur to address potential slope instability during construction. Therefore, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides or unstable soils during construction or building operation. With Mitigation Measure GEO-1 and GEO-2, the potential for structural failure due to an in adequate foundation and/or unstable slopes would be reduced to a less than significant level.

Impact GEO-3 **The lowest proposed finished floor level of the structure would be located below the historic high groundwater level and provisions to resist resulting hydrostatic pressures would be required. Permanent dewatering is not required, but waterproofing will be required. Temporary dewatering may be needed during construction, which could affect the local groundwater table and result in the discharge of potentially contaminated groundwater. However, with implementation of mitigation measures, impacts would be Class II, *less than significant with mitigation incorporated*.**

The historic high groundwater level at the site ranges from approximately 222 to 225 MSL depending on location within the site (Figure 1, GeoDesign's Addendum 2, May 22, 2014). In the borings drilled by GeoDesign as part of the geotechnical evaluation, groundwater was encountered at between 205 and 207 MSL. The lowest proposed finished floor level would be established at 222.2 MSL. Therefore, the groundwater level based on the most recent exploration data is approximately 15.2 to 17.2 feet below the lowest planned finished floor level and the historical high groundwater level is approximately2.8 feet above the lowest planned finished floor level.

CBC Sections 8005.1.3 and 1005.3 define the conditions in which waterproofing would be required when the groundwater level is within six inches of the lowest planned finish floor level or higher. As the lowest finish floor level for the proposed project is 2.8 feet below the historical high levels at the site, waterproofing is required per CBC requirements. As stated in Section 2.0, *Project Description,* the subterranean level of the proposed project would include a waterproofing system such as an asphalt membrane barrier which would prevent water intrusion into the building. As the proposed structure would be waterproof in accordance with CBC requirements, then no permanent dewatering would be needed in the event that the groundwater table rises above the bottom of the building. Rather, the building foundation and walls below grade will be designed to resist the nominal hydrostatic pressure that would develop in the event that the groundwater rises to the historic high levels. Since the proposed project would not involve permanent dewatering, groundwater impacts associated with operation of the proposed project would be less than significant.

Construction of the proposed project would require excavating four feet below the lowest planned finished floor level to allow for construction of the foundation. Localized deeper excavations may also be required for elevator pits, during installation of the slop shoring features, and/or other depressed building features. The required excavations would extend below the historical high groundwater level. Therefore, groundwater may be encountered during construction at the bottom of the excavation and dewatering would be needed. If any contaminated groundwater is encountered during dewatering, any applicable regulatory requirements will be followed. The temporary construction dewatering would occur over approximately eight months during the excavation, underground utilities, and construction of subterranean parking phases (see Section 2.0, *Project Description,* for estimated construction schedule). Once these construction phases are finished, the dewatering would no longer be necessary.

The adjacent properties do not rely on groundwater for water supply; rather, water is delivered by the City. Therefore, any potential dewatering would not affect groundwater wells. Further, temporary dewatering during construction would not cause any subsidence of the overlying sediments. Sediments beneath the project site and surrounding areas have already been subject to naturally-occurring episodes of saturation and unsaturation. Therefore, dewatering of the groundwater would have no impact on any ground settlement or sediment compaction.

Mitigation Measures. The following measures shall be implemented to reduce impacts related to groundwater dewatering during construction to a less than significant level.

GEO-3(a) Groundwater Monitoring. A groundwater well shall be installed at the project site prior to construction to determine the location of groundwater. If groundwater would be encountered during construction and dewatering would be needed, than Mitigation Measure GEO-3(b) would be required.

GEO-3(b) Dewatering Plan. If dewatering occurs during construction then a dewatering plan shall be prepared by the applicant and presented to the City Engineer for review and approval. The dewatering plan shall identify the groundwater flow rate, groundwater capture zone, and means of discharge of groundwater. Proper permits for the discharge of the water shall be obtained and approved by the appropriate regulatory oversight agency and included in the dewatering plan. If contaminated groundwater is encountered during dewatering, then contaminated groundwater should be removed in accordance with applicable regulatory requirements. The dewatering plan shall describe the operation and maintenance tasks to be performed and identify who will be responsible for the operation, maintenance, and permit compliance obligations. If the discharge of groundwater is to be done through the sanitary sewer, then the proper connections to the sewer shall be designed and depicted on the plans. If the groundwater is to be discharged into the storm drain, all pipes and pumps shall be properly designed to manage the expected maximum flows and shall meet all construction requirements of the City of West Hollywood. Backup systems, if required, shall be included on the plans. A sufficient amount of area near the dewatering system shall be allocated in case filtration of contaminated groundwater is required after groundwater dewatering commences.

Significance after Mitigation. Implementation of the above mitigation measure would ensure that dewatering would not impact sewer or storm drain systems or affect water quality by requiring that should dewatering occur, the City would confirm that dewatering occurs in accordance with proper City-approved procedures in a manner that would not exceed sewer capacity and would not release contaminated groundwater into the sewer system . Impacts would be reduced to a less than significant level.

c. Cumulative Impacts. Proposed development, in conjunction with other cumulative projects proposed in the City of West Hollywood, would expose additional people and property to seismically related hazards that are present throughout the region. If all of the development indicated in Table 3-2 (Section 3.0, *Environmental Setting*) were to proceed, individual construction projects located throughout the City would add at least 218 residential units and 194,745 square feet of other non-residential development. There is one pending or planned project within ¼ mile of the project site at 8550 Santa Monica Boulevard (a planned commercial project across Santa Monica Boulevard from the project site). In the event that construction of this project occurs at the same time as construction of the proposed project and that each requires dewatering, local impacts to the groundwater table and impacts to water quality could occur. However, cumulative impacts related to groundwater as well as liquefaction and soil-related hazards would be similar to what is described for project-specific impacts, and would be addressed on a project-by-project basis through compliance with existing building codes and any site-specific mitigation measures for individual projects. Compliance with applicable code requirements and the recommendations of site-specific geotechnical evaluations on a case-by-case basis would reduce cumulative impacts relating to geologic hazards to a less than significant level.

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4.3 GREENHOUSE GAS EMISSIONS

This section analyzes greenhouse gas (GHG) emissions associated with the proposed project and potential impacts related to climate change.

4.3.1 Setting

a. Climate Change and Greenhouse Gases. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2007), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (90% or greater chance) that the global average net effect of human activities since 1750 has been one of warming. The prevailing scientific opinion on climate change is that most of the observed increase in global average temperatures, since the mid-20th century, is likely due to the observed increase in anthropogenic GHG concentrations (IPCC, 2007).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2E), and is the amount of a GHG emitted multiplied by its GWP. CO_2 has a GWP of one. By contrast, methane (CH_4) has a

GWP of 21, meaning its global warming effect is 21 times greater than carbon dioxide on a molecule per molecule basis (IPCC, 1997).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (CalEPA, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [U.S. EPA], April 2012). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the second half of the 20th Century. Concentrations of CO_2 in the atmosphere have risen approximately 40% since the industrial revolution. The global atmospheric concentration of CO_2 has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; Oceanic and Atmospheric Association [NOAA], 2010). The average annual CO_2 concentration growth rate was larger between 1995 and 2005 (average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO_2 represents an estimated 82.8% of total GHG emissions (Department of Energy [DOE] Energy Information Administration [EIA], August 2010). The largest source of CO_2 emissions, and of overall GHG emissions, is fossil fuel combustion.

Methane. Methane (CH_4) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. It has a GWP approximately 21 times that of CO_2. Over the last 250 years, the concentration of CH_4 in the atmosphere has increased by 148% (IPCC, 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH_4 include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (U.S. EPA, April 2012).

Nitrous Oxide. Concentrations of nitrous oxide (N_2O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA, 2010). N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions. The GWP of nitrous oxide is approximately 310 times that of CO_2.

Fluorinated Gases (HFCS, PFCS and SF_6). Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfurhexafluoride (SF_6), are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-

depleting substances such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF_6 emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the IPCC has evaluated.

b. Greenhouse Gas Emissions Inventory. Worldwide anthropogenic emissions of GHGs were approximately 40,000 million metric tons (MMT) CO_2E in 2004, including ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes (i.e., deforestation, biomass decay) (IPCC, 2007). CO_2 emissions from fossil fuel use accounts for 56.6% of the total emissions of 49,000 MMT CO_2E (includes land use changes) and CO_2 emissions from all sources account for 76.7% of the total. Methane emissions account for 14.3%of total GHG emissions and N_2O emissions account for 7.9% (IPCC, 2007).

Total U.S. GHG emissions were 6,673 MMT CO_2E in 2013. Total U.S. emissions have increased by 5.9% from 1990 to 2013 and by 2% from 2012 to 2013 (USEPA, April 2012). This increase was primarily due to (1) an increase in the carbon intensity of fuels consumed to generate electricity due to an increase in coal consumption and decreased natural gas consumption; and (2) relatively cool winter conditions resulting in an increase in fuels for heating. In 2013, the transportation end-use sector accounted for 33.4% of U.S. CO_2 emissions from fossil fuel combustion. The industrial end-use sector accounted for 27%, the residential end-use sector accounted for 21%, and the commercial end-use sector accounted for 18% (USEPA, April 2015).

Based upon the California Air Resources Board (ARB) California Greenhouse Gas Inventory for 2000-2014, California produced 441.5 MMT CO_2E in 2014. The major source of GHG in California is transportation, contributing 36% of the state's total GHG emissions. Electricity generation is the second largest source, contributing 20%of the state's GHG emissions (ARB, June 2016). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 509 MMT CO_2E (ARB, May 2015). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

c. Potential Effects of Climate Change. Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Scientists have projected that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and the increase may be as high as 2.2-10°F (1.4-5.8°C) in the next century. In addition to these projections, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic (IPCC, 2007).

According to the CalEPA's *2010 Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, April 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Sea Level Rise. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (May 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The study identifies a sea level rise on the California coast over the past century of approximately eight inches. Based on the results of various global climate change models, sea level rise is expected to continue. The California Climate Adaptation Strategy (December 2009) estimates a sea level rise of up to 55 inches by the end of this century.

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC March, 2009).

Water Supply. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10% during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, May 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during our wet winters and releasing it slowly when we need it during our dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40%reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR, 2008).

Hydrology. As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise may be a product of climate change through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a $30 billion agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2004; Parmesan, C. and H. Galbraith, 2004).

Local Effects of Climate Change. While the above discussion identifies the possible effects of climate change at a global and potentially statewide level, in general scientific modeling tools are currently unable to predict what impacts would occur locally with a similar degree of accuracy. In general, regional and local predictions are made based on downscaling statewide models (CalEPA, April 2010).

d. Regulatory Setting. The following state and local regulations address both climate change and GHG emissions.

California Regulations. California has a numerous regulations aimed at reducing the state's GHG emissions. Assembly Bill (AB) 1493 (2002), referred to as "Pavley," requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 per cent reduction by 2012 and 30 per cent by 2016.

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80% of 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, the ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2E. The Scoping Plan was approved by ARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures including in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted over the last five years. Implementation activities are ongoing and ARB is currently the process of updating the Scoping Plan.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Senate Bill (SB) 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing ARB to develop regional greenhouse gas emission reduction targets to be achieved from vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG) was assigned targets of an 8% reduction in GHGs from transportation sources by 2020 and a 13% reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of

subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements. In April 2012, SCAG adopted the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) to meet the assigned targets in accordance with SB 375. On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 RTP/SCS.

ARB Resolution 07-54 establishes 25,000 metric tons of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005% of California's total inventory of GHG emissions for 2004.

In April 2011, Governor Brown signed SB 2X requiring California to generate 33% of its electricity from renewable energy by 2020.

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, which requires the State to further reduce GHGs to 40 percent below 1990 levels by 2030. SB 32 is an extension of AB 32. SB 32 extends AB 32, directing ARB to ensure that GHGs are reduced to 40 percent below the 1990 level by 2030. The other provisions of AB 32 remain unchanged. ARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The Draft 2017 Scoping Plan Update Proposed Plan (Proposed Plan) was made available on January 20th, 2017. The Proposed Plan describes the actions the State would take to achieve the SB 32 climate goals of reducing greenhouse gases of at least 40 percent below 1990 levels by 2030. It outlines an approach that cuts across economic sectors to combine greenhouse gas reductions with reductions of smog-causing pollutants, while also safeguarding public health and economic goals. It also describes the need to extend key reduction programs now underway, lays out new actions that prioritize direct emission reductions, and establishes the trajectory that will move the State farther along the path to a low-carbon future.

For more information on the Senate and Assembly bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and http://www.arb.ca.gov/cc/cc.htm.

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, they give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Local Regulations. In October 2007, the City adopted a mandatory green building ordinance (WHMC Section 19.20.060). The ordinance establishes new standards for all new development projects such as drought-tolerant landscaping, low-flow plumbing fixtures, and energy efficient appliances. The ordinance also develops a Green Building Point System for new construction with incentives for projects that exceed minimum requirements.

The City of West Hollywood adopted a Climate Action Plan (CAP) in September 2011 which implements policy IRC-6.3 of the West Hollywood General Plan 2035 Infrastructure, Resources, and Conservation Element. The CAP outlines a course of action to reduce municipal and community-wide GHG emissions that contribute to climate change. The plan includes seven emission reductions strategies: 1) community leadership and engagement, 2) land use and community design, 3) transportation and mobility, 4) energy use and efficiency, 5) water use and efficiency, 6) waste reduction and recycling, and 7) green space. The land use and community design strategy and the transportation and mobility strategy encourage development in areas to promote transit use, walking and bicycling in order to improve health and decrease driving. According to the CAP, a project-specific GHG analysis "must identify the specific CAP measures applicable to the project and how the project incorporates the measures." If the project is not consistent with the CAP measures or if the measures are not otherwise binding, they must be incorporated as mitigation measures applicable to the project.

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. Based on the environmental checklist contained in Appendix G of the *CEQA Guidelines*, impacts related to GHG emissions from the proposed project would be significant if the project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

The adopted *CEQA Guidelines* provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The 2008 SCAQMD threshold considers emissions of over 10,000 metric tons of carbon dioxide equivalent (CO_2E) per year to be significant. However, the SCAQMD's threshold applies only to stationary sources and is expressly intended to apply only when the SCAQMD is the CEQA lead agency. Although not formally adopted, the SCAQMD has a recommended tiered GHG significance threshold (SCAQMD, 2008). According to their tiered approach, under Tier 1, a proposed project would have a less than significant impact on GHG emissions if the project fits under any applicable exemptions. If no exemptions apply, the project would be evaluated under Tier 2. There are no exemptions that would apply to the proposed project. Under Tier 2, project impacts would be less than significant if a project is consistent with an approved GHG reduction plan, such as a CAP. The City of West Hollywood has an adopted CAP. Therefore, GHG emissions associated with the proposed project would be less than significant if it is consistent with the City of West Hollywood CAP. If the proposed project is not

consistent with the CAP (or if no adopted GHG reduction plan exists) then projects may be evaluated based on the SCAQMD recommended Tier 3 screening level quantitative thresholds. SCAQMD has a recommended screening level quantitative threshold for all land use types of 3,000 metric tons CO_2E /year (SCAQMD, "Proposed Tier 3 Quantitative Thresholds – Option 1", September 2010). For the proposed project, impacts would be significant if it were found to be inconsistent with the City's CAP. However, the project's estimated annual emissions have been calculated and compared to the 3,000 metric tons CO_2E /year threshold for informational purposes.

The threshold approach of evaluating consistency with a qualified GHG reduction plan to determine impact significance was endorsed by the California State Supreme Court in the Newhall Ranch ruling (*Center for Biological Diversity vs. California Department of Fish and Wildlife*) as an appropriate method to determine significance of GHG emissions, provided the qualified GHG reduction plan uses a GHG reduction target consistent with the state reduction planning (Association of Environmental Professionals, 2016). West Hollywood's CAP is consistent with the state's GHG reduction planning efforts.

Study Methodology. For informational purposes, calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9% of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, because the project is a residential and commercial development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent GWP in terms of CO_2 (CO_2E). Minimal amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the total calculated CO_2E amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (January 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (January 2009).

GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (see Appendix E for calculations).

Operational Emissions. CalEEMod provides operational emissions of CO_2, N_2O and CH_4. Emissions from energy use include emissions from electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (*Compilation of Air Pollutant Emissions Factors*) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide, 2013). The default electricity consumption values in CalEEMod include the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, U.S. EPA, and district supplied emission factor values (CalEEMod User Guide, 2013).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2013). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California.

For mobile sources, CO_2 and CH_4 emissions from vehicle trips to and from the project site were quantified using in CalEEMod. Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (January 2009) direct emissions factors for mobile combustion (see Appendix E for calculations). The estimate of total daily trips associated with the proposed project was based on the project traffic study and was calculated and extrapolated to derive total annual mileage in CalEEMod. Emission rates for N_2O emissions were based on the vehicle fleet mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

A limitation of the quantitative analysis of emissions from mobile combustion is that emission models, such as CalEEMod, evaluate aggregate emissions, meaning that all vehicle trips and related emissions assigned to a project are assumed to be new trips and emissions generated by the project itself. Such models do not demonstrate, with respect to a regional air quality impact, what proportion of these emissions are actually "new" emissions, specifically attributable to the project in question. For most projects, the main contributor to regional air quality emissions is from motor vehicles; however, the quantity of vehicle trips appropriately characterized as "new" is usually uncertain as traffic associated with a project may be relocated trips from other locales. In other words, vehicle trips associated with the project may include trips relocated from other existing locations, as people begin to use the proposed project instead of similar existing retail and commercial uses. Therefore, because the proportion of "new" versus relocated trips is unknown, the VMT estimate generated by CalEEMod is used as a conservative, "worst-case" estimate.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA, 2008). Nevertheless, air districts such as the SCAQMD (2011) have recommended amortizing construction-related emissions over a 30-year period in conjunction with the proposed project's operational emissions.

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. CalEEMod was used to estimate emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and

anticipated equipment used during construction. Complete results from CalEEMod and assumptions can be viewed in Appendix E.

b. Project Impacts and Mitigation Measures.

Impact GHG-1 **The project would generate short-term as well as long-term GHG emissions. These emissions would incrementally contribute to climate change. However, the proposed project is consistent with applicable plans and policies adopted for the purpose of reducing GHG emissions, including SB 375 and the City of West Hollywood Climate Action Plan and Green Building Ordinance. Impacts would therefore be Class III, *less than significant*.**

Consistency with Approved GHG Reduction Plans

As discussed under "Methodology and Significance Thresholds," according to the SCAQMD's recommended thresholds, a project would have a less than significant impact if it would be consistent with an approved plan for the reduction of GHG. In 2011, the City of West Hollywood adopted a Climate Action Plan (CAP), which serves as a qualified GHG reduction strategy consistent with *State CEQA Guidelines* and SCAQMD.

The CAP outlines a course of action to reduce municipal and communitywide GHG emissions that contribute to climate change. It includes seven emission reductions strategies: 1) community leadership and engagement, 2) land use and community design, 3) transportation and mobility, 4) energy use and efficiency, 5) water use and efficiency, 6) waste reduction and recycling, and 7) green space. According to the CAP, a project-specific GHG analysis "must identify the specific CAP measures applicable to the project and how the project incorporates the measures." If the project is not consistent with the CAP measures or if the measures are not otherwise binding, they must be incorporated as mitigation measures applicable to the project. Table 4.3-1 compares the proposed project to applicable CAP measures. The proposed project would implement applicable GHG reduction measures and therefore would be consistent with the CAP. Impacts would be less than significant and mitigation would not be required.

Table 4.3-1
Consistency with Applicable West Hollywood Climate Action Plan Reduction Measures

Measure	Project Consistency
Land Use and Community Design	
LU-1.1: Facilitate the establishment of mixed-use, pedestrian- and transit-oriented development along the commercial corridors and in Transit Overlay Zones.	**Consistent** The proposed project is a mixed-use, pedestrian-friendly development located along a commercial corridor and within the General Plan's Transit Overlay Zone.
Transportation and Mobility	
T-1.1: Increase the pedestrian mode share in West Hollywood with convenient and attractive pedestrian infrastructure and facilities.	**Consistent** The proposed project is located within walking distance of retail facilities, restaurants, and public transportation.

Table 4.3-1
Consistency with Applicable West Hollywood Climate Action Plan Reduction Measures

Measure	Project Consistency
T-2.1: Increase the bicycle mode share by providing accessible, convenient, and attractive bicycle infrastructure.	**Consistent** The proposed project is located adjacent to a bike lane along Santa Monica Boulevard and includes bicycle parking for residents, employees, and customers visiting restaurants and retail.
T-2.2: Install bike racks and bike parking in the City where bike parking infrastructure currently does not exist.	**Consistent** The proposed project includes bicycle parking for residents, employees and customers.
Energy Use and Efficiency	
E-2.2: Require all new construction to achieve California Building Code Tier II Energy Efficiency Standards (Section 503.1.2).	**Consistent** The proposed project would exceed California Building Code Energy Efficiency Standards by 15%. This would be achieved through energy efficiency features and installation of solar panels.
E-3.1: Require that all new construction and condominium conversions be sub-metered to allow each tenant the ability to monitor their own energy and water use.	**Consistent** Residential and commercial units would be sub-metered.
E-3.2: Require the use of recycled materials for 20% of construction materials in all new construction.	**Potentially Consistent** The proposed project would include recycled-content materials in the foundation, insulation, and landscaping. The interior spaces would use materials composed of recycled content or rapidly renewable and sustainably harvested resources. The exact percentage of building materials that would use recycled content is unknown; however, the project is consistent with the intent of this policy.
Water Use and Efficiency	
W-1.1: Reduce per capita water consumption by 30% by 2035.	**Consistent** In order to reduce water use, the proposed project would, install low-flow showerheads, tankless water heaters and water-efficient toilets and faucets. In addition, the proposed project would use drought-tolerant landscaping.
W-1.2: Encourage all automated irrigation systems installed in the City to include a weather-based control system.	**Consistent** The proposed project would include drought-tolerant, climate appropriate landscaping to reduce the amount of irrigation needed.
Waste Reduction and Recycling	
SW-1.1: Establish a waste reduction target not to exceed 4.0 pounds per person per day (by 2035).	**Consistent** The City of West Hollywood's Public Works Department is responsible for complying with AB 939. The City has enacted numerous programs to achieve the mandated diversion rates and continues to implement projects to reduce per capita waste generation in order to achieve a 4.0 pounds per person per day target (City of West Hollywood, April 2014). In 2007 and 2008, the per capita disposal rate per day in West Hollywood was 5.6 pounds per resident which is below CalRecycle's target of 5.8 pounds per capita per day, meaning that the City is exceeding CalRecycle's target (City of West Hollywood General Plan Final EIR, October 2010). The proposed project would provide space for the collection and storage of recyclables in each unit. In addition, the proposed project would divert at least 80% of construction and demolition waste in accordance with WHMC Section 19.20.060. The project would also be subject to all applicable State and City requirements for solid waste reduction

Table 4.3-1
Consistency with Applicable West Hollywood Climate Action Plan Reduction Measures

Measure	Project Consistency
	as they change in the future. Therefore, the project would be consistent with City requirements which are designed to help the City achieve the target of 4.0 pounds per person per day.
Urban Forest	
G-1.1: Increase and enhance the City's urban forest to capture and store carbon and reduce building energy consumption.	**Consistent** The proposed project includes landscaping on the sidewalks surrounding the project site, on the roof, and in concrete planters in order to increase the amount of landscaping on site from existing conditions.
G-1.2 Establish a green roof and roof garden program to standardize, promote, and incentivize green roofs and roof gardens throughout the City.	**Consistent** To date, the City has not established a green roof and roof garden program. The City's Green Building Program allows projects to earn up to 6 points on the West Hollywood Green Building Point System Table for projects that install extensive vegetated green roof. Most of the proposed project's rooftop space would be occupied by solar panels in order to achieve the energy reductions in accordance with policy E-2.2. However, the portion of the roof not occupied by solar panels or mechanical equipment would include landscaping. Therefore, some portions of the rooftop would include roof gardens and the project is consistent with this goal to the extent feasible.

The proposed project exceeds the minimum requirements of the City's Green Building Ordinance and is estimated to achieve 90 points on the City's Green Building Point System in order to receive a FAR bonus (see Section 4.4, *Land Use and Planning*). Therefore, the proposed project would be consistent with the Green Building Ordinance.

Senate Bill 375, signed in August 2008, requires the inclusion of sustainable communities' strategies (SCS) in regional transportation plans (RTPs) for the purpose of reducing GHG emissions. In April 2016, the South Coast Association of Government (SCAG) adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). A goal of the SCS is to "encourage land use and growth patterns that facilitate transit and active transportation." The proposed project would be infill development that would be located within walking and biking distance of commercial and recreational activities as well as public transportation (approximately 700 feet to the Metro Line 4 bus stops at Santa Monica Boulevard and Westbourne Drive and approximately 250 feet to the Metro Lines 105 and 705 bus stops on La Cienega Boulevard and Santa Monica Boulevard). Therefore, the proposed project is situated to facilitate transit and active transportation and the proposed project would be consistent with this goal.

The proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would be consistent with the West Hollywood Climate Action Plan and objectives of the RTP/SCS, AB 32, SB 97 and SB 375. Impacts would be less than significant.

GHG Emissions Associated with the Proposed Project

Although the proposed project would be consistent with the West Hollywood CAP and impacts would be less than significant, for informational purposes a quantitative analysis of GHG

emissions associated with construction emissions and operational emissions from the proposed project is provided below. GHG emissions for the proposed project were estimated using California Emissions Estimator Model (CalEEMod) version 2013.2.2. The following summarizes the project's overall GHG emissions (see Appendix E for detailed CalEEMod worksheets). Table 4.3-2 shows emissions expected from the proposed project.

Construction Emissions. For the purpose of this analysis, construction activity is assumed to occur over a period of approximately 22 months. Construction activity for the proposed project would generate an estimated 941 metric tons of CO_2E. Following the SCAQMD's recommended methodology to amortize emissions over a 30-year period (the assumed life of the project), construction of the proposed project would generate an estimated 31 metric tons of CO_2E per year.

Operational Indirect and Stationary Direct Emissions. Long-term emissions relate to area sources, energy use, solid waste, water use, and transportation. Each of these sources is discussed below.

Area Source Emissions. CalEEMod was used to calculate direct sources of air emissions located at the project site. These include consumer product use and landscape maintenance equipment. Area emissions are estimated at 2 metric tons CO_2E per year.

Energy Use. Operation of on-site development would consume both electricity and natural gas. The generation of electricity through combustion of fossil fuels emits CO_2, and to a smaller extent, N_2O and CH_4. As discussed above, annual electricity and natural gas emissions can be calculated using default values from the CEC sponsored CEUS and RASS studies which are built into CalEEMod. Electricity consumption associated with the project would generate approximately 512 metric tons CO_2E per year. Natural gas use would generate approximately 80 metric tons CO_2E per year. Thus, overall energy use at the project site would generate an estimated 592 metric tons CO_2E per year.

Solid Waste Emissions. In accordance with AB 939, it was assumed that the project would achieve at least a 50% diversion rate. Based on this estimate, solid waste associated with the project would generate an estimated 48 metric tons of CO_2E per year.

Water Use Emissions**.** Based on the amount of electricity generated in order to supply and convey water for the proposed project, the project would generate an estimated 70 metric tons of CO_2E per year.

Transportation Emissions. Mobile source GHG emissions were estimated using the average daily trips for the proposed project according to the project traffic study (see Appendix G for traffic study) and based on the total vehicle miles traveled (VMT) estimated in CalEEMod. The proposed project would generate about 4.4 million annual VMT. As noted above, CalEEMod does not calculate N_2O emissions related to mobile sources. As such, N_2O emissions were calculated based on the project's VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (January 2009). The project would emit an estimated 1,926 metric tons of CO_2E per year from mobile sources.

Combined Construction, Stationary, and Mobile Source Emissions. Table 4.3-2 combines the construction, operational, and mobile GHG emissions associated with development of the proposed project, and subtracts operational and mobile emissions associated with existing development on the project site. For the proposed project, the combined annual emissions are estimated at 1,352 metric tons CO_2E per year.

Table 4.3-2
Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (Metric Tons CO_2E)
Proposed Project	
Project Construction	31
Project Operational	
Area	2
Energy	592
Solid Waste	48
Water	70
Project Mobile	
CO_2 and CH_4	1,829
N_2O	97
Project Subtotal	**2,669**
Existing Uses	
Existing Operational	
Area	(1)
Energy	(188)
Solid Waste	(35)
Water	(21)
Existing Mobile	
CO_2 and CH_4	(1,023)
N_2O	(49)
Existing Conditions Subtotal	**(1,317)**
Total Emissions from Proposed Project (Project - Existing)	**1,352 metric tons CO_2E**

Source: Tables 2.1 2.2 and 4.2 in CalEEMod annual worksheets, see Appendix E for calculations and for GHG emission factor assumptions.
( ) denotes subtraction

Mitigation Measures. No mitigation is required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. According to the City's CAP, GHG emissions in the City are projected to be approximately 646,000 MT CO_2E in 2020 and 712,000 MT CO_2E in 2035. The proposed project's annual contribution of 1,325 MT CO_2E would be approximately 0.22% of 2020 emissions and 0.20% of 2035 emissions. As indicated in Impact GHG-1, GHG emissions associated with the proposed project were found to be less than significant. Analysis of GHG-

related impacts is cumulative in nature as climate change is related to the accumulation of GHGs in the global atmosphere. Although cumulative increases in atmospheric GHGs may be significant, the proposed project's contribution to cumulative levels of GHGs is not considered considerable since emissions associated with the project would not exceed quantitative thresholds and proposed development would comply with and implement applicable plans and policies pertaining to GHG reduction.

4.4 LAND USE and PLANNING

This section analyzes the proposed project's consistency with applicable land use policies.

4.4.1 Setting

a. Regulatory Setting. The City of West Hollywood General Plan 2035 and the City's Zoning Ordinance (Article 19 of the West Hollywood Municipal Code (WHMC)) serve as the primary land use planning tools for the City.

General Plan 2035. The General Plan 2035 (adopted in 2011) is the primary means for guiding future change in West Hollywood and provides a guide for land use decision-making. The General Plan includes the following elements: Land Use and Urban Form; Historic Preservation; Economic Development; Mobility; Human Services; Parks and Recreation; Infrastructure, Resources, and Conservation; Safety and Noise; and Housing. A discussion of the Land Use and Urban Form and Housing elements is included below.

Land Use and Urban Form Element. The Land Use and Urban Form Element establishes a vision for the City's built environment by establishing goals and policies for the City's land use patterns and setting guidelines for land use designations. Guidelines include permitted uses, density, design standards, height, and etc. for each land use designation. Figure 4.4-1 shows the General Plan land use designations throughout West Hollywood.

Housing Element. The Housing Element provides a profile of the City's resident population and housing stock, projects future housing needs, and includes policies to address projected housing needs across the economic and social spectrum of the City. According to the Housing Element, the City has extensive needs for affordable housing. Goal H-1 of the Element is to "provide affordable rental housing" and Goal H-3 is to "encourage a diverse housing stock to address the needs of all socioeconomic segments of the community."

Zoning Ordinance. Applicable sections of the West Hollywood Zoning Ordinance are discussed below. Figure 4.4-2 shows the city's zoning map.

Affordable Housing. The City's Zoning Ordinance includes provisions to incentivize the development of affordable housing. Section 19.22.030 requires projects with 41 units or more to make at least 20% of the units available to very low-, low- and moderate-income households. In addition, section 19.22.050 of the WHMC implements the provisions of California Government Code Section 65915 and provides for density bonuses and regulatory concessions in order to encourage the construction of affordable housing. Table 4.4-1 shows the density bonuses permitted. The density bonus allows an increase in Floor Area Ratio (FAR) and/or unit count based on the percentages shown in Table 4.4-1 and requires the City to grant up to three affordable housing incentives or concessions. These may include an additional 10 feet in height, reductions in setbacks, and other concessions necessary to facilitate the provision of affordable housing.

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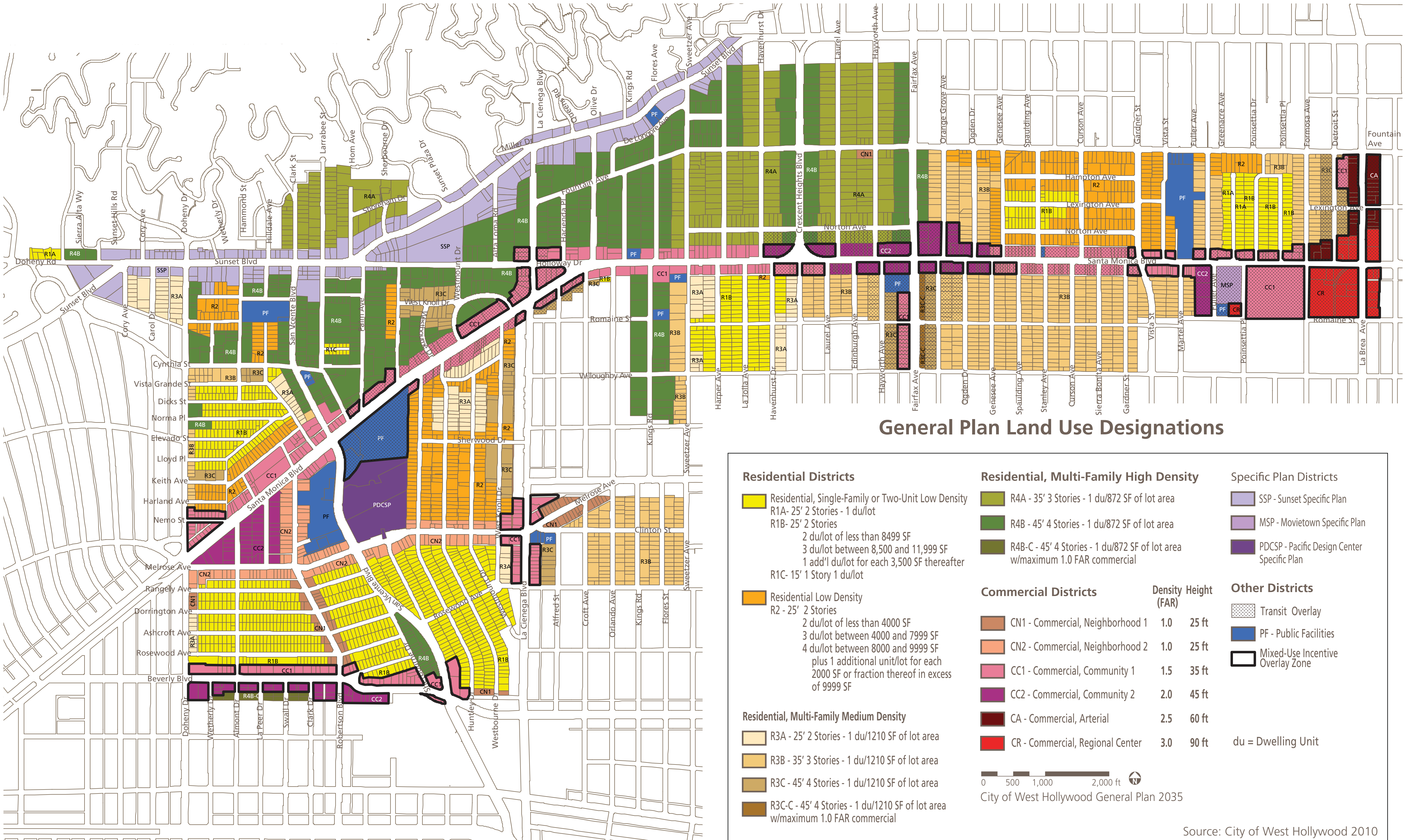
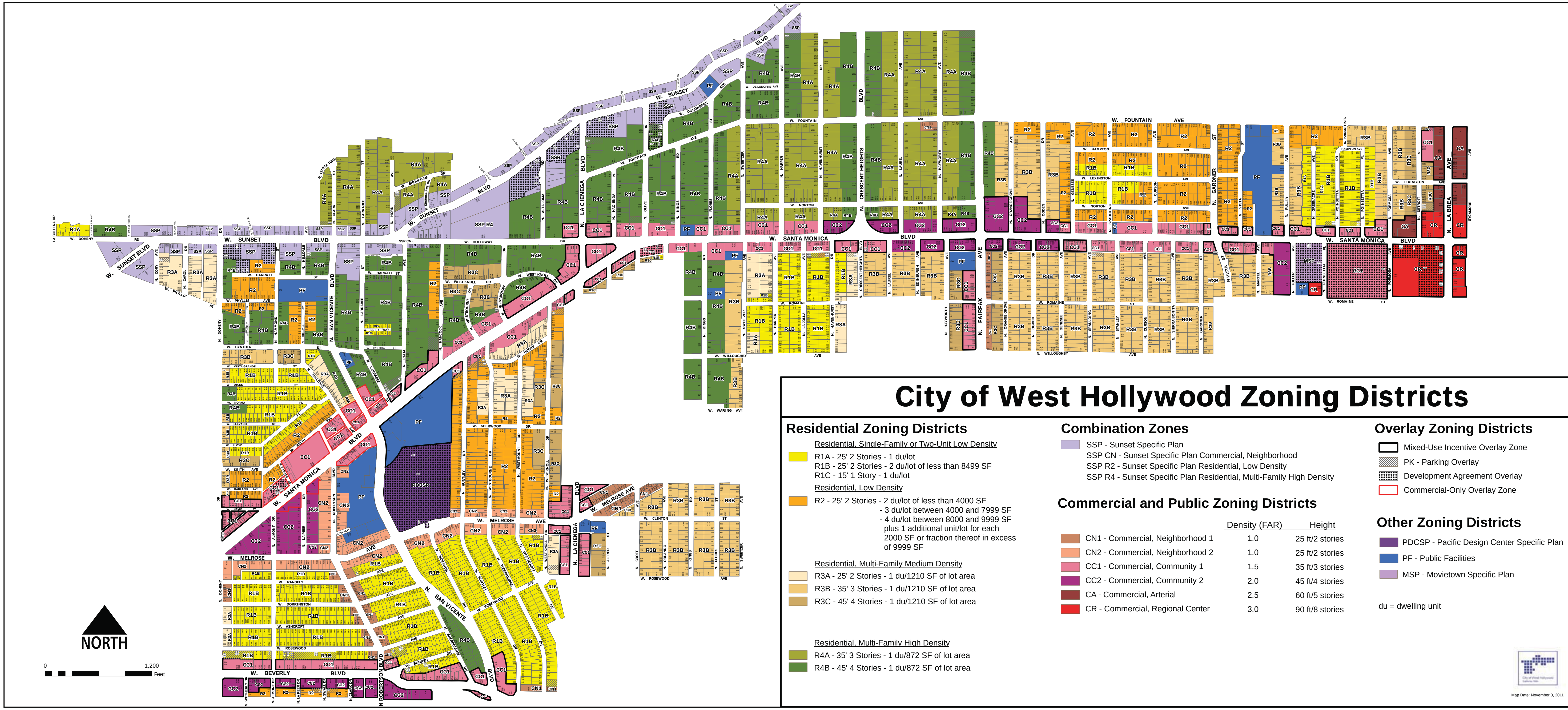


City of West Hollywood
General Plan Land Use Map

Figure 4.4 -1

Source: City of West Hollywood, 2010



Source: City of West Hollywood, 2011

City of West Hollywood
Zoning Map

Figure 4.4-2

Table 4.4-1
Density Bonuses Permitted by WHMC Section 19.22.030

Type of Affordable Housing Units	Minimum % of Affordable Units	Density Bonus Granted	Additional Bonus for each 1% increase in Affordable Units
Very Low Income	5%	20%	2.5%
Low Income	10%	20%	1.5%
Moderate Income	10%	5%	1%

Open Space. Per Section 19.36.280(A)(1) of the Municipal Code, mixed-use developments containing residential uses with more than 31 residential units are required to provide private open space at a ratio of 120 square feet per dwelling unit, and a minimum of 2,000 square feet of common open space. Private open space must have a minimum dimension of 7 feet and common open space areas must have a minimum dimension of 15 feet. Sixty percent of the required common open space must be located at grade or at the level of the first habitable floor.

b. Existing Land Uses and Land Use Designations. The project site is developed and contains three adjoining two-story commercial buildings and two surface parking lots on a commercial area and three one-story single-family residences on three residential lots. The 42,164 square -foot portion of the project site that currently contains commercial buildings (8527-8555 Santa Monica Boulevard, APN 4339-005-025 and 4339-005-013) is zoned and has a West Hollywood General Plan land use designation of Commercial, Community 1 (CC1). This portion of the site is also within the West Hollywood General Plan's Commercial Subarea 2, Transit Overlay Zone, and Mixed-Use Incentive Overlay Zone.

A 12,974-square foot northern portion of the project site currently contains three single-family residences (8532, 8538, and 8546 West Knoll Drive, APNs 4339-005-010, 4339-005-011, and 4339-005-012). These parcels are zoned Residential, Multi-Family High Density (R4B) and have a General Plan Land Use Designation of High Density Residential (R4B). Figure 2-4 in Section 2.0, *Project Description,* shows the zoning for the project site and surrounding uses and Figure 2-5 in Section 2.0 shows the General Plan land use designations for the project site and surrounding uses.

The CC1 land use designation provides for commercial and mixed-use development along major corridors, including Santa Monica Boulevard. The designation allows for a variety of commercial uses, including retail, offices, and restaurants, as well as a mix of residential, commercial, and office uses. The base FAR is 1.5 and the base height is 35 feet. The Transit Overlay Zone is intended to encourage mixed-use development in locations with adequate transit service to reduce the need for auto trips; however, the City has not yet codified the Transit Overlay Zone provisions into the WHMC. The Mixed-Use Incentive Overlay Zone encourages a mix of residential and commercial uses and allows mixed-use projects to receive an additional 0.5 FAR (maximum of 2.0) and 10 feet in height (maximum of 45 feet). The R4B designation provides for high-density (up to 50 units per acre) multi-family housing and allows for residential buildings that are four stories and 45 feet in height. In areas designated CC1 and R4B, density bonuses shall be granted for projects that include affordable housing. The density

bonus allows increases of up to 35% in FAR (equivalent to an additional 0.7 FAR, based on the 2.0 FAR inclusive of the mixed-use bonus) and/or unit count, and requires the City to grant up to three affordable housing incentives or concessions. In addition, mixed-use projects that achieve a minimum of 90 points on the West Hollywood Green Building Point System Table are eligible to receive an additional 0.1 FAR. Table 4.4-2 shows the Zoning Ordinance and General Plan requirements for the CC1 and R4B zones.

Table 4.4-2
Zoning and General Plan Requirements

	Community, Commercial 1 (CC1)	**Residential, Multi-Family, High Density (R4B)**
Purpose	Provide a wide variety of commercial uses such as retail, offices, entertainment, restaurants, etc. Mixed-use developments with residential and office uses above businesses are encouraged *Transit Overlay Zone: Intended to encourage mixed-use development in location with adequate transit service to reduce the need for auto trips* *Mixed Use Incentive Overlay Zone: Intended to focus residential mixed-use projects in high priority nodes, focused on commercial corridors and including locations with high transit levels of service and near major intersections*	Provide for the development of wide range of high-density multi-family housing, including apartments and condominiums
Height	Base Height Allowed: 35 ft, 3 stories *Mixed-Use Incentive Overlay Zone Bonus: Additional 10 feet in height* *Density Bonus Height Concession:* *Additional story, not to exceed 10 ft in height* *Total Allowable Height: 55 ft, 5 stories*	Base Height Allowed: 45 ft, 4 stories *Density Bonus Height Concession:* *Additional story, not to exceed 10 ft in height* *Total Allowable Height: 55 ft, 5 stories*
Floor Area Ratio (FAR)	Base FAR Allowed: 1.5 *Mixed-Use Incentive Overlay Zone Bonus: Additional 0.5 FAR* *35% Density Bonus: Additional 0.7 FAR* *Green Building Bonus: Additional 0.1 FAR* *Total Allowable FAR: 2.8*	N/A
Residential Density	N/A	1 unit for each 872 sf of site area *Density Bonus: 35% increase in density*
Inclusionary Housing	20% of the baseline units as affordable housing units	20% of the baseline units as affordable housing units

c. Surrounding Land Uses. The project site is located in a neighborhood characterized by a mix of residential and commercial uses. Figure 2-6 in Section 2.0, *Project Description,* shows the project site and surrounding uses. Surrounding uses and corresponding designations/zones are described below.

North: Immediately north of the project site is a one-story single-family home (8552 West Knoll Drive) and a three-story multi-family condominium building (8562 West Knoll Drive). The properties north of the project site are zoned and have a land use designation of R4B.

South: The site is bordered on the south by Santa Monica Boulevard. Across Santa Monica Boulevard is a one-story restaurant (Shake Shack, located at 8520 Santa Monica Boulevard), a two-story restaurant (Forbidden Restaurant and Lounge, 8512 Santa Monica Boulevard), and an undeveloped lot (8550 Santa Monica Boulevard). A commercial development has been approved on this undeveloped lot. Properties south of the project site are zoned and have a land use designation of CC1.

East: To the east, the project site is bordered by West Knoll Drive. Across West Knoll Drive are a one-story retail building (Healthy Spot, 8525 Santa Monica Boulevard) on a lot zoned CC1 and a four-story multi-family residential building (8535 West Knoll Drive) zoned and with a land use designation of R4B.

West: Immediately west of the project site is the Ramada Plaza Hotel (8585 Santa Monica Boulevard), a four-story hotel building with ground-floor retail that includes a bank, shops, and several restaurants. This property is also zoned and has a land use designation CC1.

4.4.1 Impact Analysis

a. Methodology and Significance Thresholds. According to Appendix G of the *CEQA Guidelines*, the effects of the proposed project on land use are considered to be significant if the proposed project would:

- *Physically divide an established community;*
- *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, clean air plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or*
- *Conflict with any applicable habitat conservation plan or natural community.*

The Initial Study (see Appendix A) concluded that only the second criterion could be applicable to the project potentially resulting in a significant impact. The proposed project would not divide an established community, and there are no habitat conservation plans or natural community conservation plans applicable to the project site. These impacts would be less than significant and are not discussed further in this EIR. Hence, only impacts related to consistency with applicable land use plans are addressed in this section.

b. Project Impacts and Mitigation Measures.

Impact LU-1 The proposed project would be consistent with the City's General Plan and Zoning Ordinance. Impacts related to consistency with plans, policies, and regulations would therefore be Class III, *less than significant.*

The project site contains a 42,164 square foot commercial area that is zoned and has a General Plan land use designation of Commercial, Community 1 (CC1) and a 12,974 square foot residential area that is zoned and has a General Plan land use designation of Residential, Multi-Family High Density (R4B). (See Figure 2-3 in the Project Description for the project site and the surrounding properties' land use designations.)

The area zoned R4B would only contain residential uses and would not include the retail or restaurant uses associated with the project. Because the project spans multiple legal lots, a lot tie is required to hold the lots together under one owner for the purpose of creating a single building site. The resulting building site would have split zoning, which is allowed in the West Hollywood Zoning Ordinance.

Affordable Housing. Table 4.4-3 summarizes the affordable housing associated with the proposed project. The maximum allowed density bonus is 35%.

Table 4.4-3
Proposed Project Affordable Housing and Density Bonuses

	# Units	% of Baseline[1]	Density Bonus Granted
Moderate Income	8	11%	6%[2]
Very Low Income	7	10%	32.5%[3]
Total Inclusionary Housing Units	**15**	**21%**	**35%**

[1] The baseline number of units is the number of units proposed to be constructed in the zone in which the project is located, prior to the inclusion of the Density Bonus. This is based on either the maximum density in residential areas or the maximum FAR in commercial areas. For this project site, the baseline number of units proposed is 70 based on the FAR 2.0 (1.5 base FAR + 0.5 mixed use bonus FAR) in the commercial area (see Table 4.4-4 below).
[2] As shown in Table 4.4-1, 5% density bonus for providing 10% moderate income units + 1% bonus for each additional 1% increase in affordable units above 10% = 6%
[3] As shown in Table 4.4-1, 20% density bonus for providing 5% very low income units +2.5% bonus for each additional 1% increase in affordable units above 10% = 32.5%. However, the maximum density bonus allowed is 35%. Therefore, the project applicant is seeking a 35% bonus.

As shown, 21% (15 units) of the baseline apartment units associated with the proposed project would be designated for affordable housing. Therefore, the proposed project would meet the City of West Hollywood's inclusionary housing ordinance and the requirements of SB 1818 (California Government Code 65915 et. seq.) by providing at least 20% of the baseline units as affordable housing. Accordingly, the proposed project would be allowed a 35% density bonus, as discussed below.

Density, FAR, and Height. The project applicant is seeking a 35% density bonus based on the percentage of affordable units, as well as three associated regulatory "concessions" pursuant to SB 1818 and WHMC Section 19.22.050. The requested concessions are:

- *An additional story (adding not more than 10 feet to overall project height)*
- *A 10% reduction in minimum front yard setback to allow a 15 foot 6 inch setback from West Knoll Drive in lieu of the 17 foot setback required per Section 19.06.040.B of the WHMC.*
- *Allow a minimum aggregate site area of 55,138 square feet for a mixed-use project that spans both the CC1 and R4B zoning districts, in lieu of the minimum aggregate area of 60,000 square feet otherwise required by Section 19.36.170.A.1 of the WHMC.*

The applicant is seeking height and FAR bonuses based on the proposed mixed-use nature of the project in accordance with the Mixed-Use Development Overlay Zone, a 35% FAR bonus for the provision of affordable housing pursuant to Section 19.22.050 of the WHMC and SB 1818, and a FAR bonus available to mixed-use projects that achieve a minimum of 90 points on the West Hollywood Green Building Point System Table.

Consistency with the applicable requirements of the Zoning Ordinance and General Plan are shown in Table 4.4-4. In the CC1 zone, the base FAR is 1.5. With the mixed-use development incentive bonus (additional 0.5 FAR), 35% affordable housing density bonus (additional 0.7 FAR), and green building bonus (additional 0.1 FAR), the allowed FAR for the project would be 2.8. The floor area on the commercial zone of the proposed project would be 118,059 sf on the 42,164 sf CC1 site for an FAR of 2.8. While the City does not apply an FAR to calculate density on the residential lot, for informational purposes, the FAR for the combined residential and commercial lots is 2.61 (143,735 sf on a 55,138 sf project site). The proposed project would be consistent with the City's commercial FAR requirements.

In the R4B zone, the allowed density is 1 unit for each 872 sf of site area. The portion of the project site zoned R4B is 12,974 sf. Therefore, 14 units would be allowed without the density bonus. With the density bonus, the project would be able to increase density by 35%, or 5 units. The proposed project would include 19 units in the R4B zone. Therefore, the proposed project would be consistent with permitted residential density.

In the CC1 zone, the allowed height is 35 feet or three stories. With the mixed-use development incentive bonus the allowed height would be 45 feet or four stories. In the R4B zone, the allowed height is 45 feet or four stories. The proposed mixed-use structure would be 55 feet in height measured from the ground surface at the north side (rear) of the structure facing West Knoll. As mentioned previously, the project is allowed regulatory concessions pursuant to Section 19.22.050 of the West Hollywood Zoning Ordinance and Section 65915 of the California Government Code for providing affordable housing. The applicant is requesting a concession of an additional 10 feet and one story in height, pursuant to Section 19.22.050.E.2.a of the WHMC. With this concession, the allowed height for the proposed project would be 55 feet and five stories. The proposed project would be 55 feet, five stories in the CC1 zone and 55 feet, four stories in the R4B zone. Therefore, the proposed project would be consistent with the allowed height for the project site.

Table 4.4-4
Consistency with Zoning Ordinance and General Plan Requirements

Requirement	Allowed	Actual Provided by Proposed Project
Floor Area Ratio (FAR)[1]	CC1 Base FAR: 1.5 + Mixed-Use Bonus FAR: 0.5 + 35% Density Bonus for Affordable Housing: 0.70 + Green Building Bonus FAR: 0.1 *Total Allowed = 2.8*	**Consistent** 2.8
Density[2]	1 unit for each 872 sf of site area (14 units total in 12,974 sf area) + 35% Density Bonus for Affordable Housing (5 additional units) *Total Allowed = 19 units*	**Consistent** 19 units
Building Height	CC1 Allowed Height: 35 ft, 3 stories + Mixed-Use Bonus Height: 10 feet, 1 story + Affordable Housing Concession: 10 ft, 1 story *Total Allowed: 55 feet, 5 stories* R4B Allowed Height: 45 ft, 4 stories + Affordable Housing Concession: 10 ft, 1 story *Total Allowed: 55 ft, 5 stories*	**Consistent** CC1: 55 ft, 5 stories R4B: 55 ft, 4 stories
Setbacks	CC1: Front: none Side and Rear: 10 ft if adjacent to a parcel in a residential zoning district R4B: Front: Average of the front setbacks of the two structures closest to the front property lines on the two adjacent parcels.(avg of 2 adj. lots is 17 feet). Side: 5 ft, an additional 1 ft for setback for each story above the 2nd story, total required 7 ft Rear: None required	**Consistent** CC1: Front (facing SMB): 0 feet Rear: 10 feet Side: 5 feet to 15 feet R4B: Front (facing West Knoll): 15 feet 6 inches (requesting10% front setback reduction concession) Side (facing adjacent residence): 7 feet Rear: 0 feet

[1] *FAR used in commercial zoning only*
[2] *Density used in residential zoning only*

At the south side (front) of the structure facing Santa Monica Boulevard, the height of the building would be approximately 48 feet from the ground surface to the top of the third floor. The fourth floor would be set back approximately 8 feet from Santa Monica Boulevard. The fifth floor would be set back approximately 27 feet from the façade and the roof would be set back approximately 37 feet from the façade. At the front of the building facing Santa Monica Boulevard, the building would have five stories above ground. At the rear facing West Knoll, the building would have four stories above ground (see Appendix B for building elevations).

Open Space. The proposed project provides a minimum of 120 sf of private open space per dwelling unit, either in the form of a patio or balcony. In addition, the proposed project provides the required 2,000 square feet of common open space, plus another 2,785 square feet of open space. Therefore, the proposed project would be consistent with the Zoning Ordinance requirements of 120 sf of open space per unit and 2,000 sf of common open space.

General Plan Policies. The proposed project would be subject to the goals and policies set forth in the West Hollywood General Plan 2035. In the determination of the significance of a land use impact, consideration is given to the type of land uses within the area, the extent an area would be impacted, the nature and degree of impacts, and the extent to which existing communities or land uses would be disrupted, divided, or isolated by the proposed Project. State CEQA Guidelines Section 15125(d) requires that an EIR discuss any inconsistencies with applicable plans that the decision-makers should address. A project is considered consistent with the provisions and general policies of an applicable City or regional land use plan if it is consistent with the overall intent of the plan and would not preclude the attainment of its primary goals. A project does not need to be in perfect conformity with each and every policy.[1] More specifically, according to the ruling in *Sequoyah Hills Homeowners Association v. City of Oakland*, state law does not require an exact match between a project and the applicable general plan. Rather, to be "consistent," the project must be "compatible with the objectives, policies, general land uses, and programs specified in the applicable plan," meaning that a project must be in "agreement or harmony" with the applicable land use plan to be consistent with that plan. If a project is determined to be inconsistent with specific objectives or policies of a land use plan, but not inconsistent overall with the land use goals of that plan and would not preclude the attainment of the primary intent of the plan, that project would be considered generally consistent with the plan on an overall basis. Table 4.4-5 outlines the applicable goals and discusses the proposed project's consistency with each of these goals. As shown in the table, the proposed project would be consistent with all applicable General Plan goals.

[1] *Sequoyah Hills Homeowners Association v. City of Oakland (1993) 23 Cal.App.4th 704, 719.*

Table 4.4-5
Consistency with Applicable Goals of the West Hollywood General Plan

Policy	Discussion
Land Use and Urban Form Element	
Goal LU-1: Maintain an urban form and land use pattern that enhances quality of life and meets the community's vision for its future.	**Consistent.** The land use pattern of the area includes retail and other commercial along Santa Monica Boulevard surrounded by single- and multi-family residential uses. The proposed project would include development of a mixed-use structure to include residential, retail, office, and restaurant uses. The project is located in a Mixed-Use Incentive Overlay Zone and therefore implements the City's vision for the site. In addition, the proposed project would provide housing choices, retail businesses, and employment opportunities within the City.
Goal LU-2: Maintain a balanced mix and distribution of land uses that encourage strategic development opportunities and mobility choices within the City.	**Consistent.** The proposed project would include development of a mixed-use structure to include residential, retail, office, and restaurant uses within a Mixed-Use Incentive Overlay Zone located along Santa Monica Boulevard. Therefore, the proposed project would provide a mix of land uses on a site designated for such a purpose by the City. Further, the location of the project site and proposed project features would be designed to prioritize pedestrian, bicycle, and transit mobility options and reduce the demand for motorized transportation. The proposed project is within the Transit Overlay Zone which is intended to encourage mixed-use development in locations with adequate transit service to reduce the need for auto trips. The proposed project involves a mixed-use structure on a site served by several existing bus transit lines (Metro lines 2/302, 4/704, 10, 30/330, 105/705, Cityline Blue Route, and Cityline Orange Route). Additionally, the proposed project would provide 35 bicycle parking spaces to serve the project's residents, employees, and visitors. The project site is also located within walking distance of multiple commercial opportunities. Further, the proposed project would include site landscaping to enhance the pedestrian experience trees and planters along Santa Monica Boulevard.
Goal LU-4: Provide for an urban environment oriented and scaled to the pedestrian.	**Consistent.** The proposed project would be designed to enhance pedestrian activity. Vehicular access to the site would be provided via one driveway on Santa Monica Boulevard and one driveway on West Knoll Drive, thereby minimizing vehicle intrusions across the sidewalk on Santa Monica Boulevard. The restaurant and retail uses and the entrance to the plaza would front Santa Monica Boulevard. All parking areas would be contained on the interior of the project site. The proposed project would include site landscaping to enhance the pedestrian experience along Santa Monica Boulevard, including trees and planters. Additionally, the proposed project includes ground floor level neighborhood-serving retail and restaurant uses with pedestrian scale design fronting Santa Monica Boulevard.

Table 4.4-5
Consistency with Applicable Goals of the West Hollywood General Plan

Policy	Discussion
Goal LU-5: Encourage a high level of quality in architecture and site design in all construction and renovation of buildings.	**Consistent.** The proposed building would be contemporary in style in a neighborhood with diverse architectural styles. The proposed project would incorporate high-qualify, environmentally-friendly materials that would be long-lasting. The building materials and architecture and design of the project has been reviewed by the City's Planning Commission Design Review Subcommittee (see Subsection 1.4 of Section 1.0, *Introduction,* for additional detail about the design review process.
Goal LU-6: Create a network of pedestrian-oriented, human-scale and well-landscaped streets and civic spaces throughout the City.	**Consistent.** As mentioned previously, the proposed project is designed to improve the pedestrian experience. The proposed project would include site landscaping to enhance the pedestrian experience along Santa Monica Boulevard, including trees and planters. Additionally, the proposed project includes ground floor level neighborhood-serving retail and restaurant uses with pedestrian scale design fronting Santa Monica Boulevard. The proposed project would include a plaza with outdoor planters and fountain areas accessible to the public.
Goal LU-7: Seek to expand urban green spaces and sustainable landscapes.	**Consistent.** The proposed project would keep existing and add to street trees along Santa Monica Boulevard and West Knoll Drive, where feasible and any new street trees would be consistent with the City's street tree specifications. Site landscaping would include climate-appropriate, drought-tolerant and native plants. The proposed project would include a green or sustainable roof in several areas, with solar panels and other landscaped spaces.
Goal LU-12: Enhance Santa Monica Boulevard West as a destination for nightlife and entertainment, a focus of the LGBT community, and a center for neighborhood-serving retail and residential.	**Consistent.** The proposed project is a mixed-use development with over 22,000 square feet of neighborhood-serving commercial uses and 6,000 square feet of creative office. The proposed project includes ground floor retail and restaurants along Santa Monica Boulevard. The proposed project has the capacity for outdoor dining as it provides restaurant uses facing Santa Monica Boulevard which will engage pedestrians. The proposed project includes 97 apartment units and 12 live/work units.
Housing Element	
Goal H-2: Maintain and enhance the quality of the housing stock and residential neighborhoods.	**Consistent.** The proposed project involves construction of a mixed-use development consisting of 97 apartment units and over 18,000 square feet of ground floor level retail and restaurant uses. The project would serve the needs of site residents and adjacent residents in a pedestrian-friendly manner and in close proximity to public transportation.
Goal H-3: Encourage a diverse housing stock to address the needs of all socioeconomic segments of the community.	**Consistent.** The proposed project involves a mixed-use structure that would add 97 new residential rental units to the City's housing stock, including 82 market rate units, 8 moderate-income units, and 7 very low-income units. As such, the proposed project would provide a share of the City's regional housing needs and would accommodate households of varying size, type, and income.

Table 4.4-5
Consistency with Applicable Goals of the West Hollywood General Plan

Policy	Discussion
Goal H-4: Provide for adequate opportunities for new construction of housing.	**Consistent.** The proposed project involves construction of a mixed-use development consisting of 97 apartment units, including 82 market rate units, 8 moderate-income units and 7 very low-income units, and over 18,000 square feet of ground floor level retail and restaurant uses.

Based on the above, the proposed project would be consistent with the West Hollywood General Plan and Zoning Ordinance, including the affordable housing requirements. Therefore, impacts would be less than significant.

Mitigation Measures. Mitigation would not be required as this impact would be less than significant.

Residual Impact. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. As discussed in Section 3.0, *Environmental Setting*, pending or planned development in the City consists of 218 residential units and approximately 195,000 square feet of non-residential development. There is one planned project within ¼ mile of the project site at 8550 Santa Monica Boulevard (a commercial project across Santa Monica Boulevard from the project site). The environmental review process for the 8550 Santa Monica Boulevard project found that the project would be consistent with the City's applicable land use plans (City of West Hollywood, 2015). Consistency with the West Hollywood General Plan 2035 and Zoning Ordinance would be addressed on a case-by-case basis and, as discussed above, the project would be consistent with applicable West Hollywood plans, policies, and regulations. Therefore, the project's contribution to cumulative land use impacts would be less than significant.

4.5 NOISE

This section evaluates the proposed project's potential impact to local noise conditions. Both temporary construction noise and long-term noise generated by the proposed project are evaluated.

4.5.1 Setting

a. Fundamentals of Sound, Environmental Noise, and Sound Measurement. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dBA level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while those along arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations. Table 4.5-1 illustrates representative noise levels for the environment.

Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance.

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period.

The actual time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. Two commonly used noise metrics – the Day-Night average level (Ldn) and the Community Noise Equivalent Level (CNEL) - recognize this fact by weighting hourly Leqs over a 24-hour period. The Ldn is a 24-hour average noise level that adds 10 dBA to actual nighttime (10:00 PM to 7:00 AM) noise levels to account for the greater sensitivity to noise during that time period. The CNEL is identical to the Ldn, except it also adds a 5 dBA penalty for noise occurring during the evening (7:00 PM to 10:00 PM).

Table 4.5-1
Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 1,000 feet		
	—100—	
Gas Lawnmower at 3 feet		
	—90—	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
		Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Source: Caltrans, 1998: http://www.dot.ca.gov/hq/env/noise/pub/Technical%20Noise%20Supplement.pdf

b. Fundamentals of Groundborne Vibration. Vibrating objects in contact with the ground radiate energy through that medium; if a vibrating object is massive enough and/or close enough to the observer, its vibrations are perceptible. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured in vibration decibels (VdB).

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is

from approximately 50 VdB, which is the typical background vibration velocity level, and 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

The general human response to different levels of groundborne vibration velocity levels is described in Table 4.5-2.

Table 4.5-2
Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
90 VdB	Difficulty with tasks such as reading computer screens.

Source: FTA, 2006.

c. Sensitive Receptors. The City of West Hollywood General Plan Safety and Noise Element describes sensitive receptors as residences, schools, hospitals, religious facilities, theatres, concert halls, libraries, offices, and parks. These uses are considered sensitive because the presence of excessive noise may interrupt normal activities typically associated with their use. Noise sensitive receptors located in the vicinity of the project site include single and multi-family residences located between approximately 15 to 25 feet immediately north of the project site and Pacific Hills School approximately 650 feet northwest of the project site at 8628 Holloway Drive. Although hotels are not considered noise-sensitive receptors according to the City's General Plan, for the purpose of this analysis the Ramada Plaza Hotel is considered a noise-sensitive receptor. Guest rooms located between approximately 13 to 28 feet west of the project site; therefore, due to their proximity they are included in this analysis.

d. Regulatory Setting.

City Noise Policies. The City of West Hollywood adopted the 2035 General Plan Safety and Noise Element in September 2011. The Noise Element provides a description of existing noise levels and sources and incorporates comprehensive goals, policies, and implementing actions. The Noise Element includes several policies on noise and acceptable noise levels. These policies address unnecessary, excessive, and annoying noise levels and sources such as vehicles, construction, special sources (e.g., radios, musical instrument, animals, etc.), and stationary sources (e.g., heating and cooling systems, mechanical rooms, etc.). The Noise Element also establishes land use compatibility categories for community noise exposure. The maximum "normally acceptable" noise level for the exterior of residential areas is 60 dBA CNEL or Ldn, as shown in Table 4.5-3. The maximum "normally acceptable" noise level for commercial and professional uses is 65 dBA CNEL or Ldn. As shown on Figure 10-4 of the 2035 General Plan Safety and Noise Element, the project site is located within the 70 dBA CNEL contour for Santa Monica Boulevard.

Table 4.5-3
Land Use Compatibility for Noise Environments

Land Use Category	Community Noise Exposure Level (CNEL or Ldn)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential	50-60	60-70	70-75	70-85
Transient Lodging – Motel, Hotels	50-60	60-75	75-80	80-85
Schools, Libraries Churches, Hospitals, Nursing Homes	50-60	60-70	70-80	80-85
Auditoriums, Concert Halls, Amphitheaters	NA	50-70	NA	70-85
Sports Arenas, Outdoor Spectator Sports	NA	50-75	NA	75-85
Playgrounds, Parks	50-70	NA	70-75	75-85
Golf Courses, Riding Stable, Water Recreation, Cemeteries	50-70	NA	70-80	80-85
Office Buildings, Business Commercial and Professional	50-65	60-75	75-85	NA
Industrial, Manufacturing, Utilities, Agriculture	50-70	70-80	80-85	NA

Source: City of West Hollywood 2035 General Plan Safety and Noise Element (2011).
Notes: NA - Not Applicable
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable – New construction or development should generally not be undertaken.

In certifying the Final Program EIR for the City of West Hollywood General Plan 2035 and Climate Action Plan, the City adopted mitigation measures 3.9-1, 3.9-2, 3.9-5, and 3.9-6 for the reduction of noise during construction. These mitigation measures apply to all new development in the City. The requirements of these measures include the following:

3.9-1 The City shall use the following thresholds and procedures for CEQA analysis of proposed projects, consistent with policies adopted within the General Plan:

- *The City shall apply the noise standards specified in Table 10-1 and Table 10-2 of the Safety and Noise Element to proposed projects analyzed under CEQA.*
- *In addition to the foregoing, an increase in ambient noise levels is assumed to be a significant noise concern if a proposed project causes ambient noise levels to exceed the following:*
- *Where the existing ambient noise level is less than 60 dB, a project-related permanent increase in ambient noise levels of 5 dB Ldn or greater.*
- *Where the existing ambient noise level is greater than 60 dB, a project-related permanent increase in ambient noise levels of 3 dB Ldn or greater.*
- *A project-related temporary increase in ambient noise levels of 10 dB Leq or greater.*

3.9-2 The City shall require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- *Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc.).*
- *Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.*
- *Construction operations and related activities associated with the proposed project shall comply with the operational hours outlined in the WHMC Noise Ordinance, or mitigate noise at sensitive land uses to below WHMC standards. Construction equipment should not be idled for extended periods of time in the vicinity of noise-sensitive receptors.*
- *Locate fixed and/or stationary equipment as far as possible from noise-sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers). Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.*
- *Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed of material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated STC rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by a qualified acoustical consultant.*
- *Music from a construction site shall not be audible at offsite locations.*

3.9-5 When the City exercises discretionary review, provides financial assistance, or otherwise facilitates residential development within a mixed-use area, provide written warnings to potential residents about noise intrusion and condition of that approval, assistance, or facilitation. The following language is provided as an example:

"All potential buyers and/or renters of residential property within mixed-use areas in the City of West Hollywood are hereby notified that they may be subject to audible noise levels generated by business- and entertainment-related operations common to such areas, including amplified sound, music, delivery and passenger vehicles, mechanical noise, pedestrians, and other urban noise sources. Binding arbitration is required for disputes regarding noise in mixed-use buildings that require legal action."

3.9-6 The City shall require future developments to implement the following measures to reduce the potential for human annoyance and architectural/structural damage resulting from elevated groundborne noise and vibration levels.

- *Pile driving within a 50-foot radius of historic structures or sensitive land uses shall utilize alternative installation methods where possible (e.g., pile cushioning, jetting, predrilling, cast-in-place systems, resonance-free vibratory pile drivers). Specifically, geo pier style cast-in-place systems or equivalent shall be used where feasible as an alternative to impact pile driving to reduce the number and amplitude of impacts required for seating the pile.*
- *The preexisting condition of all designated historic buildings within a 50-foot radius of proposed construction activities shall be evaluated during a preconstruction survey. The*

preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage shall be documented (photographically and in writing) prior to construction. All damage will be repaired back to its preexisting condition.

- *Vibration monitoring shall be conducted prior to and during pile driving operations occurring within 100 feet of the historic structures. Every attempt shall be made to limit construction-generated vibration levels in accordance with Caltrans recommendations during pile driving and impact activities in the vicinity of the historic structures.*
- *Provide protective coverings or temporary shoring of on-site or adjacent historic features as necessary, in consultation with the Community Development Director or designee.*

To implement the City's noise policies, the City adopted a Noise Ordinance. The Noise Ordinance is part of the West Hollywood Municipal Code (WHMC). The City of West Hollywood Noise Ordinance has no numerical standards, but restricts unnecessary or excessive noise within the City limits. Section 9.08.040 prohibits "sounds or vibrations that in view of the totality of the circumstances are so loud, prolonged and harsh as to be annoying to reasonable persons of ordinary sensitivity and to cause or contribute to the unreasonable discomfort or disturbance of any persons within the vicinity." Factors that should be taken into consideration when considering whether a noise, sound or vibration is unreasonable include:

a. *The volume and intensity of the noise, particularly as it is experienced within a residence or place of business;*
b. *Whether the noise is prolonged and continuous;*
c. *How the noise contrasts with the ambient noise level;*
d. *The proximity of the noise source to residential and commercial uses;*
e. *The time of day;*
f. *The anticipated duration of the noise; and*
g. *Any other relevant circumstances or conditions.*

In addition, radios, musical instruments or similar devices operated between 10:00 PM and 8:00 AM may not be operated at a level to be plainly audible at a distance of 50 feet (Section 9.08.050[a]); the operation of any motor may not be audible at more than 50 feet from the source (Section 9.08.050[c]); loading and unloading activities are generally prohibited from 10:00 PM to 8:00 AM (Section 9.08.050[e]); and commercial activities may not be plainly audible at any residence between 10:00 PM to 8:00 AM (Section 9.08.050[k]). The City Manager has responsibility, with the assistance of the Sheriff's Department if necessary, to enforce these noise regulations (Section 9.08.070).

Section 9.08.050 of the City's Municipal Code sets limits on when construction activities can occur. Construction activities are not permitted between the hours of 7:00 PM and 8:00 AM on weekdays and Saturdays, or at any time on Sundays or City holidays. Pursuant to Section 9.08.050 of the City's Municipal Code, the loading, unloading, opening, closing or other handling of boxes, containers, building materials, solid waste and recycling containers or similar objects is not permitted between the hours of 10:00 PM and 8:00 AM in such manner as to cause unreasonable noise disturbance, excluding normal handling of solid waste and recycling containers by a franchised collector.

d. Existing Noise Conditions and Sources. The most common sources of noise in the project vicinity are transportation-related, such as automobiles, trucks, and motorcycles. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to areas sensitive to noise exposure. The primary sources of roadway noise near the project site are automobiles traveling on Santa Monica Boulevard immediately south of the project site as well as automobile traffic on West Knoll Drive, which borders the project site on its eastern and northern boundaries. Two mid-day 20-minute noise measurements were taken using an ANSI Type II integrating sound level meter on November 19, 2012. Results of the noise monitoring are shown in Table 4.5-4. Sound levels in the southern portion of the site adjacent to Santa Monica Boulevard were more than 11 dBA higher than in the northern portion of the site. Complete noise monitoring data can be found in Appendix F.

Table 4.5-4
Noise Monitoring Results

Measurement Location	Primary Noise Source	Approximate Distance to Primary Noise Source	Leq (dBA)	Nearest Sensitive Receptor
West Knoll Drive on Northern Boundary of Project Site	Traffic on West Knoll and Santa Monica Boulevard	30 feet from center line	58.9	Single- and multi-family residences
Southern boundary of project site adjacent to Santa Monica Boulevard	Traffic on Santa Monica Boulevard	50 feet from center line	70.5	Multi-family residences; hotel

Source: Field measurements using ANSI Type II Integrating sound level meter.
See Appendix F for noise monitoring data sheets

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. The following thresholds are based on Appendix G of the *CEQA Guidelines*. Impacts would also be potentially significant if the proposed project would result in:

- *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
- *Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;*
- *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*
- *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*
- *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels; or*
- *For a project within the vicinity of private airstrip, would the project expose people residing or working the project area to excessive noise levels.*

The Initial Study (see Appendix A) concluded that the proposed project would result in no impact with respect to noise exposure from public or private airports. Therefore, the fifth and sixth criteria are not discussed in this EIR.

According to Mitigation Measure 3.9-1 of the 2035 General Plan FEIR, an increase in ambient noise levels is assumed to be a significant noise concern if a proposed project causes ambient noise levels to exceed the following:

- *Where the existing ambient noise level is less than 60 dB, a project-related permanent increase in ambient noise levels of 5 dB Ldn or greater.*
- *Where the existing ambient noise level is greater than 60 dB, a project-related permanent increase in ambient noise levels of 3 dB Ldn or greater.*
- *A project-related temporary increase in ambient noise levels of 10 dB Leq or greater.*

Noise levels associated with existing and future traffic along area roadways were calculated using the Federal Highway Administration's Traffic Noise Model (TNM) version 2.5 lookup tables (noise modeling data sheets can be viewed in Appendix F of this document). The model calculations are based on traffic data from the EIR traffic study (see Appendix G). Cumulative conditions correspond to the assumed buildout of pending development within the City as indicated in Section 3.0, *Environmental Setting*, Table 3-1.

For traffic-related noise, impacts are considered significant if traffic-generated noise associated with development of the project would result in exposure of sensitive receptors to unacceptable noise levels. The Federal Transit Administration's (FTA) May 2006 document *Transit Noise and Vibration Impact Assessment* recommendations were used to determine whether or not increases in roadway noise would be considered significant. The allowable noise exposure increase changes with increasing noise exposure, such that lower ambient noise levels have a higher allowable noise exposure increase. Table 4.5-5 shows the significance thresholds for increases in traffic-related noise levels caused by the project. If residential development or other sensitive receptors would be exposed to traffic noise increases exceeding these criteria, impacts would be considered significant.

Construction noise and groundborne vibration levels were estimated based estimates from the FTA's *Transit Noise and Vibration Impact Assessment* (May 2006). Reference noise and vibration levels from that document were used to estimate noise levels at nearby sensitive receptor locations based on the distance between the construction site and receptors and a standard noise attenuation rate of 6 dBA per doubling of distance and vibration attenuation rate of approximately 9 VdB per doubling of distance. Construction noise and vibration level estimates do not account for the presence of intervening structures or topography, which could further reduce noise and vibration levels at receptor locations. Therefore, the noise and vibration levels presented herein represent a worst-case estimate of actual construction noise.

Table 4.5-5
Significance of Changes in
Operational Roadway Noise Exposure

Ldn or Leq in dBA	
Existing Noise Exposure	**Allowable Noise Exposure Increase**
45-50	7
50-55	5
55-60	3
60-65	2
65-75	1
75+	0

Source: Federal Transit Administration (FTA), May 2006

The City of West Hollywood has not adopted specific numerical thresholds for groundborne vibration impacts. Therefore, this analysis uses the FTA's vibration impact thresholds to determine whether groundborne vibration would be "excessive." A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Consequently, the FTA recommends a 72 VdB threshold for frequent events at residences and buildings where people normally sleep (e.g., the future on-site residences and the residences adjacent to the project site). The FTA does not consider most commercial and industrial uses to be noise-sensitive (except for those that depend on quiet as an important part of operations, such as sound recording studios) and therefore does not recommend thresholds for groundborne vibration impacts to such uses. In terms of groundborne vibration impacts on structures, the FTA states that groundborne vibration levels in excess of 100 VdB would damage fragile buildings and levels in excess of 95 VdB would damage extremely fragile historic buildings.

b. Project Impacts and Mitigation Measures.

Impact N-1 Project construction would intermittently generate high noise levels and groundborne vibration on and adjacent to the site. This would affect existing noise-sensitive receptors near the project site. Therefore, impacts would be Class I, *significant and unavoidable*.

Nearby noise-sensitive receptors, including the single-family and multi-family residences immediately north of the project site and the Ramada Plaza Hotel[1] immediately west of the project site, would be exposed to temporary construction noise during development of the proposed project. Noise impacts are a function of the type of activity being undertaken and the distance to the receptor location. Construction activity is expected to occur over a period of 22

[1] *As stated in subsection 4.5.1(c), hotels are not considered noise-sensitive receptors according to the City's General Plan but the Ramada Plaza Hotel is considered a noise-sensitive receptor for the purposes of this analysis due to the proximity of guest rooms to the project site. This analysis is therefore conservative.*

months and would require approximately 3,113 round-trip truckloads in order to export the estimated 49,800 cubic yards of earth material.

Table 4.5-6 shows typical noise levels associated with activities during various phases of construction at distances of 25, 50, and 100 feet from the noise source.

Table 4.5-6
Typical Noise Levels at Construction Sites

Equipment Onsite	Typical Level (dBA) 25 Feet from the Source	Typical Level (dBA) 50 Feet from the Source	Typical Level (dBA) 100 Feet from the Source
Air Compressor	87	81	75
Backhoe	86	80	74
Concrete Mixer	91	85	79
Crane, mobile	89	83	77
Dozer	91	85	79
Jack Hammer	94	88	82
Paver	95	89	83
Saw	82	76	70
Truck	94	88	82

Noise levels assume a noise attenuation rate of 6 dBA per doubling of distance.
Source: Federal Transit Administration (FTA), May 2006

Typical construction noise levels at 25 feet from the source range from about 86 to 95 dBA. The grading/excavation phase of project construction tends to create the highest construction noise levels because of the operation of heavy equipment, although only a limited amount of equipment can operate near a given location at a particular time. In addition, construction vehicles traveling on local roadways can generate intermittent noise levels that affect adjacent receptors.

Vibration from construction activities could also have an impact on nearby noise-sensitive land uses. Table 4.5-7 identifies various vibration velocity levels for the types of construction equipment that would operate at the project site during construction.

The primary sources of man-made vibration are blasting, grading, pavement breaking and demolition. The primary vibratory source during construction within the project area would likely be large bulldozers and loaded trucks. As shown in Table 4.5-7, typical bulldozer or loaded truck activities generate an approximate vibration level of 86-87 VdB at a distance of 25 feet. Vibration levels in excess of 80 VdB typically result in annoyance. As such, existing residences and other sensitive receptors in close proximity to construction activities may intermittently be disturbed by nuisance vibration noise levels.

Table 4.5-7
Vibration Source Levels for Construction Equipment

Equipment	Approximate VdB				
	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet
Large Bulldozer	87	81	79	77	75
Loaded Trucks	86	80	78	76	74
Jackhammer	79	73	71	69	67
Small Bulldozer	58	52	50	48	46

Vibration levels assume a noise attenuation rate of 6 dBA per doubling of distance.
Source: Federal Transit Administration (FTA), May 2006

Based on the information presented in Table 4.5-6 and Table 4.5-7, temporary construction noise and groundborne vibration could affect sensitive noise receptors near the project site, particularly the single- and multi-family residences north of the project site and the Ramada Plaza Hotel west of the project site. Construction noise could reach up to 95 dBA at these receptors which would be an increase of more than 10 dBA above the existing ambient noise levels of 58.9 and 70.5 dBA Leq. This would be a significant and unavoidable temporary or periodic increase in noise levels.

Vibration levels could temporarily and intermittently reach up to approximately 87 VdB at these sensitive receptors, which would exceed the groundborne velocity threshold level of 72 VdB established by the FTA for residences and buildings where people normally sleep. As discussed in *Methodology and Significance Thresholds*, pursuant to Section 9.08.050 of the City's Municipal Code, construction is prohibited between the hours of 7:00 PM and 8:00 AM on weekdays and Saturdays; and at any time on Sundays or City holidays. Therefore, construction would not occur during recognized sleep hours for residences and vibration would not exceed 72 VdB during normal sleep hours. The vibration levels would not be anticipated to exceed 100 VdB, which is the threshold where minor damage can occur in fragile buildings. Therefore, impacts related to vibration would be less than significant.

Mitigation Measures. The following are required as mitigation measures to reduce construction-related noise impacts to nearby sensitive receptors.

N-1(a) **Staging Area.** The contractor shall provide staging areas onsite to minimize off-site transportation of heavy construction equipment. These areas shall be located to maximize the distance between activity and sensitive receptors. This would reduce noise levels associated with most types of idling construction equipment.

N-1(b) **Diesel Equipment Mufflers**. All diesel equipment shall be operated with closed engine doors and shall be equipped with factory- recommended mufflers.

N-1(c) **Electrically-Powered Tools and Facilities.** Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities.

N-1(d) **Construction Notice**. Two weeks prior to the commencement of construction at the project site, notification shall be provided to the owners and tenants of residential properties located along West Knoll Drive between Santa Monica Boulevard and Westmount Drive, and the manager of the Ramada Plaza Hotel, disclosing the planned construction schedule, including the various types of activities and equipment that would be occurring throughout the duration of the construction period. This notification shall also provide a contact name and phone number for residents to call for construction noise related complaints. All reasonable concerns shall be rectified within 24 hours of receipt.

Significance After Mitigation. As shown in Table 4.5-4, the measured ambient noise levels on the project site range from 58.9 to 70.5 dBA Leq. Therefore, a significant impact would occur if the project resulted in noise levels above 68.9 to 80.5 dBA Leq (a temporary increase in ambient noise levels of 10 dB Leq or greater). Implementation of mitigation measures N-1(a) through N-1(d) would reduce the impacts associated with temporary construction activities. It is estimated that these measures would reduce noise levels by 10-15 dBA Leq. Since construction noise levels are estimated to be 86 to 95 dBA at the nearest sensitive receptor, the project may still result in noise levels above 68.9 or 80.5 Leq. Therefore, construction activities would still result in a significant and unavoidable short-term noise impact.

Impact N-2 **Project-generated traffic has the potential to increase traffic-related noise on study area roadway segments under existing plus project and future plus project conditions. However, the change in noise levels would not exceed thresholds. Therefore, the effect of increased traffic noise on existing uses would be Class III, *less than significant*.**

The proposed project would increase the number of vehicle trips to and from the site, which would incrementally increase traffic noise on study area roadways. The project could therefore incrementally increase noise at neighboring uses. Estimated peak hour traffic values from the traffic study (see Section 4.6, *Transportation and Circulation*) were used to model the change in noise levels resulting from increased traffic on nine roadway segments. The nine roadway segments include the eight roadway segments analyzed in the traffic study as well as the segment of Santa Monica Blvd between West Knoll Drive and Westmount Drive which is adjacent to the south side of the project site. Table 4.5-8 indicates noise levels at between 32.8 and 50 feet from the centerline of each roadway segment, or the approximate distance between the roadway centerline and sensitive receptors adjacent to the roadway. Noise levels at distances greater than 32.8 feet from the centerline would be less due to attenuation provided by increased distance from the noise source. As noted in the *Setting*, noise from heavily traveled roadways drops off about 3 dBA for every doubling of distance. In addition, more distant receivers would generally be partially shielded from traffic noise by intervening structures.

Table 4.5-8
Calculated Noise Associated with Traffic on Surrounding Roadways

Roadway	Projected Noise Level (dBA Leq)				Change In Noise Level (dBA Leq)			Significant Impact?*
	Existing (1)	Existing + Project (2)	Cumulative (3)	Cumulative + Project (4)	Due to Project Traffic (2 minus 1)	Cumulative Traffic Noise Increase (4 minus 1)	Due to Project Traffic Under Future Conditions (4 minus 3)	
1. Hancock Ave. between Holloway Dr. and West Knoll Dr.	60.3	60.5	60.5	60.6	0.2	0.3	0.1	No
2. Hancock Ave. between West Knoll Dr. and Santa Monica Blvd.	61.1	61.1	61.1	61.1	0	0	0	No
3. West Knoll Dr. between Hancock Ave and Westbourne Dr.	57.2	57.3	57.3	57.7	0.1	0.5	0.4	No
4. Westbourne Dr. between West Knoll Dr. and Santa Monica Blvd.	57.9	58.4	58.3	58.4	0.5	0.5	0.1	No
5. Westbourne Dr. between Rugby Dr. and Sherwood Dr.	59.3	59.3	59.3	59.7	0	0.4	0.4	No
6. Sherwood Dr. between Westbourne Dr. and Westmount Dr.	60.9	60.9	61.1	61.1	0	0.2	0	No
7. Westmount Dr. between Holloway Dr. and West Knoll Dr.	60.3	60.3	60.5	60.6	0	0.3	0.1	No
8. West Knoll Dr. between Westmount Dr. and Santa Monica Blvd.	57.3	57.9	57.8	57.9	0.6	0.6	0.1	No
9. Santa Monica Blvd. between West Knoll Dr. and Westmount Dr.	71.5	71.6	72.5	72.6	0.1	1.1	0.1	No

Estimates of noise generated by traffic from roadway centerline at 32.8 feet except for segment 9 which is from 50 feet.
Refer to Appendix F for full noise model output. Noise levels presented do not account for attenuation provided by existing barriers or future barriers; therefore, actual noise levels at sensitive receptor locations influenced by study area roadways may in many cases be lower than presented herein.
Source: Federal Highway Administration Traffic Noise Model Version 2.5 Look-Up Tables; Fehr & Peers, 2016.
** Significant impact per FTA guidelines, see Table 4.5-5*

As shown in Table 4.5-8, existing noise levels on study area roadway segments are between 57.2 and 71.5 dBA Leq. For segments with existing noise levels between 55 and 60 dBA (segments 3, 4, 5, and 8 during both existing and future conditions), the highest noise level increase due to the proposed project would be 0.6 dBA. This is less than the 3 dBA threshold for significant increases in noise where existing noise levels are between 55 and 60 dBA, as shown in Table 4.5-5. For segments with existing noise levels between 60 and 65 dBA (segments 1, 2, 6 and 7 during both existing and future conditions), the highest noise level increase due to the proposed project would be 0.2 dBA. This is less than the 2 dBA threshold for significant increases in noise where existing noise levels are between 60 and 65 dBA, as shown in Table 4.5-5. For the segment with existing noise levels between 65 and 75 dBA (segment 9), the highest noise level increase due to the proposed project would be 0.6 dBA. This is less than the 1 dBA threshold for significant increases in noise where existing noise levels are between 65 and 75 dBA, as shown in Table 4.5-5.

Under cumulative conditions without the project, noise levels on study area roadway segments range from 57.3 to 72.5 dBA Leq. With the project under cumulative conditions, noise levels range from 57.7 to 72/6 dBA. The cumulative increase for all segments, except for segment #9, would be under FTA criteria and would not be significant. For segment #9, the increase in noise from existing conditions to cumulative plus project conditions is 1.1 dBA. This exceeds the FTA criteria of a 1 dBA increase for segments between 65 and 75 dBA as shown in Table 4.5-5. Therefore, the segment has a potential significant cumulative traffic noise impact. However, the project's contribution to the impact is only 0.1 dBA, which is less than the FTA significance criteria. The project's contribution is not cumulatively considerable, and, therefore, is less than significant.

Therefore, impacts related to project-generated traffic noise would be less than significant. It should also be noted that the proposed structure would generally shield residences immediately north of the site from traffic noise associated with Santa Monica Boulevard.

Mitigation Measures. Mitigation is not required.

Significance After Mitigation. The proposed project's impact related to traffic noise levels on study roadway segments would be less than significant without mitigation.

Impact N-3 Noise generated by existing traffic near the project site could expose new sensitive receptors to noise levels that exceed City standards. With compliance with California Building Code requirements, impacts would be Class III, *less than significant*.

The project site is on the north side of Santa Monica Boulevard and the west side of West Knoll Drive. As show in on Tables 4.5-4 (measured noise levels) and 4.5-8 (modeled noise levels), existing noise on Santa Monica Boulevard in front of the project site was measured at 70.5 dBA Leq and modeled at 71.5 dBA Leq. Existing noise on West Knoll Drive was measured at 58.9 dBA Leq and modeled at 57.3 dBA Leq.

Table 4.5-3 shows the West Hollywood General Plan Safety and Noise Element land use compatibility criteria. For new residential uses, noise levels between 70-75 dBA CNEL are considered "normally unacceptable" and noise insulation features should be included in the

project design. The ambient noise level in CNEL is typically within (+/-) 2 dBA of the measured peak hour Leq. Therefore, based on the measured noise levels, ambient noise on-site near Santa Monica Boulevard may be within the normally unacceptable range due to existing noise levels.

The 2013 California Building Code (Title 24, Part 2, Volume 1, Chapter 12, Section 1207.4) requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. Habitable rooms include any space for living, sleeping, eating, or cooking. With compliance with California Building Code requirements, residents would not be exposed to noise levels that exceed City standards. Impacts would be less than significant.

Mitigation Measures. None required.

Significance After Mitigation. Noise impacts related to existing traffic-related noise would be less than significant without mitigation.

Impact N-4 On-site activities associated with project operation would generate noise levels that may periodically be audible to existing uses near the project site. On-site noise sources include stationary equipment such as rooftop ventilation and heating systems, deliveries, trash hauling, and general retail and restaurant activities. However, with adherence to the City of West Hollywood's Noise Ordinance, impacts would be Class III, *less than significant*.

Existing uses near the project site may periodically be subject to noises associated with operation of the proposed project, including noise that is typical of residential and retail developments such as light machinery, conversations, music, and delivery trucks.

Existing uses on the project site include two parking lots: one on the northeast section of the project site and one on the western half of the project site (see Figure 2-2 in Section 2.0, *Project Description*). The proposed project includes three levels of enclosed parking. Therefore, noise associated with parking lots, such as the movement of vehicles through the parking area and the slamming of doors, conversations, would be reduced as parking would be moved from outdoors to an enclosed garage.

The proposed project involves ground-level patios for residential units on the north side of the second floor of the project, and private balconies for residential units on the second through fifth floors. The patios and balconies on the northern side of the proposed mixed-use structure would face existing multi-family and single-family residences north of the project site (see Figure 2-6 in Section 2.0, *Project Description,* and Figure 4.1-5 in Section 4.1, *Aesthetics*). Balconies and patios would be between approximately 13 to 50 feet from adjacent residences. Conversations and music from residents on these balconies could be audible at these nearby residences. Normal conversational levels are in the 60-65 dBA range at approximately 3 feet. Assuming a sound attenuation level of 6 dBA per doubling of distance, conservations would be approximately 47 dBA at the adjacent residences. The level of noise at nearby residences from music on balconies and patios at nearby residences would depend on the volume the music is being played. Residents living in units with balconies and patios facing adjacent residences would be subject to WHMC noise ordinance requirements, specifically Section 9.08.040 which

prohibits prolonged and harsh sound which would disturb any persons in the vicinity and Section 9.08.050[a] which prohibits loud radios or similar devices between 10:00 PM and 8:00 AM.

Noise generated by on-site operations is expected to also include noise associated with rooftop ventilation and heating systems. Heating, ventilation, and air condition equipment (HVAC) units usually have noise shielding cabinets placed on the roof or are in mechanical equipment rooms. Typically, the shielding and location of these units reduces noise levels to no greater than 55 dBA at 50 feet from the source. The rooftop HVAC systems for the proposed project would be at least approximately 28 feet from the Ramada Hotel to the west and 45 feet from the residences to the north. The HVAC systems would also be located on the roof of the proposed project which would be higher in elevation compared to the surrounding buildings. Due to the distance and the elevation change, HVAC systems associated with the project would not substantially increase noise levels at nearby noise-sensitive receptors.

Operation of the proposed retail and residential project would involve delivery trucks and trash hauling trucks going to and from the project site and occasional moving vans. An individual delivery truck can generate noise of up to 85 dB, which could be disruptive if it were to occur at night or in the early morning hours. However, the loading zone for the proposed project would be within the enclosed first floor parking garage (see site plans in Appendix B). Further, as described in *Methodology and Significance Thresholds,* pursuant to Section 9.08.050 of the City's Municipal Code, commercial deliveries that would cause unreasonable noise disturbance are not permitted between the hours of 10:00 PM and 8:00 AM, except for normal handling of solid waste and recycling containers by a franchised collector. Noise generated by daytime deliveries and trash pickups would not adversely affect nearby sensitive receptors due to their relatively low frequency, the location of the loading zone with an enclosed area, and the lower noise level sensitivity of receptors during the day when deliveries would occur.

Due to the design features associated with the proposed project, and assuming compliance with West Hollywood Noise Ordinance regulations, impacts related to operational noise would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts related to project operational noise would be less than significant without mitigation.

c. Cumulative Impacts. The proposed project and related projects in the area, as identified in Table 3-1 in Section 3.0 *Environmental Setting*, would generate temporary noise during construction. As discussed in Impact N-1, impacts related to noise generated by construction of the proposed project would be significant and unavoidable. Construction activities on the related projects in the area would generate similar noise levels as the proposed project. Construction noise is localized and rapidly attenuates within an urban environment. Most of the related projects outside the immediate site vicinity are located too far from the project site to contribute to increases in ambient noise levels associated with construction in the project area. There is one pending or planned project within ¼ mile of the project site at 8550 Santa Monica Boulevard (an approved commercial project across Santa Monica Boulevard from

the project site). Because this project has been approved and construction is underway, it is assumed that the construction periods for the two projects would not overlap. Therefore, the proposed project would not contribute to a significant cumulative construction noise impact. Traffic noise impacts associated with cumulative development within the City would incrementally increase noise levels along roadways. As discussed in Impact N-2, although there is a potentially significant cumulative traffic noise increase for the segment of Santa Monica Boulevard between West Knoll Drive and Westmount Drive, the project's contribution to the cumulative impact is less than the FTA thresholds and therefore is not cumulatively considerable. As such, cumulative traffic noise impacts would be less than significant.

Cumulative development would result in stationary (non-traffic) operational noise increases in the project vicinity. Based on the long-term stationary noise analysis, impacts from the proposed project's operational noise would be less than significant. Because noise dissipates as it travels away from its source, noise impacts associated with on-site activities and other stationary sources would be limited to the project site and vicinity. There is one approved project across the street from the proposed project (8550 Santa Monica Boulevard). However, the City does not have operational noise thresholds. Cumulative operational (non-traffic) noise impacts would be less than significant.

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4.6 TRANSPORTATION AND CIRCULATION

This section analyzes the proposed project's impacts to the local transportation and circulation system. The analysis is based in part upon the Transportation Analysis Report prepared for the proposed project by Fehr & Peers in April 2017. The study is included in its entirety in Appendix G.

4.6.1 Setting

a. Existing Street System. The project site is located at the corner of Santa Monica Boulevard and West Knoll Drive in the City of West Hollywood. The study area for this analysis is generally bordered by Sunset Boulevard to the north, Kings Road to the east, Melrose Avenue to the south, and San Vicente Boulevard to the west. Primary regional access to the study area is provided by Santa Monica Boulevard, which runs east-west through the study area and the Hollywood Freeway (U.S. 101), which generally runs northwest-southeast approximately two miles northeast of the project site. Access to the U.S. 101 is provided at the Highland Avenue interchange.

North-south regional project access is provided by San Vicente Boulevard and La Cienega Boulevard; east-west regional access is provided by Sunset Boulevard and Santa Monica Boulevard. Localized access is provided by Fountain Avenue, Holloway Drive, Westbourne Drive, and West Knoll Drive.

The following is a brief description of the streets that serve the site:

- *San Vicente Boulevard – San Vicente Boulevard is a north-south arterial south of Santa Monica Boulevard and a collector between Santa Monica Boulevard and Sunset Boulevard west of the project site. It provides two lanes in each direction during the peak hours. Parking is generally allowed on both sides of the street near the study area, with some segments including diagonal parking south of Santa Monica Boulevard. The posted speed limit is 35 miles per hour (mph).*

- *La Cienega Boulevard – La Cienega Boulevard is a north-south arterial south of Santa Monica Boulevard and a collector between Santa Monica Boulevard and Sunset Boulevard east of the project site. It provides four travel lanes with two lanes in each direction. La Cienega also provides regional access with a connection to the I-10 ramps, south of the study area. Parking is generally allowed on both sides of the street in the project vicinity. The posted speed limit is 35 mph.*

- *Santa Monica Boulevard – Santa Monica Boulevard is an east-west arterial. In the project area, it provides four travel lanes with two lanes in each direction. Parking is available but limited in the study area. The posted speed limit is 30 mph.*

- *Sunset Boulevard – Sunset Boulevard is an east-west arterial that provides four travel lanes during the peak periods, with two lanes in each direction. Parking is prohibited during the AM and PM peak periods and limited between the peak periods. The posted speed limit is 35 mph.*

- *Fountain Avenue – Fountain Avenue is an east-west collector street. Four travel lanes are provided East of La Cienega Boulevard during the PM peak period in the study area. Parking is generally allowed in the study area between 7:00 AM and 4:00 PM without a permit. The posted speed limit is 35 mph.*

- *Holloway Drive – Holloway Drive is an east-west collector street north of the project site. Two travel lanes are provided on the undivided roadway; parking is available on the street. The speed limit is 25 mph.*

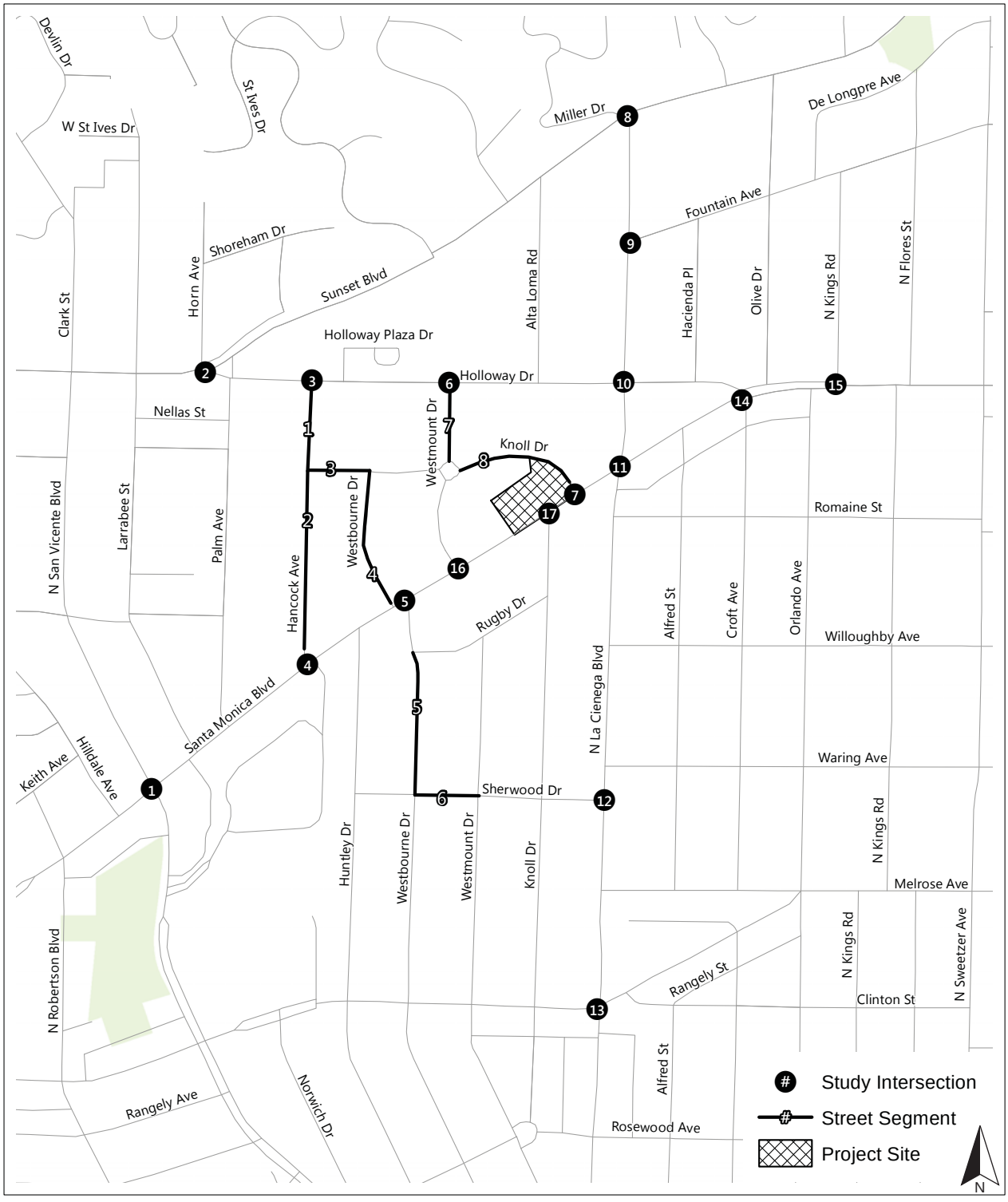
- *Westbourne Drive – Westbourne Drive is a north-south local street to the west of the project site. Two travel lanes are provided on the undivided roadway; parking is available on the street. The speed limit is 25 mph.*

- *West Knoll Drive – West Knoll Drive is a north-south local street to the east of the project site. Two travel lanes are provided on the undivided roadway; parking is available on the street. The speed limit is 25 mph.*

b. Existing Traffic Volumes and Levels of Service. Seventeen intersections were identified for this analysis. The locations of study area intersections are shown on Figure 4.6-1. Study intersections include:

1. *San Vicente Boulevard & Santa Monica Boulevard*
2. *Horn Avenue/Holloway Drive & Sunset Boulevard*
3. *Hancock Avenue & Holloway Drive*
4. *Hancock Avenue & Santa Monica Boulevard*
5. *Westbourne Drive & Santa Monica Boulevard*
6. *Westmount Drive & Holloway Drive*
7. *West Knoll Drive & Santa Monica Boulevard*
8. *Miller Drive/La Cienega Boulevard & Sunset Boulevard*
9. *La Cienega Boulevard & Fountain Avenue*
10. *La Cienega Boulevard & Holloway Drive*
11. *La Cienega Boulevard & Santa Monica Boulevard*
12. *La Cienega Boulevard & Sherwood Drive*
13. *La Cienega Boulevard & Melrose Avenue*
14. *Holloway Drive/Croft Avenue & Santa Monica Boulevard*
15. *Kings Road & Santa Monica Boulevard*
16. *Westmount Drive & Santa Monica Boulevard*
17. *West Knoll Drive & Santa Monica Boulevard*

All the study intersections are located within the City of West Hollywood except for the intersection of La Cienega Boulevard and Sherwood Drive, which is fully within the City of Los Angeles' jurisdiction. Of the 17 study intersections, 10 operate under traffic signal control while the seven remaining intersections of Hancock Avenue & Holloway Drive, Hancock Avenue & Santa Monica Boulevard, Westmount Drive & Holloway Drive, West Knoll Drive & Santa Monica Boulevard, and La Cienega Boulevard & Sherwood Drive, Westmount Drive & Santa Monica Boulevard, and West Knoll Drive and Santa Monica Boulevard are stop-controlled.



Study Area Intersections and Roadway Segments

Figure 4.6-1

Source: Fehr & Peers, 2016

Weekday AM, midday, and PM peak hour traffic counts were collected at the study intersections in January 2016. Figure 4.6-2 shows the existing intersection volumes for the AM, midday, and PM peak hours. Traffic counts are provided in Appendix G.

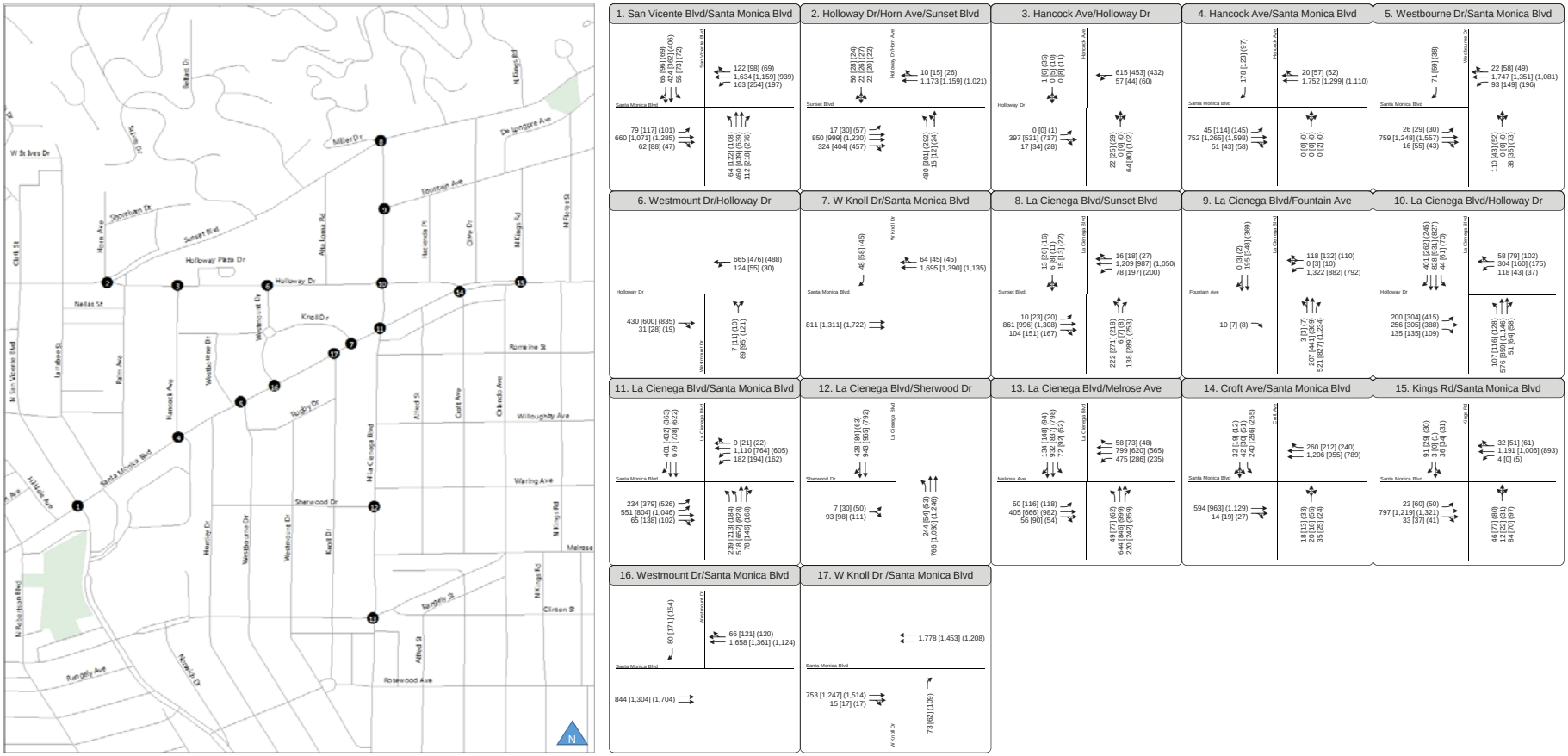
Using the traffic count data at the study area intersections, a volume-to-capacity (V/C) ratio or average vehicle delay and corresponding level of service (LOS) was determined for all of the study area intersections. LOS is a qualitative measure used to describe the condition of traffic flow. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS D is typically considered to be the minimum desirable LOS in urban areas. Table 4.6-1 summarizes the LOS definitions.

Table 4.6-1
Level of Service Definitions

LOS	Interpretation	Signalized Intersection Average Stopped Delay per vehicle (seconds)	Stop-Controlled Intersection Average Total Delay (seconds/vehicle)
A	Excellent operation. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10	≤ 10
B	Very good operation. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20	> 10 and ≤ 15
C	Good operation. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35	> 15 and ≤ 25
D	Fair operation. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developed lines, preventing excessive backups.	> 35 and ≤ 55	> 25 and ≤ 35
E	Poor operation. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80	> 35 and ≤ 50
F	Failure. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80	> 50

Source: Highway Capacity Manual, Special Report 209 and Transportation Research Board, 2000

Table 4.6-2 provides the V/C ratios or delay and LOS values for each study intersection under existing (2016) conditions.



Source: Fehr & Peers, 2016

Existing (2013) Peak Hour Intersection Volumes

Figure 4.6-2

Table 4.6-2
Existing (2016) Level of Service Summary

Study Intersection	Jurisdiction	Weekday					
		AM Peak		Midday Peak		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
1. San Vicente Blvd & Santa Monica Blvd	WH	33	C	28	D	35	C
2. Horn Ave/Holloway Dr & Sunset Blvd	WH	31	C	22	C	22	C
3. Hancock Ave & Holloway Dr [a]	WH	19	C	26	D	48	E
4. Hancock Ave & Santa Monica Blvd [b]	WH	39	E	20	C	16	C
5. Westbourne Dr & Santa Monica Blvd	WH	18	B	46	D	97	F
6. Westmount Dr & Holloway Dr [b]	WH	15	B	18	C	25	D
7. West Knoll Dr & Santa Monica Blvd [b]	WH	10	B	10	B	10	B
8. La Cienega Blvd & Sunset Blvd	WH	62	E	97	F	166	F
9. La Cienega Blvd & Fountain Ave	WH	57	E	32	C	20	B
10. La Cienega Blvd & Holloway Dr	WH	36	D	36	D	64	E
11. La Cienega Blvd & Santa Monica Blvd	WH	66	E	73	E	78	E
12. La Cienega Blvd & Sherwood Dr [b]	LA	50	F	--	--	34	D
13. La Cienega Blvd & Melrose Ave	WH	53	D	38	D	67	E
14. Croft Ave & Santa Monica Blvd	WH	19	B	16	B	18	B
15. Kings Rd & Santa Monica Blvd	WH	10	A	12	B	13	B
16. Westmount Dr & Santa Monica Blvd [b]	WH	14	B	17	B	14	B
17. West Knoll Dr & Santa Monica Blvd [b]	WH	9	A	11	B	12	B

Source: Fehr & Peers, 2017. (Appendix G)
[a] Intersection is a two-way stop. Average vehicular delay reported for worst case approach
[b] The minor approach is stop controlled. Average vehicular delay reported for worst case approach
WH = West Hollywood, LA = City of Los Angeles

As shown in Table 4.6-2, under existing conditions nine of the seventeen study intersections currently operate at LOS E or F during at least one studied timeframe. These include:

3. *Hancock Avenue & Holloway Drive (PM peak hour)*
4. *Hancock Avenue & Santa Monica Boulevard (AM peak hour)*
5. *Westbourne Drive & Santa Monica Boulevard (PM peak hour)*
8. *La Cienega Boulevard & Sunset Boulevard (AM, Midday, and PM peak hours)*
9. *La Cienega Boulevard & Fountain Avenue (AM peak hour)*
10. *La Cienega Boulevard & Holloway Drive (PM peak hour)*
11. *La Cienega Boulevard & Santa Monica Boulevard (AM, Midday, and PM peak hours)*
12. *La Cienega Boulevard & Sherwood Drive (AM and PM peak hours)*
13. *La Cienega Boulevard & Melrose Avenue (PM peak hour)*

c. Existing Roadway Segment Volumes. Eight street segments were selected for this analysis. The locations of these segments are shown on Figure 4.6-1. The segments include:

1. *West Knoll Drive between Hancock Avenue and Westbourne Drive*
2. *West Knoll Drive between Westmount Drive and Santa Monica Boulevard*
3. *Westmount Drive between Holloway Drive and West Knoll Drive*
4. *Westbourne Drive between West Knoll Drive and Santa Monica Boulevard*
5. *Westbourne Drive between Rugby Drive and Sherwood Drive*

6. *Sherwood Drive between Westbourne Drive and Westmount Drive*
7. *Hancock Avenue between Holloway Drive and West Knoll Drive*
8. *Hancock Avenue between West Knoll Drive and Santa Monica Boulevard*

Daily traffic counts were collected in January 2016 for six study segments. Daily traffic counts at Sherwood Drive between Westbourne Drive and West Knoll Drive and Westmount Drive between Holloway Drive and West Knoll Drive were collected in February 2016. Table 4.6-3 summarizes traffic volumes on the roadway segments.

Table 4.6-3
Existing (2016) Traffic Volumes on Study Area Roadway Segments

Street Segments	Existing Daily Traffic Volumes
1. Hancock Ave between Holloway Dr and West Knoll Dr	2,512
2. Hancock Ave between West Knoll Dr and Santa Monica Blvd	2,962
3. West Knoll Dr between Hancock Ave and Westbourne Dr	1,258
4. Westbourne Dr between West Knoll Dr and Santa Monica Blvd	1,484
5. Westbourne Dr between Rugby Dr and Sherwood Dr	1,980
6. Sherwood Dr between Westbourne Dr and Westmount Dr	2,925
7. Westmount Dr between Holloway Dr and West Knoll Dr	2,480
8. West Knoll Dr between Westmount Dr and Santa Monica Blvd	1,306

Source: Fehr & Peers, 2013. (Appendix G).

d. Existing Transit Service. The study area is served by bus transit lines operated by the Los Angeles County Metropolitan Transportation Authority (METRO) and the West Hollywood CityLine system. Lines that serve the project site are described below:

- *Metro Lines 2 and 302 – Line 2 is a local service that runs along Sunset Boulevard between downtown Los Angeles and Pacific Palisades. Line 302 is a limited-stop service line that provides service during the weekday in the peak hours. In the AM peak hour, the lines operate with average seven-minute headways in the eastbound direction and average five-minute headways in the westbound direction. In the PM peak hour, the lines operate at average six-minute headways.*

- *Metro Lines 4 and 704 – Line 4 is a local east-west line that travels from Santa Monica to downtown Los Angeles. Line 704 is a Metro Rapid line that provides limited-stop service along the same route. Line 4 and Line 704 provide service to Echo Park, Silver Lake, Hollywood, West Hollywood, Beverly Hills, Century City, Westwood and Santa Monica. Lines 4 and 704 both travel along Santa Monica Boulevard in the study area. In the AM peak hour, Metro Line 4 and 704 operate at six-minute headways. In the PM peak hour, the lines operate at 10-minute headways.*

- *Metro Line 10 – Line 10 is a local east-west line that travels from West Los Angeles to Downtown Los Angeles via Temple Street and Melrose Avenue. Line 10 travels along Melrose Avenue in the study area. The lines operate at average 10-minute headways in the AM and PM peak hours.*

- *Metro Lines 30 and 330 – Line 30 is a local east-west line that travels from Mid-City to East Los Angeles. Line 330 is a Metro line that provides limited-stop service from West Hollywood to East Los Angeles. Line 30 and Line 330 provide service to Mid-city, downtown Los Angeles, Boyle Heights, and East Los Angeles, with Line 330 also serving West Hollywood and Beverly Hills. Lines 30 and 330 both travel along San Vicente Boulevard in the study area. In the AM peak hour, Metro Line 30 operates at six-minute headways and Line 330 operates with 30-minute headways. In the PM peak hour, Line 30 operates at seven-minute headways and Line 330 operates with 30-minute headways.*

- *Metro Lines 105 and 705 – Line 105 is a local southeast-northwest line that travels from West Hollywood to Vernon. Line 705 is a Metro Rapid line that provides limited-stop service along the same route. Line 105 and Line 705 provide service to West Hollywood, Beverly Hills, Baldwin Hills, Leimert Park, Exposition Park, and Vernon. Lines 105 and 705 both travel along La Cienega Boulevard in the study area. In the AM peak hour, Metro Line 105 and 705 operate at 10-minute headways. In the PM peak hour, the lines operate at 20-minute headways.*

- *CityLine Blue Route – The West Hollywood CityLine Blue Route provides local circulation service to the City of West Hollywood, linking the east and west communities while primarily traveling on Santa Monica Boulevard. Near the project site, the Blue Route stops include: Santa Monica Boulevard & La Cienega Boulevard, Santa Monica Boulevard & West Knoll Drive, and Santa Monica Boulevard & Hancock Avenue. Route A operates at 35- to 70-minute headways during the day.*

- *CityLine Orange Route – The West Hollywood CityLine Orange Route provides local circulation service to the City of West Hollywood, linking the east and west communities to Plummer Park while primarily traveling on Santa Monica Boulevard. Near the project site, the Orange Route stops include Santa Monica Boulevard & Westbourne Drive and Santa Monica Boulevard & La Cienega Boulevard. The Orange Route operates at 35- to 70-minute headways during the day.*

e. Future Year without Project Conditions. To evaluate the potential impact of the proposed project on future (year 2019) traffic conditions, it is first necessary to develop a forecast of future traffic volumes in the study area under conditions without the project. This provides a basis against which to measure the project's traffic impacts. The year 2019 was selected for analysis based on the anticipated completion and occupation date of the proposed project.

Areawide Traffic Growth. Existing traffic is expected to increase between year 2016 and year 2019 as a result of general areawide and regional growth and development. Based on historical trends and in consultation with City of West Hollywood staff, an ambient growth factor of 1% per year was used to adjust the existing year 2016 traffic volumes to reflect the effects of regional growth and development by the year 2019. The result was a total adjustment of 4% applied from 2016 to 2019.

Growth from Cumulative Projects. Cumulative base traffic forecasts include the effects of specific projects, called related projects, expected to be implemented in the vicinity of the study area prior to the buildout date of the proposed project. The list of related projects was

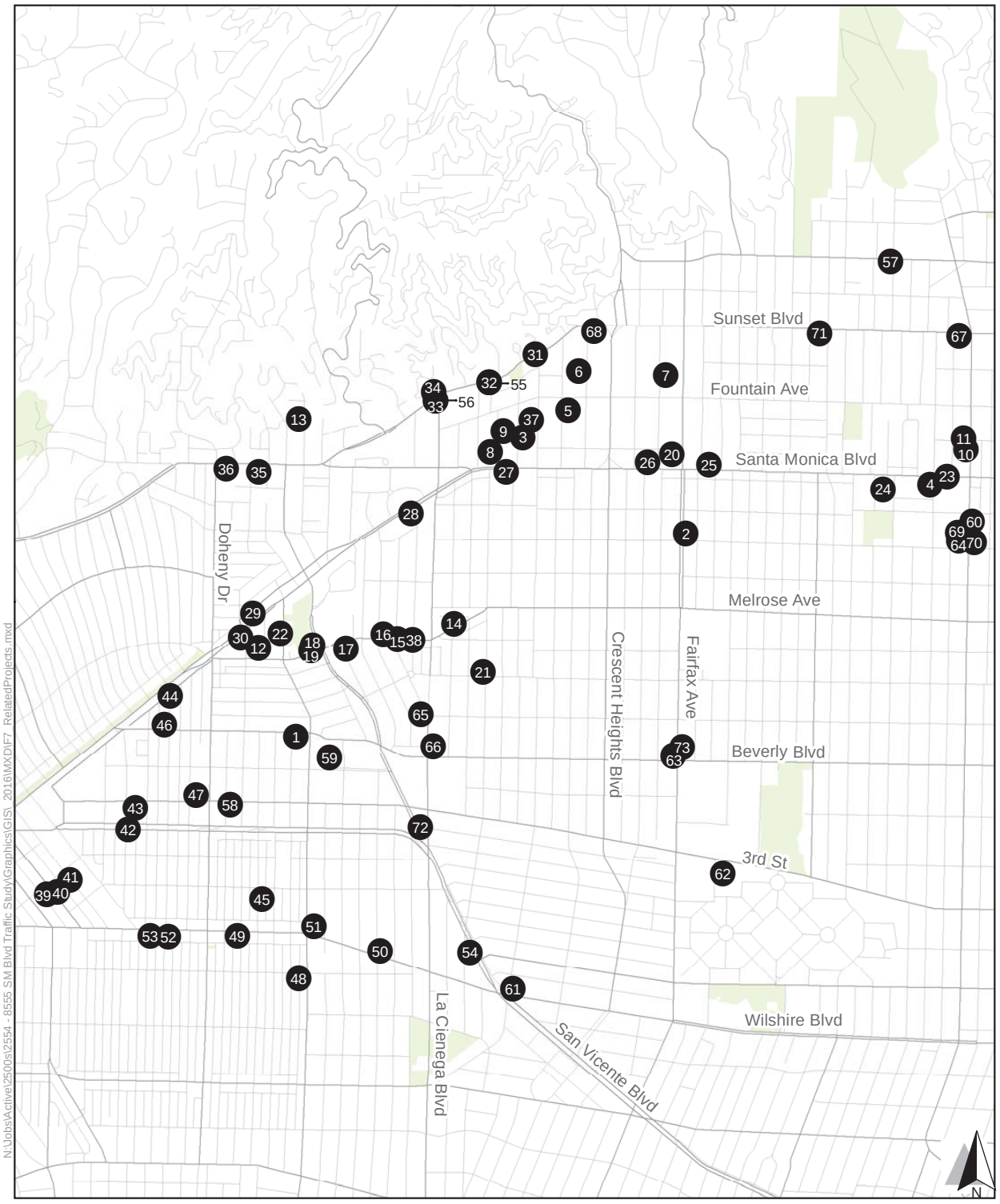
obtained from the City of West Hollywood, Los Angeles Department of Transportation (LADOT), the City of Beverly Hills, and other traffic studies conducted in the vicinity of the proposed project. A total of 73 related projects were identified, and details are provided in Appendix G. Figure 4.6-3 illustrates the locations of the related projects.

Trip generation estimates for the related projects were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation, 9th Edition* (Institute of Transportation Engineers, 2012). Appendix G shows that the 73 related projects would generate a combined approximate total of 95,953 daily trips. The estimated trip generation for these related projects total approximately 5,205 trips during the weekday AM peak hour, 7,695 trips during the weekday midday peak hour, and 7,663 trips during the weekday PM peak hour. Some of these projections are conservative in that they do not account for the existing uses to be removed or the use of alternative travel modes (transit, walk, etc.).

Using the trip generation estimates and trip distribution patterns dependent on the type and density of the proposed land use, the geographic distribution of population from which the employees and potential patrons of proposed commercial projects could be drawn, the geographic distribution of employment and activity centers to which residents of proposed residential projects could be attracted, and the location of the projects in relation to the surrounding street system, traffic expected to be generated by the identified related projects was assigned to the street network. These related project traffic volumes were then added to the existing traffic volumes after the adjustment for areawide growth to represent cumulative base conditions (i.e., future conditions without the proposed project).

Future Transportation Improvements. Transportation network improvements are planned along Santa Monica Boulevard at the intersections of Westmount Drive & Santa Monica Boulevard and West Knoll Drive (south leg) & Santa Monica Boulevard. These improvement projects have been approved and funded and construction work is anticipated to begin the summer of 2017 and be completed by the build-out year (2019). Therefore, these improvements are accounted for in the cumulative base traffic network. These improvements also include a modification to the median between these two intersections. Under existing conditions, both locations operate as unsignalized minor approach stop-controlled intersections. The planned improvements are described below:

- Westmount Drive & Santa Monica Boulevard - This unsignalized intersection T-intersection, allowing only right-turns in and out of Westmount Drive, will be signalized and the median will be modified to allow left-turns in and out of Westmount Drive. These modifications will result in the addition of an eastbound left-turn lane and the other lane configurations will remain the same.
- West Knoll Drive (south leg) & Santa Monica Boulevard – This location has off-set approaches for West Knoll Drive. The intersection of Santa Monica Boulevard and the south leg of West Knoll Drive is currently unsignalized and allows only right-turns in and out of West Knoll Drive. This intersection will be signalized and will allow for eastbound left-turns into the proposed project at 8555 Santa Monica Boulevard (a left-turn out of the project site driveway will not be allowed). These modifications will result in the addition of an eastbound left-turn lane, the project driveway, and the other lane configurations will remain the same.



Related Projects

Source: Fehr & Peers, 2016

Figure 4.6-3

- Santa Monica Boulevard Median between Westmount Drive and West Knoll Drive – The median along this segment of Santa Monica Boulevard provides an unsignalized eastbound left-turn into the Ramada Hotel driveway. Under future conditions, this median will be modified to provide an unsignalized westbound left-turn lane that will allow access into the parking structure immediately east of 24-Hour Fitness (a left-turn out of this parking structure driveway will not be allowed).

Peak Hour Intersection Level of Service. Based on the future 2019 without project forecasts, intersection level of service was calculated for each of the seventeen study intersections. Table 4.6-4 summarizes the V/C, delay and associated LOS results at each study intersection. Figure 4.6-4 illustrates the future 2016 base intersection volumes for the AM, midday, and PM peak hours.

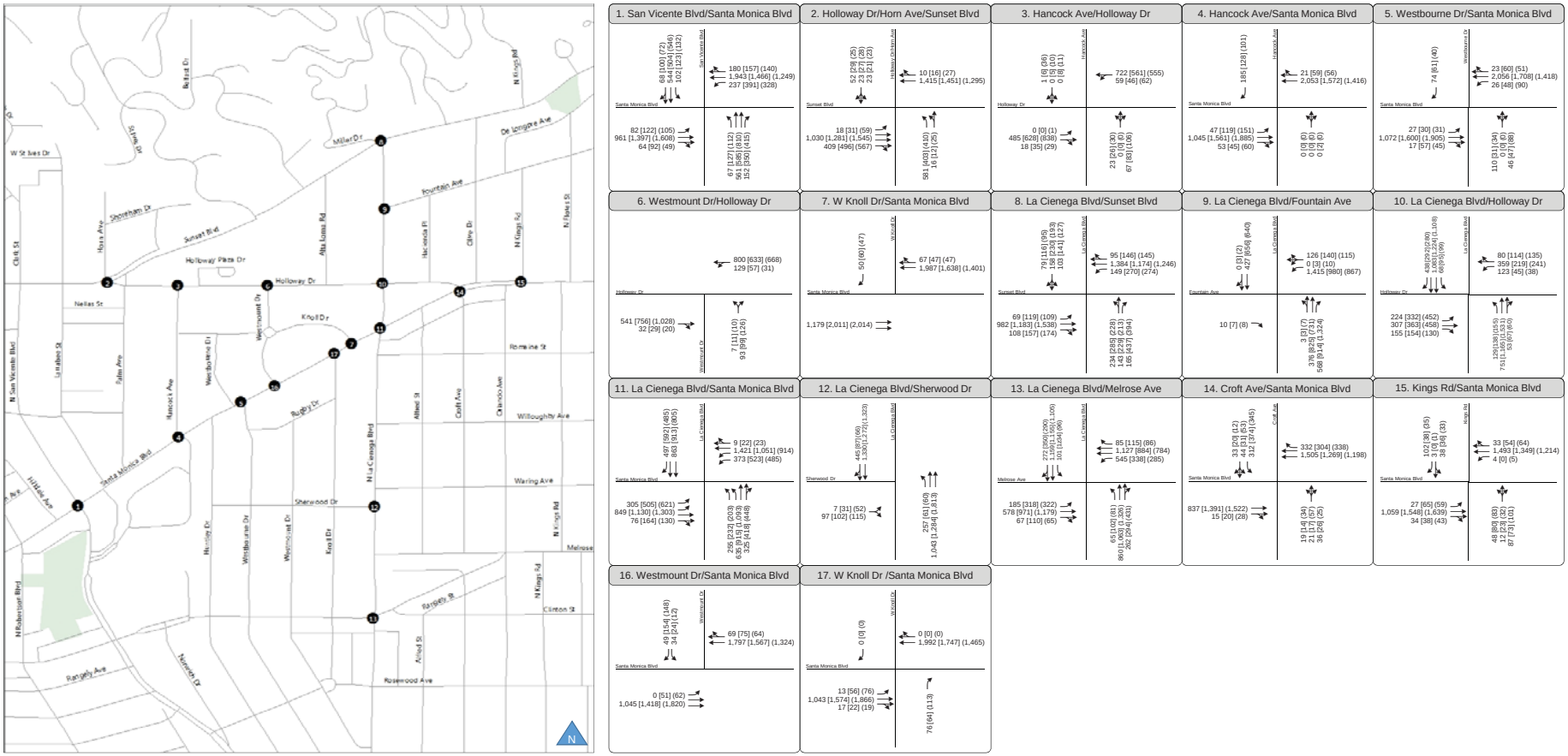
Table 4.6-4
Future (2019) Intersection Level of Service Analysis

Study Intersection	Jurisdiction	AM Peak		Midday Peak		PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
1. San Vicente Blvd & Santa Monica Blvd	WH	76	E	74	E	92	F
2. Horn Ave/Holloway Dr & Sunset Blvd	WH	42	D	27	C	28	C
3. Hancock Ave & Holloway Dr [a]	WH	27	C	37	D	163	F
4. Hancock Ave & Santa Monica Blvd [b]	WH	74	F	27	D	20	C
5. Westbourne Dr & Santa Monica Blvd	WH	28	D	29	C	58	E
6. Westmount Dr & Holloway Dr [b]	WH	21	C	28	C	49	D
7. West Knoll Dr & Santa Monica Blvd [b]	WH	12	B	10	A	10	A
8. La Cienega Blvd & Sunset Blvd	WH	156	F	243	F	281	F
9. La Cienega Blvd & Fountain Ave	WH	69	E	40	D	46	D
10. La Cienega Blvd & Holloway Dr	WH	44	D	56	E	119	F
11. La Cienega Blvd & Santa Monica Blvd	WH	113	F	159	F	165	F
12. La Cienega Blvd & Sherwood Dr [b]	LA	**	**	--	--	**	**
13. La Cienega Blvd & Melrose Ave	WH	129	F	141	F	171	F
14. Croft Ave & Santa Monica Blvd	WH	26	C	23	C	27	C
15. Kings Rd & Santa Monica Blvd	WH	9	A	11	B	13	B
16. Westmount Dr & Santa Monica Blvd	WH	12	B	12	B	10	A
17. West Knoll Dr & Santa Monica Blvd	WH	11	B	5	A	11	B

Source: Fehr & Peers, 2017. (Appendix G)
[a] Intersection is a two-way stop. Average vehicular delay reported for worst case approach
[b] The minor approach is stop controlled. Average vehicular delay reported for worst case approach
*** indicates oversaturated conditions. Delay could not be calculated*
WH= West Hollywood, LA = City of Los Angeles

Under future 2019 without project conditions, ten study intersections are projected to operate at LOS E or F (including the nine intersections that currently operation at LOS E or F) during one or more of the peak hours. These include:

1. *San Vicente Boulevard & Santa Monica Boulevard (AM, Midday, and PM peak hours)*
3. *Hancock Avenue & Holloway Drive (PM peak hour)*
4. *Hancock Avenue & Santa Monica Boulevard (AM peak hour)*



Source: Fehr & Peers, 2016

Cumulative (2019) Base Peak Hour Traffic Volumes

Figure 4.6-4

5. *Westbourne Drive & Santa Monica Boulevard (PM peak hour)*
8. *La Cienega Boulevard & Sunset Boulevard (AM, Midday, and PM peak hours)*
9. *La Cienega Boulevard & Fountain Avenue (AM peak hour)*
10. *La Cienega Boulevard & Holloway Drive (Midday and PM peak hours)*
11. *La Cienega Boulevard & Santa Monica Boulevard (AM, Midday, and PM peak hours)*
12. *La Cienega Boulevard & Sherwood Drive (AM and PM peak hours)*
13. *La Cienega Boulevard & Melrose Avenue (AM, Midday, and PM peak hours)*

Future Base Roadway Segment Analysis. The traffic volumes used to perform the future street segment analysis were developed from the existing street segment counts. The existing volumes were factored to year 2019 (from 2016) levels and the daily traffic expected to be generated by the cumulative projects was added to the cumulative base conditions. Project traffic volumes were added to the cumulative base volumes to develop the cumulative plus project volumes. Table 4.6-5 summarizes the projected future roadway segment traffic volumes on the study roadway segments.

Table 4.6-5
Future (2019) Base Daily Traffic Volumes on Study Roadway Segments

Street Segments	Existing Daily Count (2016)	Cumulative Base Daily Traffic (2019)
1. Hancock Ave between Holloway Dr and West Knoll Dr	2,512	2,624
2. Hancock Ave between West Knoll Dr and Santa Monica Blvd	2,962	3,082
3. West Knoll Dr between Hancock Ave and Westbourne Dr	1,258	1,319
4. Westbourne Dr between West Knoll Dr and Santa Monica Blvd	1,484	1,562
5. Westbourne Dr between Rugby Dr and Sherwood Dr	1,980	2,060
6. Sherwood Dr between Westbourne Dr and Westmount Dr	2,925	3,044
7. Westmount Dr between Holloway Dr and West Knoll Dr	2,480	2,629
8. West Knoll Dr between Westmount Dr and Santa Monica Blvd	1,306	1,367

Source: Fehr & Peers, 2015. (Appendix G).

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds.

Analysis Methodology**.** Weekday AM, midday, PM peak hour traffic operations were evaluated at the seventeen study intersections for each of the following traffic scenarios:

- *Existing (Year 2016) Conditions*
- *Existing (2016) plus Project Conditions*
- *Cumulative Base (2019) Conditions*
- *Cumulative (2019) plus Project Conditions*

A weekday daily roadway segment analysis was also conducted for the eight study area segments.

Level-of-Service Methodology. For analysis of LOS at signalized intersections, the City of West Hollywood utilizes the "Operational Analysis" method from the Highway Capacity Manual (HCM). The HCM operational method determines the average stopped delay

experienced per vehicle and the volume-to-capacity (V/C) ratio at intersections based on the amount of traffic traveling through the intersection, the lane geometries, and other factors affecting capacity such as on-street parking and pedestrian volumes at crosswalks. These characteristics are used to evaluate the operation of each signalized intersection. For the five minor-approach stop-controlled intersections analyzed in this study, the worst approach delay has been reported based on the HCM stop-controlled methodology.

The intersection in the City of Los Angeles was analyzed per the requirements in the LADOT's *Traffic Study Policies and Procedures* (August 2014). For the purposes of this analysis, the City of Los Angeles stop-controlled intersections were also analyzed using the HCM-Unsignalized methodology as a reference. The stop-controlled intersection was also analyzed with signal warrants; therefore, a LOS is provided for informational purposes. This analysis standard was applied to the stop-controlled intersection in the City of Los Angeles under AM and PM peak hour conditions.

Project Traffic Projections. The traffic projections for the proposed project were developed using the following three steps: 1) estimating the trip generation of the project; 2) determining trip distribution; and 3) assigning the project traffic to the roadway system.

Project Trip Generation. The trip generation rates estimates for the project were prepared for the proposed project using trip generation rates from the Institute of Transportation Engineers, *Trip Generation, 9th Edition* (2012). No trip credits were applied other than those for the existing land uses. See Table 4.6-6 for trip generation rates, and Table 4.6-7 for trip generation estimates.

Table 4.6-6
Trip Generation Rates

				AM Peak Hour			MD Peak Hour [a]			PM Peak Hour		
Land Use	**ITE#**	**Rate**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Apartment	220	per du	6.65	20%	80%	0.51	29%	71%	0.55	65%	35%	0.62
Single-Family Detached House	210	per du	9.52	25%	75%	0.75	26%	74%	0.77	63%	37%	1.00
Condominium	230	per du	5.81	17%	83%	0.44	19%	81%	0.44	67%	33%	0.52
Health/ Fitness Club	492	per ksf	32.93	50%	50%	1.41	47%	53%	1.43	57%	43%	3.53
Office [b]	710	per ksf	11.03	88%	12%	1.56	88%	12%	1.56	17%	83%	1.49
Specialty Retail [c]	826	per ksf	44.32	62%	38%	0.70	48%	52%	6.84	44%	56%	2.71
Hair Salon [d]	918	per ksf	16.47	100%	0%	1.21	100%	0%	1.21	17%	83%	1.45
High-Turnover Restaurant	932	per ksf	127.15	55%	45%	10.81	53%	47%	13.33	60%	40%	9.85

Source: Fehr & Peers, 2017 (Appendix G)
Du = dwelling unit, ksf = 1,000 square feet
[a] Weekday midday peak hour trip rate was assumed to be the AM peak hour of generator
[b] The AM peak hour generator is equivalent to the AM peak hour of adjacent street traffic for ITE 710
[c] AM rate was derived from the proportional relationship of PM rates between ITE 814 and Shopping Center (ITE 820) and applied to ITE 820 AM rate
[d] Condominium trip generation is used for live/work space; there are 12 units total in the proposed project

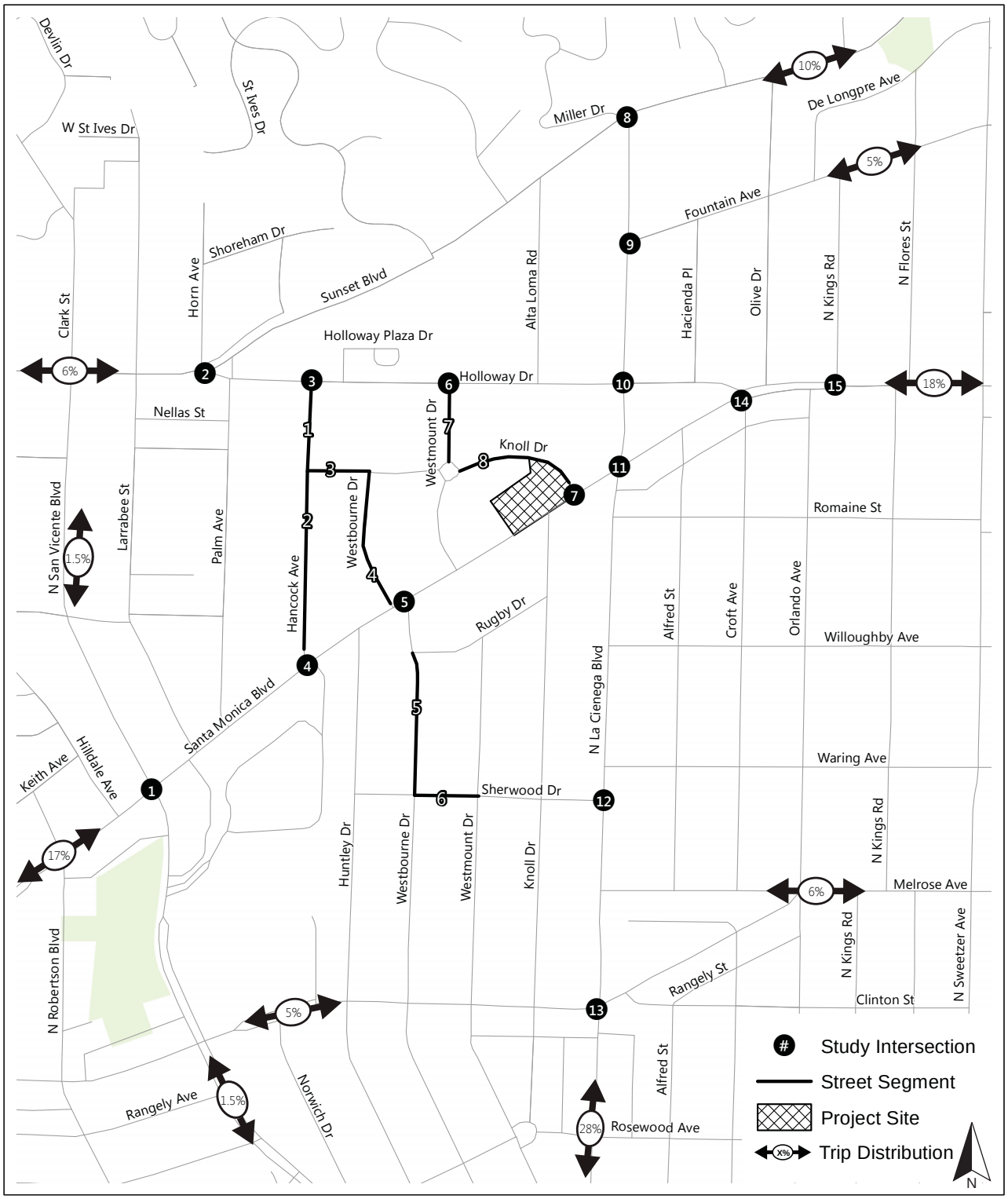
Table 4.6-7
Project Trip Generation

Land Use	Size	Weekday Daily	AM Peak Hour			Midday Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
Proposed Project											
Apartments	97 du	645	10	39	49	15	38	53	39	21	60
Live/Work*	12 units	70	1	4	5	1	4	5	4	2	6
Office	6,079 sf	67	8	1	9	8	1	9	2	7	9
Specialty Retail	15,678 sf	695	7	4	11	51	56	107	18	24	42
High-Turnover Restaurant	2,820 sf	359	17	13	30	20	18	38	17	11	28
Hair Salon	3,718 sf	61	4	0	4	4	0	4	1	4	5
Subtotal		1,897	47	61	108	99	117	216	81	69	150
Existing Uses (to be removed)											
Single-Family Detached House	3 du	29	0	2	2	1	1	2	2	1	3
Health/Fitness Club	4,058 sf	134	3	3	6	3	3	6	8	6	14
Office	4,211 sf	46	6	1	7	6	1	7	1	5	6
Specialty Retail	10,426 sf	462	4	3	7	34	37	71	12	16	28
Hair Salon	6,218 sf	102	8	0	8	8	0	8	2	7	9
High-Turnover Restaurant	2,475 sf	315	15	12	27	17	16	33	14	10	24
Subtotal		1,088	36	21	57	69	58	127	39	45	84
Net New Trips		**809**	**11**	**40**	**51**	**30**	**59**	**89**	**42**	**24**	**66**

Source: Fehr & Peers, 2017 (Appendix G)
sf = square feet, du = dwelling unit
**Condominium trip generation is used for live/work space.*

Project Trip Distribution. Trip distribution is the process of assigning the amount of traffic to and from a project site. The geographic distribution of trips generated by the proposed project is dependent on the locations of employment and commercial centers to which residents of the residential component of the project would be drawn, the locations of population centers from which employees of the project commercial uses would be drawn, characteristics of the street system serving the site, and the level of accessibility of the routes to and from the proposed project site. The general distribution pattern for this study was developed consistent with previous studies. The trip distribution is illustrated in Figure 4.6-5. The following is the regional trip distribution applied in the analysis of the project:

- 17% to/from the north
- 28% to/from the south
- 24% to/from the east
- 31% to/from the west



Trip Distribution

Figure 4.6-5

Source: Fehr & Peers, 2016

Project Trip Assignment. The final product of the trip assignment process is a full accounting of project trips, by direction and turning movement at the study intersections. The project trips were assigned based on the trip generation and distribution assumptions discussed above.

Significance Criteria**.** As indicated above, the analysis includes potential impacts to intersections, street segments, and congestion management plan facilities. The significance criteria for each of these components is outlined below.

City of West Hollywood Intersection Criteria. The intersection threshold criteria used to determine if a project has an adverse significant traffic impact at signalized or unsignalized intersections in the City of West Hollywood are as follows:

- *Signalized intersections formed by two commercial corridors are significantly impacted if:*
  - *The addition of project traffic results in a LOS D and in an increase in delay of 12 seconds or greater, or*
  - *The addition of project traffic results in a LOS E or F and an increase in delay of eight seconds or greater.*
- *All other signalized and/or four-way stop intersections are significantly impacted if:*
  - *The addition of project traffic results in a LOS D and in an increase in delay of eight seconds or greater, or*
  - *The addition of project traffic results in a LOS E or F and an increase in delay of five seconds or greater.*
- *Unsignalized one-way or two-way stop intersections are significantly impacted if:*
  - *The addition of project traffic results in a LOS D, E or F and in an increase in delay of five seconds or greater.*

City of Los Angeles Intersection Criteria. Per LADOT policy (2014), stop-controlled intersections in Los Angeles are solely analyzed to determine the need for installation of a traffic signal or other traffic control device. The policy is as follows:

> *"In reviewing unsignalized intersections, only intersections that are adjacent to the project or that are expected to be integral to the project's site access and circulation plan should be identified as study intersections. For these intersections, the overall intersection delay should be measured pursuant to procedures accepted by LADOT during the scoping process. If, based on the estimated delay, the resultant LOS is E or F in the "future with project" scenario, then the intersection should be evaluated for the potential installation of a new traffic signal. The study shall include a traffic signal warrant analysis prepared pursuant to Section 353 of LADOT's Manual of Policies and Procedures and submitted to DOT for review and approval. Unsignalized intersections shall only be evaluated to determine the need for the installation of a traffic signal or other traffic control device, but will not be included in the impact analysis."*

These criteria were applied to the intersections located in the respective jurisdictions.

Residential Street Criteria. Street segments were analyzed using the City of West Hollywood's significant impact criteria. These are:

- *Average Daily Trips (ADT) is less than 2,000 and the project would increase the ADT by 12% or greater*
- *ADT is 2,001 to 3,000 and the project would increase the ADT by 10% or greater*
- *ADT is 3,001 to 6,750 and the project would increase the ADT by 8% or greater*
- *ADT is greater than 6,750 and the project would increase the ADT by 6.25% or greater*

Congestion Management Plan Criteria. The Congestion Management Program (CMP) was created statewide because of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A specific system of arterial roadways plus all freeways comprises the CMP system. Per the CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is conducted where:

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

The CMP traffic impact analysis guidelines establish that a significant project impact occurs when the following threshold is exceeded:

- *The proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C ≥ 0.02), causing LOS F (V/C > 1.00)*
- *If the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C ≥ 0.02).*

Construction Impact to Roadway Facilities. An impact to roadway facilities would be significant if construction of a project would create a temporary, but prolonged impact due to lane closure, need for temporary signals, emergency vehicle access, traffic hazards to bicycles and/or pedestrians, damage to the roadbed, truck traffic on roadways not designated as truck routes, other similar impediments to circulation.

Bicycle and Pedestrian Facilities Impacts. An impact to bicycle and pedestrian facilities would be significant if:

- *The project would disrupt existing facilities*
- *The project would interfere with planned facilities*
- *The project would conflict or create inconsistencies with adopted guidelines, plans, policies, or standards*

b. Project and Cumulative Impacts and Mitigation Measures. The analysis herein includes both project-related and cumulative impacts. Specifically, the analysis of traffic impacts under T-3 and T-5 include cumulative development in the area.

Impact T-1 Project construction activities and the associated truck trips and worker trips could temporarily interrupt the local roadway system. However, with development of the City-required Construction Mitigation Plan, impacts would be Class III, *less than significant*.

Construction activities would require the use of haul equipment and delivery trucks during demolition and construction. Additionally, construction worker traffic would temporarily add trips to the roadway infrastructure and require parking. Additional trips generated by the truck deliveries and construction employees could affect traffic flow in the study area. Construction activity could impact traffic along Santa Monica Boulevard and West Knoll Drive, pedestrian traffic flow near the project site could be altered as a result of construction, and the availability of parking, especially on-street parking, could be impacted if on-site parking for construction employees were not provided.

Delivery and export haul routes would be developed to use the freeway system, exiting to major arterials, and ending at the project site by traveling on Santa Monica Boulevard. The proposed project would require approximately 3,113 round-trip export trips over approximately four months in order to export an estimated 49,800 cubic yards of earth material (assuming 16 cubic yards per truck). Locally, the following haul and export routes are available for construction truck trips:

- *East on Santa Monica Boulevard to U.S. 101*
- *South on La Cienega Boulevard to I-10*
- *West on Santa Monica Boulevard to I-405*

Although no street closures are anticipated to occur during construction of the project, it is anticipated that construction of the project may temporarily displace on-street parking located along Santa Monica Boulevard and West Knoll Drive near the project site. Any lane closure requests or requests to displace on-street parking would be submitted to the City for prior approval in accordance with City policies and procedures. The applicant would be responsible for all costs associated with signage and lane closure equipment and for providing flagging as necessary or requested by the City, to ensure the safe operation and movement of traffic during periods of lane closures or on-street parking displacement. The applicant would be required to provide temporary sidewalks or alternative pedestrian passage for pedestrians should existing sidewalks be closed during construction.

Project construction would be required to comply with the City of West Hollywood's development permit conditions, which restrict grading and other construction activities to the hours of 8: 00 AM to 7:00 PM, Monday through Friday. On Saturday, only interior construction activities are permitted within these same hours. The use of heavy equipment is restricted to between the hours of 8:00 AM and 7:00 PM, Monday through Friday. Trucks and other equipment and vehicles cannot arrive before 8:00 AM and employees for the project cannot arrive prior to 7:45 AM on any working day. In addition, all construction equipment and materials must be stored on site.

In addition, the City of West Hollywood's plan check process includes the requirement for implementing a "Construction Mitigation Plan." Portions of this plan that relate to traffic include:

- *Describe how much of the public street, alleyway, or sidewalk is proposed to be used in conjunction with construction.*
- *Describe anticipated construction-related truck routes, number of truck trips, hours of hauling and parking locations.*
- *Provide a construction-period parking plan which shall minimize use of public streets for parking.*
- *Describe where workers will park, efforts to carpool to the job site.*

The developer would also be required to ensure that employees can either park on-site or at another off-site location. Off-site parking in the adjacent residential neighborhoods is prohibited.

As discussed above, several mandatory City policies and procedures, and the required Construction Mitigation Plan address impacts to the local roadway system during construction activities. These City requirements would reduce impacts related to traffic and pedestrian flow and temporary parking impacts during construction. Therefore, impacts would be less than significant.

Mitigation Measures. Mitigation is not required because impacts would be less than significant.

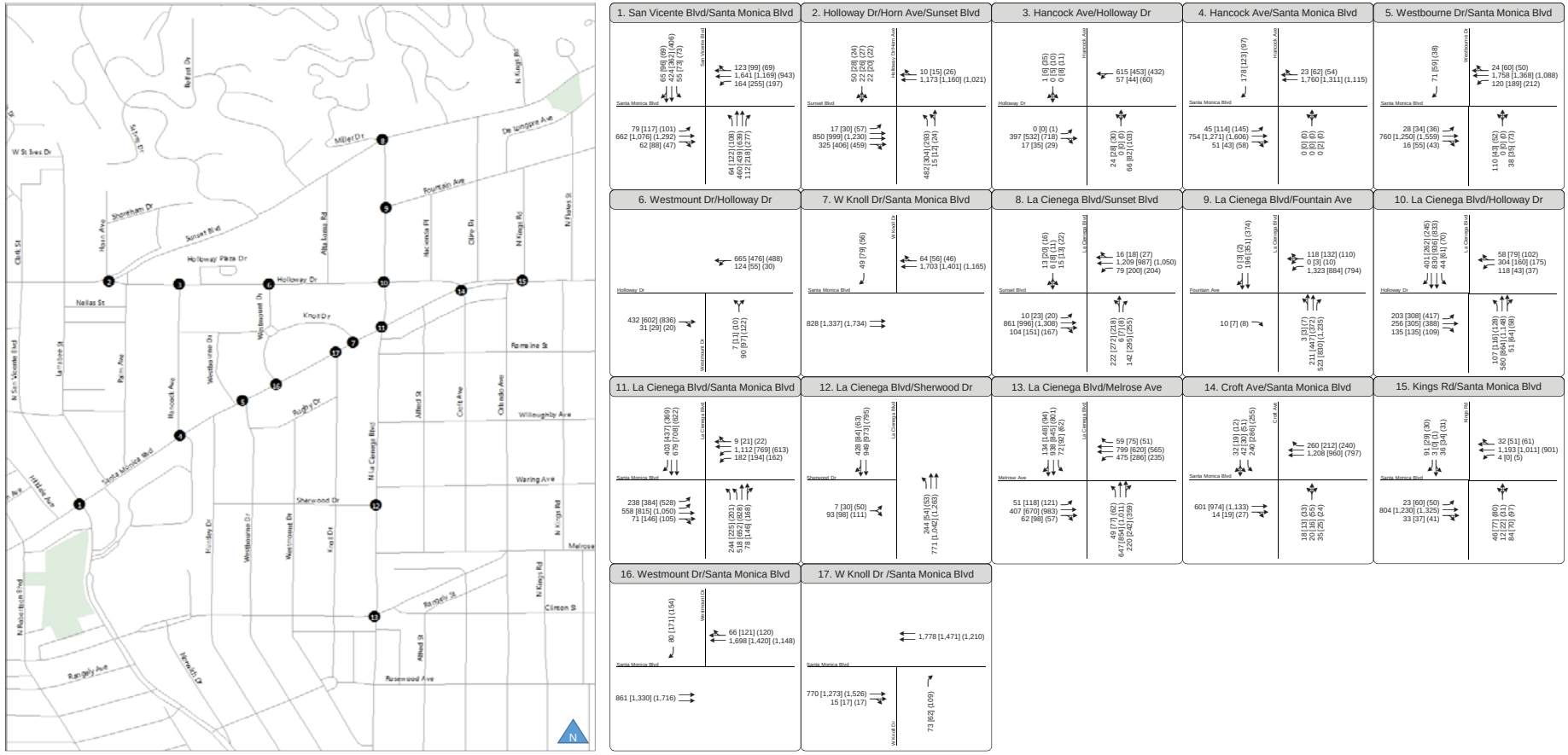
Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact T-2 The proposed project would generate an estimated 809 net new weekday average daily trips. This would incrementally increase traffic levels at study intersections under existing plus project conditions, but would not create an exceedance of significance thresholds. Therefore, impacts would be Class III, *less than significant*.

The proposed project would generate an estimated 809 net new weekday daily trips, including 51 AM peak hour trips, 89 midday peak hour trips, and 66 PM peak hour trips (see Table 4.6-7). The existing (2016) traffic conditions with the addition of project-related traffic are shown in Table 4.6-8. Existing plus project peak period traffic volumes are illustrated in Figure 4.6-6 (refer to Appendix G for worksheets showing level of service calculations).

As shown in Table 4.6-8, nine of the seventeen study intersections within the City of West Hollywood are projected to operate at a poor LOS E or F during one or more peak periods with the addition of project traffic:

3. Hancock Avenue & Holloway Drive (PM peak hour)
4. Hancock Avenue & Santa Monica Boulevard (AM peak hour)
5. Westbourne Drive & Santa Monica Boulevard (PM peak hour)



Source: Fehr & Peers, 2016

Existing Plus Project Peak Hour Traffic Volumes

Figure 4.6-6

Table 4.6-8
Existing Intersection Level Of Service Analysis

Intersection	Peak Hour	Existing (Year 2016)		With Project (Year 2016)			
		V/C or Delay	LOS	Delay	LOS	Change in Delay	Significant Impact?
1. San Vicente Blvd & Santa Monica Blvd	AM	33	C	34	C	1	No
	Midday	28	C	28	C	0	No
	PM	35	C	35	C	0	No
2. Horn Ave/Holloway Dr & Sunset Blvd	AM	31	C	31	C	0	No
	Midday	22	C	22	C	0	No
	PM	22	C	22	C	0	No
3. Hancock Ave & Holloway Dr[a]	AM	19	C	19	C	0	No
	Midday	26	D	26	D	0	No
	PM	48	E	50	E	2	No
4. Hancock Ave & Santa Monica Blvd[b]	AM	39	E	40	E	1	No
	Midday	20	C	20	C	0	No
	PM	16	C	16	C	0	No
5. Westbourne Dr & Santa Monica Blvd	AM	18	B	18	B	0	No
	Midday	46	D	47	D	1	No
	PM	97	F	97	F	0	No
6. Westmount Dr & Holloway Dr[b]	AM	15	B	15	B	0	No
	Midday	18	C	18	C	0	No
	PM	25	C	25	C	0	No
7. West Knoll Dr & Santa Monica Blvd[b]	AM	10	A	10	A	0	No
	Midday	10	A	11	B	1	No
	PM	10	A	10	A	0	No
8. La Cienega Blvd & Sunset Blvd	AM	62	E	62	E	0	No
	Midday	97	F	98	F	1	No
	PM	166	F	168	F	2	No
9. La Cienega Blvd & Fountain Ave	AM	57	E	57	E	0	No
	Midday	32	C	32	C	0	No
	PM	20	B	20	B	0	No
10. La Cienega Blvd & Holloway Dr	AM	36	D	37	D	1	No
	Midday	36	D	37	D	1	No
	PM	64	E	65	E	1	No
11. La Cienega Blvd & Santa Monica Blvd	AM	66	E	67	E	1	No
	Midday	73	E	77	E	4	No
	PM	78	E	80	E	2	No
12. La Cienega Blvd & Sherwood Dr[b]	AM	50	E	52	F	2	No
	PM	34	D	35	D	1	No
13. La Cienega Blvd & Melrose Ave	AM	53	D	53	D	0	No
	Midday	38	D	38	D	0	No
	PM	67	E	68	E	1	No
14. Croft Ave & Santa Monica Blvd	AM	19	B	19	B	0	No
	Midday	16	B	16	B	0	No
	PM	18	B	18	B	0	No
15. Kings Rd & Santa Monica Blvd	AM	10	A	10	A	0	No
	Midday	12	B	12	B	0	No
	PM	13	B	13	B	0	No
16. Westmount Dr & Santa Monica Blvd	AM	14	B	15	B	1	No
	Midday	17	B	17	B	0	No
	PM	14	B	14	B	0	No
17. West Knoll Dr & Santa Monica Blvd	AM	9	A	10	A	1	No
	Midday	11	B	11	B	0	No
	PM	12	B	12	B	0	No

Source: Fehr & Peers, 2017. (Appendix G)
[a] *Intersection is a two-way stop. Average vehicular delay reported for worst case approach*
[b] *The minor approach is stop controlled. Average vehicular delay reported for worst case approach*

8. La Cienega Boulevard & Sunset Boulevard (AM, MD, and PM peak hours)
9. La Cienega Boulevard & Fountain Avenue (AM peak hour)
10. La Cienega Boulevard & Holloway Drive (PM peak hour)
11. La Cienega Boulevard & Santa Monica Boulevard (AM, MD, and PM peak hours)
12. La Cienega Boulevard & Sherwood Drive (AM peak hour)
13. La Cienega Boulevard & Melrose Avenue (PM peak hour)

However, as shown in Table 4.6-8, the proposed increase in traffic associated with the proposed project would not exceed City of West Hollywood significance thresholds for any of the study intersections. Therefore, impacts would be less than significant.

One study area intersection, La Cienega Boulevard & Sherwood Drive (intersection #12), is located within the City of Los Angeles and analyzed per LADOT thresholds. As stated in *Methodology and Significance Thresholds,* per LADOT policy, if the project results in a LOS E or F at a stop-controlled intersection, then the intersection should be evaluated for the potential installation of a new traffic signal. This intersection operates at a LOS F during the AM peak hour and LOS D during the PM peak hour in existing plus project conditions. According to the traffic signal analysis included in the project traffic study (see Appendix G), the intersection satisfies the "peak hour," "four-hour," and "interruption of continuous traffic" signal warrants. However, per LADOT thresholds, this does not constitute a significant traffic impact and the proposed project would not be required to fund installation of a signal at this intersection. This analysis is for reference purposes only and impacts to this intersection would be considered less than significant.

Mitigation Measures. Mitigation is not required because impacts would be less than significant.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact T-3 **The proposed project would add new traffic to study area intersections under cumulative plus project conditions. Project-generated trips would result in a significant impact at the Hancock Avenue and Holloway Drive intersection during the PM peak hour based on City of West Hollywood thresholds. Cumulative impacts would be Class I, *significant and unavoidable*.**

Cumulative plus project peak period traffic volumes were analyzed to determine the projected future (year 2019) operating conditions with the addition of the proposed project traffic. Cumulative plus project peak period traffic volumes are illustrated in Figure 4.6-7. The results of the cumulative plus project analysis are presented in Table 4.6-9.

Source: Fehr & Peers, 2016

Cumulative (2019) Plus Project Peak Hour Traffic Volumes

Figure 4.6-7

Table 4.6-9
Future (2019) Intersection Level Of Service Analysis

Intersection	Peak Hour	Cumulative Base (Year 2019)		With Project (Year 2019)			
		V/C or Delay	LOS	V/C or Delay	LOS	Change in Delay	Significant Impact?
1. San Vicente Blvd & Santa Monica Blvd	AM	76	E	77	E	1	No
	Midday	74	E	74	E	0	No
	PM	92	F	93	F	1	No
2. Horn Ave/Holloway Dr & Sunset Blvd	AM	42	D	42	D	0	No
	Midday	27	C	27	C	0	No
	PM	28	C	28	C	0	No
3. Hancock Ave & Holloway Dr[a]	AM	27	C	29	C	2	No
	Midday	37	D	38	D	1	No
	PM	163	F	173	F	10	**YES**
4. Hancock Ave & Santa Monica Blvd[b]	AM	74	F	76	F	2	No
	Midday	27	D	28	D	1	No
	PM	20	C	20	C	0	No
5. Westbourne Dr & Santa Monica Blvd	AM	38	D	42	D	4	No
	Midday	29	C	30	C	1	No
	PM	58	E	89	E	1	No
6. Westmount Dr & Holloway Dr[b]	AM	21	C	21	C	0	No
	Midday	28	C	28	C	0	No
	PM	49	D	49	D	0	No
7. West Knoll Dr & Santa Monica Blvd[b]	AM	12	B	12	B	0	No
	Midday	10	A	11	B	1	No
	PM	10	A	10	A	0	No
8. La Cienega Blvd & Sunset Blvd	AM	156	F	156	F	0	No
	Midday	243	F	244	F	1	No
	PM	281	F	283	F	2	No
9. La Cienega Blvd & Fountain Ave	AM	69	E	69	E	0	No
	Midday	40	D	40	D	0	No
	PM	46	D	46	D	0	No
10. La Cienega Blvd & Holloway Dr	AM	44	D	45	D	1	No
	Midday	56	E	57	E	1	No
	PM	119	F	120	F	1	No
11. La Cienega Blvd & Santa Monica Blvd	AM	113	F	114	F	1	No
	Midday	159	F	166	F	7	No
	PM	165	F	167	F	2	No
12. La Cienega Blvd & Sherwood Dr[b, c]	AM	*	*	*	*	[c]	
	PM	*	*	*	*		
13. La Cienega Blvd & Melrose Ave	AM	129	F	130	F	1	No
	Midday	141	F	144	F	3	No
	PM	171	F	173	F	2	No

Table 4.6-9
Future (2019) Intersection Level Of Service Analysis

Intersection	Peak Hour	Cumulative Base (Year 2019)		With Project (Year 2019)			
		V/C or Delay	LOS	V/C or Delay	LOS	Change in Delay	Significant Impact?
14. Croft Ave & Santa Monica Blvd	AM	26	C	26	C	0	No
	Midday	23	C	23	C	0	No
	PM	27	C	28	C	0	No
15. Kings Rd & Santa Monica Blvd	AM	9	A	9	A	0	No
	Midday	11	B	11	B	0	No
	PM	13	B	13	B	0	No
16. Westmount Dr & Santa Monica Blvd	AM	12	B	12	B	0	No
	Midday	12	B	12	B	0	No
	PM	10	A	10	A	0	No
17. West Knoll Dr & Santa Monica Blvd	AM	11	B	11	B	0	No
	Midday	5	A	6	A	1	No
	PM	11	B	11	B	0	No

Source: Fehr & Peers, 2017. (Appendix G)
** Indicates oversaturated conditions. Delay could not be calculated.*
[a] Intersection is a two-way stop. Average vehicular delay reported for worst case approach
[b] The minor approach is stop controlled. Average vehicular delay reported for worst case approach
[c] This intersection is located in the City of Los Angeles; therefore, the City of Los Angeles thresholds were applied. A signal warrant analysis was conducted per LADOT's "Traffic Study Policies and Procedures" (see Appendix G).The intersection was analyzed using the HCM-Unsignalized methodology to determine current operating conditions for reference purposes only.

As indicated in Table 4.6-9, ten of the seventeen analyzed intersections are projected to operate at unacceptable poor LOS E or F during one or more peak periods with the addition of project traffic. These include:

1. San Vicente Boulevard & Santa Monica Boulevard (AM, MD, and PM peak hours)
3. Hancock Avenue & Holloway Drive (PM peak hour)
4. Hancock Avenue & Santa Monica Boulevard (AM peak hour)
5. Westbourne Drive & Santa Monica Boulevard (PM peak hour)
8. La Cienega Boulevard & Sunset Boulevard (AM, MD, and PM peak hours)
9. La Cienega Boulevard & Fountain Avenue (AM peak hour)
10. La Cienega Boulevard & Holloway Drive (MD and PM peak hours)
11. La Cienega Boulevard & Santa Monica Boulevard (AM, MD, and PM peak hours)
12. La Cienega Boulevard & Sherwood Drive (AM and PM peak hours)
13. La Cienega Boulevard & Melrose Avenue (AM, MD, and PM peak hours)

Using the City of West Hollywood criteria for determination of significant impacts, under cumulative plus project conditions, the proposed project would result in a significant impact at the following intersection:

3. Hancock Avenue & Holloway Drive (PM peak hour)

One study area intersection, La Cienega Boulevard & Sherwood Drive (intersection #12), is located within the City of Los Angeles and analyzed per LADOT thresholds. As stated in *Methodology and Significance Thresholds,* per LADOT policy, if the project results in a LOS E or F at a stop-controlled intersection, then the intersection should be evaluated for the potential installation of a new traffic signal. The intersection of La Cienega Boulevard and Sherwood Drive was identified as meeting signal warrants under the cumulative base traffic conditions and would continue to do so under the cumulative plus project conditions. According to the traffic signal analysis included in the project traffic study (see Appendix G), the intersection satisfies the "peak hour," "four-hour," and "interruption of continuous traffic" signal warrants. However, per LADOT thresholds, this does not constitute a significant traffic impact and the proposed project would not be required to fund installation of a traffic signal at this intersection. This analysis is for reference purposes only and impacts to this intersection would be considered less than significant.

Mitigation Measures. Mitigation measures were identified in the project traffic study for intersections potentially impacted by the addition of project traffic from the proposed project. Opportunities for physical mitigation measures such as restriping of intersection approaches to add turn lanes and improving traffic control devices were investigated. The emphasis was to identify physical and/or operational improvements that could be easily implemented.

As indicated in the intersection impact analysis, one intersection, Hancock Avenue & Holloway Drive, is identified as significantly impacted. Based on City of West Hollywood significance criteria, in order for an impact to be considered less than significant at this location, the Project could increase the delay by up to five seconds. The cumulative plus project condition for 2019 during the PM peak hour results in an increase of 10 seconds of delay at this location. Fehr & Peers considered several mitigation measures such as modifications to intersection traffic control or restriping of the approaches to provide turn-lanes. These potential mitigation measures were either ineffective in reducing the impact to a level below significance or were determined to be infeasible based on the constrained right-of-way that precludes widening or the addition of vehicular capacity at this location. Due to the constrained right-of-way, there is not enough area to install additional turning lanes without relocating buildings and sidewalks, which would have implications for private property, may be inconsistent with City street design standards, and may cause additional environmental impacts. Therefore, no feasible mitigation measures were identified.

Significance after Mitigation. No feasible mitigation measures have been identified for the intersection of Hancock Avenue and Holloway Drive. As a result, the impacts on this segment would be significant and unavoidable.

Impact T-4 The proposed project would generate traffic that would use nearby residential streets. However, the amount of traffic added to these streets would not exceed established thresholds in existing plus project conditions. This is a Class III, *less than significant*, impact.

The traffic volumes used to perform the existing street segment analysis were developed from the existing street segment counts (collected in January 2016) in a manner consistent with the

development of the volumes used for the intersection analyses. Project traffic volumes were added to the existing volumes to develop the existing plus project volumes. The segment volumes for the existing with project scenario were calculated using the trip distribution shown in Figure 4.6-5. Table 4.6-10 compares daily vehicle trips on study roadway segments in existing conditions without the project to daily vehicle trips with project-generated traffic. As indicated, the increase in traffic on the study segments would range from 0% to 9.1%. According to the segment impact criteria, none of the segments would be significantly impacted by the proposed project. Impacts would be less than significant.

Table 4.6-10
Existing (2016) Plus Project Weekday Roadway Segment Impact Analysis

Street Segments	Existing Daily Traffic Volumes	Proposed Project			
		Project Only Daily Traffic	Existing plus Project	% Increase	Significant Impact?
1. Hancock Ave between Holloway Dr and West Knoll Dr	2,512	68	2,580	2.7%	NO
2. Hancock Ave between West Knoll Dr and Santa Monica Blvd	2,962	34	2,996	1.2%	NO
3. West Knoll Dr between Hancock Ave and Westbourne Dr	1,258	34	1,292	2.7%	NO
4. Westbourne Dr between West Knoll Dr and Santa Monica Boulevard	1,484	111	1,595	7.5%	NO
5. Westbourne Dr between Rugby Dr and Sherwood Dr	1,980	107	2,087	5.4%	NO
6. Sherwood Dr between Westbourne Dr and Westmount Dr	2,925	0	2,925	0%	NO
7. Westmount Dr between Holloway Dr and West Knoll Dr	2,480	26	2,506	1.0%	NO
8. West Knoll Dr between Westmount Dr and Santa Monica Blvd	1,306	119	1,425	9.1%	NO

Source: Fehr & Peers, 2017. (Appendix G).
Note: numbers may not add up due to rounding.

Mitigation Measures. Mitigation is not required because impacts would be less than significant.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact T-5 The proposed project would generate traffic that would use nearby residential streets. However, the amount of traffic added to these streets would not exceed established thresholds in cumulative future plus project conditions. Cumulative impacts would be Class III, *less than significant*, impact.

Table 4.6-11 compares forecast future daily vehicle trips on study roadway segments without the project to daily vehicle trips with project-generated traffic. As indicated, the increase in traffic on the segments would range from 0% to 8.7%. According to the segment impact criteria, none of the study area street segments would be significantly impacted by the proposed project in future year conditions. Impacts would be less than significant and would not be cumulatively considerable.

Mitigation Measures. Mitigation is not required because impacts would be less than significant.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Table 4.6-11
Future Year (2019) Plus Project Weekday Roadway Segment Impact Analysis

Street Segments	Existing Daily Count (2016)	Cumulative Base Daily Traffic (2019)	Proposed Project			
			Project Only Daily Traffic	Cumulative plus Project (2019)	% Increase	Significant Impact?
1. Hancock Avenue between Holloway Drive and West Knoll Drive	2,512	2,624	68	2,692	2.6%	NO
2. Hancock Avenue between West Knoll Drive and Santa Monica	2,962	3,082	34	3,116	1.1%	NO
3. West Knoll Drive between Hancock Avenue and Westbourne Drive	1,258	1,319	34	1,353	2.6%	NO
4. Westbourne Drive between West Knoll Drive and Santa Monica Boulevard	1,484	1,562	111	1,673	7.1%	NO
5. Westbourne Drive between Rugby Drive and Sherwood Drive	1,980	2,060	107	2,167	5.2%	NO
6. Sherwood Drive between Westbourne Drive and Westmount	2,925	3,044	0	3,044	0%	NO
7. Westmount Drive between Holloway Drive and West Knoll Drive	2,480	2,629	26	2,654	1.0%	NO
8. West Knoll Drive between Westmount Drive and Santa Monica Boulevard	1,306	1,367	119	1,486	8.7%	NO

Source: Fehr & Peers, 2017. (Appendix G).
Note: numbers may not add up due to rounding.

Impact T-6 **Traffic generated by the proposed project would incrementally increase traffic at the Congestion Management Program (CMP) intersection of Santa Monica Boulevard and La Cienega Boulevard under existing and future conditions and on nearby freeways. However, the increase in traffic would not exceed CMP thresholds. Therefore, impacts would be Class III, *less than significant.***

Arterial Monitoring Stations. The closest CMP arterial monitoring intersection to the project site is the intersection of Santa Monica Boulevard and La Cienega Boulevard. Another CMP arterial monitoring station is on Santa Monica Boulevard at Doheny Drive. Based on the project trip generation and distribution estimates, the proposed project would add fewer than 50 trips to the La Cienega and Santa Monica Boulevard intersection. The project would increase traffic by 46 trips in the midday peak hour (which is the CMP analysis hour with the greatest proposed project trip generation). Since the project would add fewer than 50 trips at the La Cienega Boulevard and Santa Monica Boulevard intersection, no arterial intersection CMP analysis is required.

Freeways. The project site is approximately four miles west and 4.25 miles south of U.S. 101. The CMP freeway monitoring station closest to the project site is the U.S. 101 south of Santa Monica Boulevard. An additional Caltrans monitoring station near the project site on U.S. 101 is at Coldwater Canyon Avenue. An analysis of potential impacts at these locations was conducted. Based on the trip generation estimates shown in Table 4.6-7 and the forecast trip distribution, the project would generate a net increase of fewer than 20 peak hour trips on U.S. 101 southbound and fewer than 10 peak hour trips on U.S. 101 northbound during the AM, midday, or PM peak hours on the segments identified as CMP monitoring stations. This is based on assumptions that project trips distributed on Santa Monica Boulevard are also trips on the U.S. 101 south of the project site, and that project trips distributed on Sunset Boulevard are also trips on the U.S. 101 north of the project site. Even based on these conservative assumptions, the proposed project is not expected to add more than 150 vehicles to the CMP mainline freeway monitoring locations during either peak hour; therefore, a CMP freeway analysis is not required.

Mitigation Measures. Mitigation is not required because impacts would be less than significant.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Impact T-7 The proposed project would not disrupt existing or planned transit, bicycle, or pedestrian facilities or conflict with applicable transit, bicycle or pedestrian plans or policies. Impacts to transit, bicycle, and pedestrian systems are Class III, *less than significant*.

Bicycle Facility Impacts. The existing bicycle network in the study area consists of Class II facilities (designated bicycle lane, noted by striping and signage) on San Vicente Boulevard between Santa Monica Boulevard and Beverly Boulevard and on Santa Monica Boulevard between North Almont Drive and North Flores Street. Also present are Class III facilities (shared roadway, noted by signage) on San Vicente Boulevard between Santa Monica Boulevard and Sunset Boulevard and on Melrose Avenue between Santa Monica Boulevard and North Croft Avenue. Although there are no other designated bicycle facilities, there is bicycle activity throughout the study area.

There is an existing bicycle lane on Santa Monica Boulevard along the southern edge of the project site. The proposed project would not modify the bicycle lane on Santa Monica Boulevard

or alter access to the existing facility. The proposed project would provide 35 bicycle parking spaces in accordance with City requirements. Therefore, impacts would be less than significant.

Pedestrian Facility Impacts. The pedestrian network in the study area consists of crosswalks, pedestrian crossings, and sidewalks. Sidewalks are available on all streets bordering the project site and all study intersections have a crosswalk on at least one approach, with the exception of Westmount Drive/Holloway Drive and La Cienega Boulevard/Sherwood Drive intersections. Additionally, several of the stop-controlled intersections and mid-block locations in the study area have marked pedestrian crossings with high visibility signage and/or crosswalk markings. The planned improvements on Santa Monica Boulevard will result in the signalization of two crosswalks that are currently uncontrolled on Santa Monica Boulevard. The proposed project would not modify or adversely affect existing pedestrian facilities. Impacts would be less than significant.

Transit Facility Impacts. The transit facilities in the study area consist of bus stops with benches and shelters. The closest bus stop is located approximately 250 feet to the east at the corner of La Cienega Boulevard and Santa Monica Boulevard (bus stop for Metro Lines 105 and 705). The proposed project would not interfere with any existing bus stops. Therefore, the project impact would be less than significant.

Mitigation Measures. No mitigation measures are necessary.

Significance after Mitigation. Impacts would be less than significant without mitigation.

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4.7 UTILITIES and SERVICE SYSTEMS

This section analyzes the proposed project's potential impacts to wastewater service and infrastructure. This section is based on a sewer capacity study prepared by VCA Engineers, Inc., in April 2017, included in Appendix H.

4.7.1 Setting

a. Wastewater Conveyance. The City's Department of Public Works maintains the sewer collection and distribution systems located throughout West Hollywood. The City's system ties into trunk lines owned by the Los Angeles County Sanitation Districts (LACSD) and the City of Los Angeles. In general, all sewer flows in the City of West Hollywood feed into one of the following locations: Robertson Primary, La Cienega Interceptor Sewer (LCIS), and La Cienega San Fernando Valley Relief Sewer (LCSFVRS).

Within West Hollywood, the sewer system consists of 39 miles of gravity piping. This gravity sewer system includes over 850 pipe reaches and manholes, providing local sewer service to every parcel within the City. Approximately 75% of the citywide sewer system was constructed in the 1920s; the other 25% was constructed in the 1960s (City of West Hollywood General Plan Final EIR, October 2010).

The City of West Hollywood requires developers to pay a wastewater mitigation fee to offset any net increases in wastewater flow from new construction. The fee is based on net sewage unit of proposed land use for projects with new construction. The City has an annual assessment for a sewer service charge. This funds the ongoing operation and maintenance of the sewer system. These services include routine cleaning, root and grease control, and spot repairs, as well as 24-hour emergency call-out service for line blockages. The City is under contract with the County of Los Angeles to provide routine and emergency sewer maintenance services. Also, the City uses private contractors for specialized sewer maintenance services such as root control and video inspection (City of West Hollywood General Plan Final EIR, October 2010).

b. Wastewater Treatment. The City of West Hollywood has a contract with Sanitation District No. 4 of LACSD to receive wastewater (not including stormwater) generated in West Hollywood and transport that sewage to the City of Los Angeles Sanitation Bureau's trunk, interceptor, and outfall sewer system. Eventually, wastewater from the City is treated at the Los Angeles Hyperion Wastewater Treatment Plant (HTP), located at 12000 Vista Del Mar in El Segundo.

The HTP is the oldest and largest of four wastewater treatment plants in the area surrounding the City of Los Angeles. The HTP receives wastewater from much of Los Angeles and 29 contracting cities. Its primary treatment is completed with retention ponds, chemical coagulants and settling tanks. The plant also has full secondary treatment, biosolids handling, and biogas generation (City of Los Angeles, Bureau of Sanitation website, 2014).

The HTP has a dry weather capacity of 450 million gallons per day (MGD) for full secondary treatment and an 850 MGD wet weather capacity. Current average flow to the plant is estimated at 362 MGD (City of Los Angeles, Bureau of Sanitation website, 2015). Therefore, the current

capacity of the HTP is 88 MGD. The City of West Hollywood does not have a specific wastewater discharge entitlement with the HTP.

c. Existing Wastewater Service. The project site currently contains three two-story commercial buildings and three two-bedroom, single-family residences. The commercial buildings contain a restaurant with indoor (32 seats) and outdoor (37 seats) seating, office space (4,211 sf), a health/fitness store and gym (4,058 sf), a hair salon (6,218 sf), other retail (10,426 sf), and surface parking areas (21,130 sf).

Existing on-site wastewater generation is shown in Table 4.7-1. Existing wastewater generation on-site is approximately 6,810 gallons per day.

Table 4.7-1
Existing On-site Wastewater Generation

Type of Use	Quantity	Generation Factor (per day)	Amount (gpd)
Restaurant (Indoor Seating)	32 seats	30 gallons/seat	960
Restaurant (Outdoor Seating	37 seats	18 gallons/seat	666
Office	4,211 sf	150 gallons/1,000 sf	631.65
Gymnasium (Health/Fitness)	4,058 sf	250 gallons/1,000 sf	1,014.50
Beauty Parlor (Hair Salon/Facial)	6,218 sf	280 gallons/1,000 sf	1,741.04
Retail Store	10,426 sf	80 gallons/1,000 sf	834.08
Auto Parking	21,130 sf	20 gallons/1,000 sf	422.60
Residence: Single-Family Detached, 2-Bedroom	3 units	180 gallons/unit	540
Existing Wastewater Generation			**6,809.87 gpd**
Existing Flow Rate			**0.01054 cfs**
Existing Peak Flow Rate[1]			**0.02635 cfs**

Source: VCA Engineers, Inc. (2017) based on land use table from the LA County Sanitation District No 4.
Notes: sf=square feet, gpd = gallons per day, cfs = cubic feet per second
[1] To determine the maximum peak flow rate for sewer diameters less than 15 inches, a peaking factor of 2.5 was used per City of West Hollywood requirements

The project site is served by the main sanitary sewer line on Santa Monica Boulevard, which consists of an 8-inch vitrified clay pipe (VCP). This main sewer line is owned and operated by the City of West Hollywood. VCA Engineers, Inc. prepared a sewer capacity study for the proposed project in April 2017 (included in Appendix H). This study analyzed the existing peak flow demand on the Santa Monica Boulevard sewer main line downstream of the project site from West Knoll Drive to Westbourne Drive. Flow tests were conducted from April 9th to April 20th, 2014. Tests were conducted at sewer manhole #166 located at the intersection of Santa Monica Boulevard and Westbourne Drive and at sewer manhole #176 located at the intersection of Santa Monica Boulevard and Westmount Drive.

Table 4.7-2 shows the observed flow conditions at these manholes. The main sewer line downstream from the project site is operating at less than 50% capacity.

Table 4.7-2
Observed Flow Conditions

	Size (in)	Inlet Pipe Slope	Sewer Flow Monitoring Results				Sewer Pipe Capacity (cfs)	Demand to Capacity Ratio
			Existing Average Quantity (MGD)	Existing Maximum Quantity (MGD)	Existing Average Flow (cfs)	Existing Peak Flow (cfs)		
Sewer Manhole #176	8	2.12%	0.041	0.201	0.063	0.311	0.88	35%
Sewer Manhole #166	8	2.20%	0.072	0.251	0.111	0.390	0.90	43%

Source: VCA Engineers, Inc., 2017
MGD = million gallons per day, cfs = cubic feet per second

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds. According to Appendix G of the *CEQA Guidelines*, impacts to utilities are considered to be significant if the proposed project would:

- *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;*
- *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;*
- *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;*
- *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;*
- *Comply with federal, state, and local statutes, and regulations related to solid waste.*

The Initial Study (see Appendix A) concluded that the proposed project would result in less than significant impacts with respect to solid waste, water supply and infrastructure, and stormwater infrastructure. Therefore, only the first, second, and fifth criteria are discussed in this EIR.

b. Project Impacts and Mitigation Measures.

Impact UTIL-1 The proposed project would generate an estimated 16,610 gallons of wastewater per day above existing conditions. The existing main sewer line along Santa Monica Boulevard and the Hyperion Treatment Plant has sufficient capacity to accommodate this increase in wastewater. Therefore, impacts would be Class III, *less than significant.*

As shown in Table 4.7-1, existing on-site uses generate approximately 6,810 gallons of wastewater per day. The proposed project includes development of a mixed-use structure with 97 residential apartments (40 one-bedroom and 57 two-bedroom), 12 live/work units, 6,079 square feet of office space, 15,678 square feet of retail space, a 3,718 square foot hair salon, and indoor restaurant space capable of accommodating 106 seats. As indicated in Table 4.7-3, the project would generate about 23,420 gpd of wastewater, which is an increase of approximately 16,610 gpd above current on-site wastewater generation.

Table 4.7-3
Estimated Proposed Project Wastewater Generation

Type of Use	Quantity	Generation Factor (per day)	Amount (gpd)
Residential Apt 1 BD	40 units	120 gallons/unit	4,800
Residential Apt 2 BD	57 units	160 gallons/unit	9,120
Residential Live/Work	12 units	120 gallons/unit	1,440
Auto Parking	109,091 sf	20 gallons/1000 sf	2,181.82
Restaurant (Indoor Seating)	106 seats	30 gallons/seat	3,180
Hair Salon	3,718 sf	100 gallons/1000 sf	371.8
Office	6,079 sf	150 gallons/1000 sf	911.85
Retail	15,678 sf	80 gallons/1000 sf	1,254.24
Storage	3,020 sf	20 gallons/1000 sf	60.4
Residential Lobby	639 sf	80 gallons/1000 sf	51.12
Residential Recreation Room (Lounge)	610 sf	80 gallons/1000 sf	48.8
Proposed Project Wastewater Generation			**23,420.11 gpd**
Flow Rate (Proposed Project Only)			**0.03624 cfs**
Peak Flow Rate (Proposed Project Only)[2]			**0.09061 cfs**

Source: VCA Engineers, Inc. (J2017) based on land use table from the LA County Sanitation District No 4.
Notes: sf = square feet, gpd = gallons per day, bd= bedroom, cfs = cubic feet per second
[1] Kitchen area excluded from analysis, only seating area included in analysis
[2] To determine the maximum peak flow rate for sewer diameters less than 15 inches, a peaking factor of 2.5 was used per City of West Hollywood requirements

The project site is served by the City-owned main sanitary sewer line along Santa Monica Boulevard. Under existing conditions the sewer line is operating at less than 50% of capacity (see Table 4.7-2).

Table 4.7-4 shows the post-development peak flow based on the analysis in the project's sewer capacity study (VCA Engineers, 2017). Peak sewer flow post development was determined by adding the proposed project's estimated peak flow to the measured existing peak flow and subtracting the existing peak flow from the uses on-site, which would be demolished. The sewer main at sewer manhole #176 has a sewer pipe capacity of 0.88 cfs and the peak post-development flow would be 0.38 cfs, which is 43% of the pipe capacity. The sewer main at sewer manhole #166 has a capacity of 0.90 cfs and the peak post-development flow would be 0.45 cfs, which is 50% of capacity.

Table 4.7-4
Sewer Capacity Analysis

	Existing Peak Flow (cfs)	Post-Development Peak Flow (cfs)	Sewer Pipe Capacity (cfs)	Demand to Capacity Ratio
Sewer Manhole #176	0.31	0.38	0.88	43%
Sewer Manhole #166	0.39	0.45	0.90	50%

Source: VCA Engineers, Inc., 2017
MGD = million gallons per day, cfs = cubic feet per second

Post-development, the sewer line would continue to operate at no more than 50% capacity. Therefore, the sewer line serving the project site has no capacity problems and can carry the increased wastewater generated by the proposed project.

The Hyperion Treatment Plant, which ultimately treats the City's sewage, is operating at 88 MGD below capacity. The projected net increase in wastewater 16,610 gpd (23,420 gpd – 6,810 gpd, see tables 4.7-1 and 4.7-3) that would be generated by the proposed project represents 0.018% of the plant's excess capacity. Therefore, the HTP has sufficient available treatment capacity to serve the proposed project. The plant would be able to adequately treat project-generated sewage in addition to existing sewage, and the treatment requirements of the RWQCB would not be exceeded. Impacts to wastewater systems would be less than significant.

Mitigation Measures. No mitigation is necessary, as impacts would be less than significant.

Significance after Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. The potential for cumulative impacts to wastewater treatment and conveyance is assessed based upon consideration of the proposed project in combination with the list of cumulative projects identified in Table 3-1 and Table 3-2 in Section 3.0, *Environmental Setting*. Table 4.7-5 illustrates that planned and pending development within the City would generate approximately 0.063 million gallons per day (mgd) of wastewater. Daily wastewater generated by cumulative development plus wastewater generation from the proposed project would represent about 0.07% of the HTP's current daily available treatment capacity of 88 mgd. Because available capacity can serve planned and pending development, facility expansions would not be required and cumulative impacts would be less than significant. In addition, according to the City's 2035 General Plan EIR, the City's projected wastewater increase with implementation of the 2035 General Plan, in terms of the overall capacity of the HTP system, is small and there would be no impact on the facilities (City of West Hollywood, 2010). As discussed in the Initial Study, Appendix A of this EIR, the proposed project is consistent with the City's 2035 General Plan.

Table 4.7-5
Cumulative Wastewater Generation – City of West Hollywood

Land Use	Quantity	Generation Factor [a] (gal/day)	Daily Generation (gpd)	Daily Generation (mgd)
Commercial/Retail	67,745 sf	80 gallons/1000 sf	5,420	0.005
Office	70,036 sf	150 gallons/1000 sf	10,505	0.010
Residential [b]	218 du	160 gallons/unit	34,880	0.035
Restaurant	43,282 sf	300 gallons/1000 sf	12,985	0.013
Total			**63,790**	**0.063**

[a] *VCA Engineers, Inc., 2017*
gal = gallon, du = dwelling unit, sf = square feet, gpd = gallons per day, gpy = gallons per year
[b] *Based on condominium 2-bedroom rate due to residential mix comprised of high number of condo and apartment units from Table 3-1.*