4.7.2 Roadway Traffic Noise

4.7.2.1 Introduction

This section addresses noise impacts associated with changes in roadway traffic attributable to the proposed Project. Specifically, this section describes the extent to which ambient exterior noise levels at noise-sensitive uses located along major roadways around LAX may change due to traffic associated with the proposed Project. Roadway traffic noise was examined within the Project area and along streets that may experience increased vehicular traffic as a result of the new Concourse 0, Terminal 9, and reconfiguration of localized traffic circulation from the proposed roadway improvements.

Section 4.7.1.1.1 provides an overview of the basics of sound and the metrics used to measure and characterize sound, and describes typical noise levels associated with various activities operations. That overview of sound basics and sound metrics also applies to roadway traffic. Typical noise levels and noise metrics associated with roadway traffic are described below.

The primary focus of this section in on the evaluation of potential noise impacts associated with future increases in roadway traffic or redistribution of roadway traffic around LAX due to the proposed Project. This section also includes an evaluation of potential impacts associated with the increases in future roadway traffic noise levels described herein combined with the future increases in aircraft noise levels described in Section 4.7.1. The evaluations of future roadway traffic noise and future aircraft noise are based on buildout of the proposed Project in 2028. Certain aspects of the proposed Project may be completed and operational prior to 2028, in which case there would be the potential for some overlap in noise impacts from Project-related operation (i.e., future increases in aircraft noise and/or roadway noise) and ongoing construction at the time. However, it would be speculative at this level of planning to estimate the timing, location, and combined noise levels of such overlapping activities.

4.7.2.1.1 General Characteristics of Roadway Traffic Noise

The characteristics of noise, in general, are described earlier in Section 4.7.1.1.1. The following provides additional information regarding the characteristics most relevant to roadway traffic noise.

As discussed in Section 4.7.1.1, noise can be defined as unwanted sound. Roadway traffic noise (or any noise) can disrupt normal activities when the noise reaches certain levels, or when noises are distinctly louder than the typical ambient noise environment. Vehicle traffic sounds are generally considered to be unwanted noise to most people.

Sound from roadway traffic is primarily generated from tire-pavement interaction, vehicle exhaust, and engines. Additionally, vehicle horns and wind shear play a small role in noise from roadway traffic. Roadway traffic noise is never constant. Rather, roadway noise levels change based on the number, speed, and type of the vehicles producing the noise, as well as the driving habits of the vehicle operators. Generally, the loudness of roadway traffic noise increases with heavier traffic volumes, higher speeds, or greater numbers of trucks. The loudness of roadway traffic noise can also be increased by defective mufflers or other faulty equipment on vehicles. Any condition (such as a steep incline) that causes heavy laboring of motor vehicle engines will also increase roadway traffic noise levels. Other, more complicated factors also affect the loudness of roadway traffic noise. For example, as a person moves away from a highway, roadway traffic noise levels are reduced by distance, terrain, and vegetation, as well as by natural and man-made obstacles.

As noted above, the typical sound level on a busy street is 80 dBA and from a quiet automobile at a low speed is 50 dBA. If traffic conditions on a road are good (Level of Service [LOS] A or B), sound levels increase at a rate of 3 dBA per doubling of traffic volume. However, when traffic conditions are already at

LOS C, D, E, or F, increased traffic volumes (including construction traffic) may result in decreasing speeds, and traffic noise will get progressively quieter based on reduced engine operation levels, reduced drive-train and tire rotations, and reduced wind shear. On roads with good traffic conditions, roadway traffic volumes in general, including construction-related traffic, would have to increase by two-fold to reach a 3 dBA increase or by more than three-fold to reach a 5 dBA increase, which are the thresholds of significance used in this analysis (see Section 4.7.2.4). Traffic would have to increase even more on roads with poor operating conditions (LOS C or worse) to reach the 3 dBA to 5 dBA increase. If a road has free-flowing uninterrupted traffic conditions, sound levels increase at a rate of 3 dBA per doubling of traffic volume. However, if a road has saturated or constrained traffic conditions, sound levels will get progressively quieter from an increase in traffic volumes based on decreasing speeds, reduced engine operation levels, reduced drive-train and tire rotations, and reduced wind shear.

4.7.2.2 Methodology

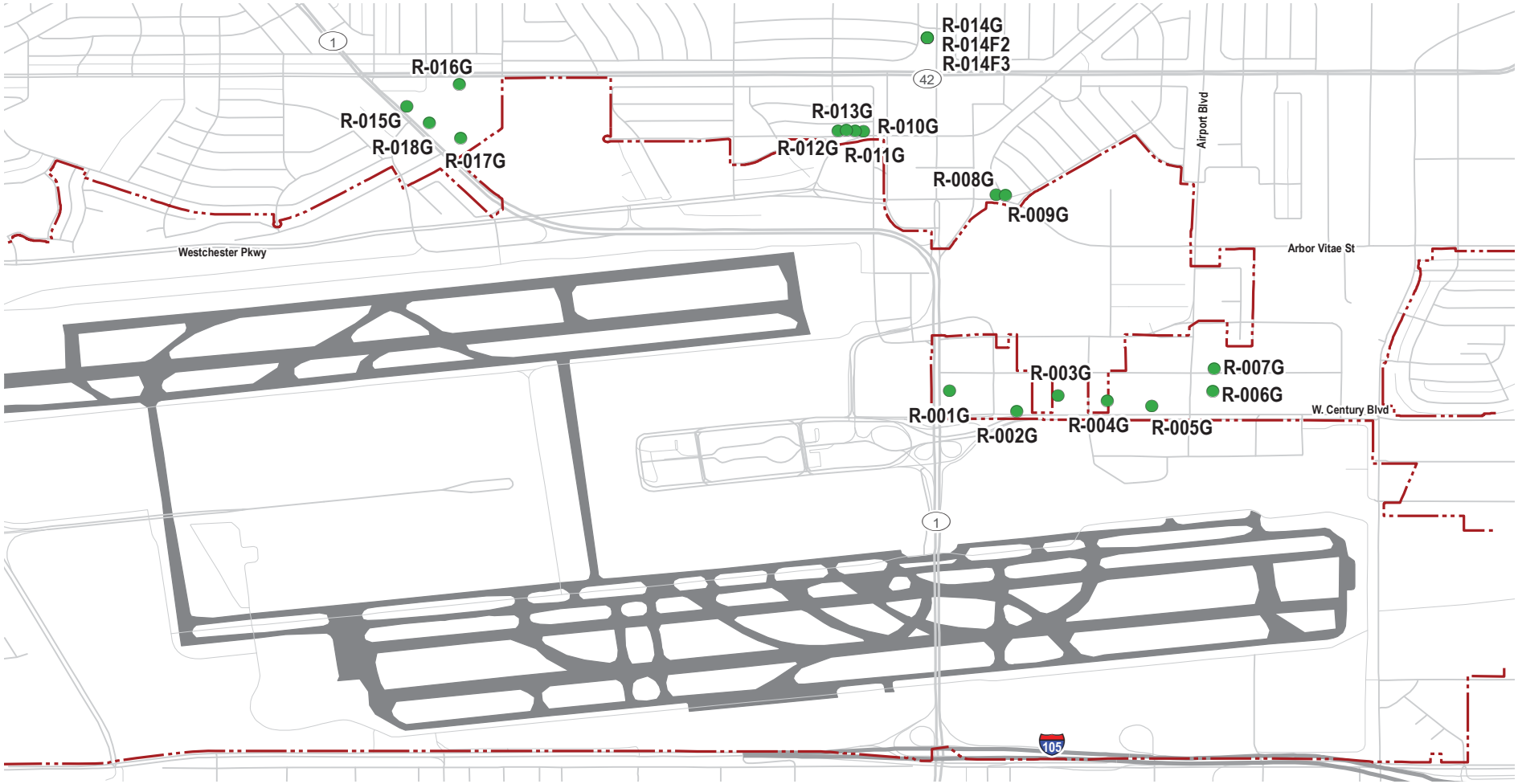
4.7.2.2.1 Overview

This section describes the methodology used to evaluate the potential impacts from roadway traffic noise resulting from operation of the proposed Project. **Appendix F.2** describes this methodology in detail. Project impacts were determined through the following steps:

- Major roadways near the airport that would be used for passenger and worker commute routes were identified by qualitatively assessing the viability of routes based on prior projects at the airport and convenient access to the Project area from major transportation corridors.
- Noise-sensitive receptors along the identified roadways were identified based on land uses.
- Baseline roadway traffic noise conditions (2019) at the noise-sensitive receptors were calculated based on existing traffic conditions.
- A noise monitoring survey was conducted, with roadway traffic noise level measurements taken at eight locations in the general vicinity of LAX; the measured roadway traffic noise levels were compared against the calculated roadway traffic noise levels for each location as a means of validating the accuracy of the roadway traffic noise model. See Section 1.5 in **Appendix F.2** for details of the noise monitoring survey.
- Future roadway traffic noise conditions (2028) at the noise-sensitive receptors were calculated based on projected traffic conditions.
- Changes to the roadway traffic noise conditions at the noise-sensitive receptors that would result from the Project were evaluated to determine whether the changes would result in a significant roadway traffic noise impact.

4.7.2.2.1.1 Noise-Sensitive Receptors

A review of existing land uses was performed to identify noise-sensitive uses. Noise-sensitive uses are places that might contain noise-sensitive equipment; house or be used by individuals who are particularly susceptible to noise stimuli, such as children or the elderly; or provide accommodations for people to sleep. Noise-sensitive land uses typically include residences, hospitals, hotels, and schools, among others. The selection of noise-sensitive receptor locations to include in the impacts analysis took into account the proximity of noise-sensitive uses to the roadway system improvements associated with the proposed Project, both in terms of proximity to new roads that are proposed and relative to existing local roads that would be primary travel routes to and from the airport terminal areas. **Figure 4.7.2-1** shows the locations of the noise-sensitive receptors addressed in the impacts analysis, and **Table 4.7.2-1** describes the location of, and existing land use at, each receptor.



Legend

- Modeled Roadway Noise Analysis Receivers
- Airport Boundary
- Runway / Taxiway
- Roads

0 1,200 2,400 Feet

Scale

Source: HMMH, May 2020
Prepared by: CDM Smith,October 2020

LAX Airfield and Terminal Modernization Project	Roadway Noise Analysis Receivers	Figure 4.7.2-1

Table 4.7.2-1
Noise-Sensitive Receptors in Vicinity of the Project Area

Receiver ID	Receptor Description	Land Use	Nearest Roadway Contribution
R-001G	Hyatt Regency Pool	Hotel	Sepulveda Boulevard
R-002G	H Hotel Pool	Hotel	Century Boulevard
R-003G	Sheraton Gateway Hotel Pool	Hotel	Century Boulevard
R-004G	Crowne Plaza Hotel Pool	Hotel	Century Boulevard
R-005G	Residence Inn Hotel Pool	Hotel	Century Boulevard
R-006G	Los Angeles Airport Marriott Pool	Hotel	Century Boulevard/Airport Boulevard
R-007G	Four Points Hotel Pool	Hotel	98th Street
R-008G	Westchester Parkway and Will Rogers Neighborhood	SF Residential	Westchester Parkway
R-009G	Westchester Parkway and Will Rogers Neighborhood	SF Residential	Westchester Parkway
R-010G	W 88th Street and La Tijera Neighborhood	SF Residential	La Tijera Boulevard
R-011G	W 88th Street and La Tijera Neighborhood	SF Residential	La Tijera Boulevard
R-012G	W 88th Street and La Tijera Neighborhood	SF Residential	La Tijera Boulevard
R-013G	W 88th Street and La Tijera Neighborhood	SF Residential	La Tijera Boulevard
R-014G	Sepulveda West Apartments	MF Residential (1st Floor)	Sepulveda Boulevard
R-014F2	Sepulveda West Apartments	MF Residential (2nd Floor)	Sepulveda Boulevard
R-014F3	Sepulveda West Apartments	MF Residential (3rd Floor)	Sepulveda Boulevard
R-015G	Westchester City Park	Recreation	Lincoln Boulevard
R-016G	Westchester City Park	Recreation	Lincoln Boulevard
R-017G	Westchester City Park	Recreation	Lincoln Boulevard
R-018G	Westchester City Park	Recreation	Lincoln Boulevard

Source: **Appendix F.2** of this EIR.

Key:
G = Ground Floor; F2 = Second Floor; F3 = Third Floor; SF = single family; MF = multi-family

4.7.2.2.1.2 Existing and Future Roadway Traffic Noise Conditions

Roadway traffic noise levels for existing baseline and future conditions with implementation of the proposed Project were calculated using the latest version of the SoundPLAN noise model, a prediction and analysis software that implements the Federal Highway Administration's (FHWA) Traffic Noise Model Version 2.5 (TNM) to compute traffic noise.

Ambient roadway noise level measurements were also taken at each of the noise-sensitive receptor locations. In addition, traffic data were measured along various roadways (traffic counts and turning movements). The noise and traffic measurement data were used to confirm that baseline roadway traffic noise estimates from SoundPLAN were within acceptable limits.

The roadway network assumed in the calculation of roadway traffic noise levels for future (2028) conditions included the roadway improvements approved as part of the LAX Landside Access Modernization Program Phase 1 approvals, which would be completed and in use prior to 2028, and the roadway improvements currently proposed by the Project.

As identified in Section 4.7.2.4 below, two thresholds were used to determine if Project-related roadway traffic noise impacts would be significant. One threshold relies on the CNEL metric and the other relies on peak hour L_{eq}. In order to compare future roadway traffic noise levels with implementation of the proposed Project to existing baseline levels, existing baseline conditions were determined for each of these metrics.

For the CNEL analysis, the assessment of whether Project-related traffic would result in a significant increase in CNEL compared future (2028) changes in average daily traffic (ADT) associated with the proposed Project to existing ambient noise levels, including both average annual day aircraft noise and roadway noise associated with existing ADT on roadways near noise-sensitive receptors. Existing and future roadway traffic noise levels were calculated at noise-sensitive receptors throughout the analysis area using SoundPLAN. Existing aviation noise at each receptor was estimated using the Aviation Environmental Design Tool (AEDT, described in Section 4.7.1.2.1) based on LAX operations and fleet mix data for the time period used in the analysis. The two types of noise – aircraft noise and roadway traffic noise – were added together logarithmically to represent existing CNEL ambient noise levels.

For the L_{eq} analysis, the assessment of whether the proposed Project would result in a significant increase in L_{eq} compared future (2028) changes in peak-hour ("worst noise hour") traffic at noise-sensitive receptors with implementation of the proposed Project to existing and future peak-hour hourly traffic noise levels. Existing and future peak-hour hourly traffic noise levels, in terms of the hourly equivalent sound level ($L_{eq}(h)$), were calculated by SoundPLAN using hourly traffic volume data from the traffic demand model developed for the proposed Project, which considered vehicle mix and distributions.

While the CNEL ambient noise level reflects the total daily (24-hour) noise level with noise penalties applied during evening and nighttime hours, the existing roadway traffic L_{eq} noise level represents a peak-hour roadway traffic noise level, based on hourly traffic volumes on roadways near the noise-sensitive receptors. As noted above, future roadway traffic CNEL noise levels near noise-sensitive receptors were based on ADT traffic volumes in 2028 with implementation of the proposed Project. Future roadway traffic L_{eq} noise levels near noise-sensitive receptors were based on hourly traffic volumes in 2028 with implementation of the proposed Project. The differences between future roadway traffic noise levels and existing noise levels provided the basis for determining whether increases in noise levels would exceed the applicable threshold of significance.

4.7.2.2.1.3 Analysis of Combined Project-Related Noise

Increases in activity levels at LAX in the future, which would occur with or without the proposed Project, would result in more vehicle traffic and more aircraft operations, as evaluated earlier in Section 4.7.1, *Aircraft Noise*. Therefore, in addition to evaluating impacts of the proposed Project on aircraft noise and roadway noise individually (see Section 4.7.2.5), the combined impacts of Project-related aircraft noise and roadway traffic noise in 2028 were also evaluated (see Section 4.7.2.6). The combined future roadway traffic noise levels and future aircraft noise levels, measured in CNEL, were calculated for each of the noise-sensitive receptors and characterize the overall daily (24-hour) noise exposure level, including noise penalties for evening and nighttime noise.

4.7.2.3 Existing Conditions

4.7.2.3.1 Regulatory Setting

Federal Highway Administration Regulations

Title 23 of the Code of Federal Regulations, Part 772 (23 CFR 772) provides the framework and establishes the standards for the assessment and abatement of highway traffic noise in the United States. The FHWA regulations in 23 CFR 772 apply to all federal or federal-aid highway projects authorized under Title 23 of the United States Code. As defined in the regulations, a traffic noise impact would occur for a particular activity category when predicted exterior noise levels approach or exceed the FHWA-defined noise abatement criteria level during the loudest hour of the day for that category or when project-related noise creates a substantial noise increase over existing noise levels.

California Department of Transportation (Caltrans) Traffic Noise Analysis Protocol

The FHWA regulations in 23 CFR 772 require state highway agencies to prepare updated state-specific policies and procedures for applying the regulation in their state. Caltrans policies and procedures for implementing 23 CFR 772 are contained in the *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*[1] (the Protocol) in the State of California. Caltrans also has published a guidance document that supplements the Protocol and serves to assist highway noise analysts with the technical aspects of traffic noise analysis.

According to the Caltrans Traffic Noise Analysis Protocol and consistent with 23 CFR 772, a traffic noise impact occurs when future project noise levels cause a substantial noise increase over existing noise. Specifically, a substantial increase occurs when a project's predicted worst-hour design-year noise level exceeds the existing worst-hour noise level by 12 dBA or more.

City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code (LAMC) (Section 41.40 and Chapter XI, Articles 1 through 6) provides regulations regarding allowable increases in noise levels in terms of established noise criteria. Supplementing these LAMC regulations, the City has also established CNEL guidelines that are used for land use planning purposes (see discussion of City of Los Angeles Noise Element of the General Plan below).

Chapter XI of the Los Angeles Municipal Code (City of Los Angeles Noise Ordinance) establishes acceptable ambient sound levels to regulate intrusive noises within specific land use zones. In accordance with the City's Noise Ordinance, a noise level increase of 5 dBA over the existing average ambient noise level at an adjacent property line is considered a noise violation.

City of Los Angeles General Plan Noise Element

The Noise Element of the City of Los Angeles General Plan[2] addresses noise mitigation regulations, strategies, and programs and delineates federal, state, and City jurisdiction relative to rail, automotive, aircraft, and nuisance noise. The City of Los Angeles has adopted local guidelines based, in part, on the community noise compatibility guidelines established by the California Department of Health Services for use in assessing the compatibility of various land use types with a range of noise levels. CNEL guidelines for specific land uses are classified into four categories: (1) "normally acceptable," (2) "conditionally acceptable," (3) "normally unacceptable," and (4) "clearly unacceptable." As shown in **Table 4.7.2-2**, a CNEL value of 60 dBA is the limit at which the noise environment for multi-family residential uses changes from "normally acceptable" to "conditionally acceptable." A CNEL as high as 65 dBA is considered "conditionally acceptable." The limit of what is considered "normally unacceptable" for all residential uses is set at 75 dBA CNEL.

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1 California Department of Transportation, *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*, April 2020. Available: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/traffic-noise-protocol-april-2020-a11y.pdf.

2 City of Los Angeles, Department of City Planning, *Noise Element of the Los Angeles City General Plan*, adopted February 3, 1999. Available: https://planning.lacity.org/odocument/b49a8631-19b2-4477-8c7f-08b48093cddd/Noise_Element.pdf.

Table 4.7.2-2
City of Los Angeles Guidelines for Noise Compatible Land Uses

Land Use Category	Day-Night Average Exterior Sound Level (CNEL dB)						
	50	55	60	65	70	75	80
Residential Single Family, Duplex, Mobile Home	A	C	C	C	N	U	U
Residential Multi-Family	A	A	C	C	N	U	U
Transient Lodging, Motel, Hotel	A	A	C	C	N	U	U
School, Library, Church, Hospital, Nursing Home	A	A	C	C	N	N	U
Auditorium, Concert Hall, Amphitheater	C	C	C	C/N	U	U	U
Sports Arena, Outdoor Spectator Sports	C	C	C	C	C/U	U	U
Playground, Neighborhood Park	A	A	A	A/N	N	N/U	U
Golf Course, Riding Stable, Water Recreation, Cemetery	A	A	A	A	N	A/N	U
Office Building, Business, Commercial, Professional	A	A	A	A/C	C	C/N	N
Agriculture, Industrial, Manufacturing, Utilities	A	A	A	A	A/C	C/N	N

Source: City of Los Angeles, Department of City Planning, *Noise Element of the Los Angeles City General Plan,* adopted February 3, 1999. Available: https://planning.lacity.org/odocument/b49a8631-19b2-4477-8c7f-08b48093cddd/Noise_Element.pdf.

Key:
A = Normally acceptable. Specified land use is satisfactory, based upon assumption buildings involved are conventional construction, without any special noise insulation.
C = Conditionally acceptable. New construction or development only after a detailed analysis of noise mitigation is made and needed noise insulation features are included in project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally will suffice.
N = Normally unacceptable. New construction or development generally should be discouraged. A detailed analysis of noise reduction requirements must be made and noise insulation features included in the design of a project.
U = Clearly unacceptable. New construction or development generally should not be undertaken.

4.7.2.3.2 Environmental Setting

The proposed Project site is located in proximity to several busy roadways, including Century Boulevard, Sepulveda Boulevard, and other roadways that generate high levels of roadway traffic noise. In addition, ambient noise is characterized by aircraft noise and other urban noise sources.

Table 4.7.2-3 indicates the existing CNEL ambient noise level, and **Table 4.7.2-4** delineates the existing peak-hour L_{eq} roadway traffic noise level at each of the noise-sensitive receptor locations. As indicated in Table 4.7.2-3, the existing CNEL ambient noise levels range from 63.9 dBA at residences northwest of the intersection of Sepulveda Boulevard and Manchester Boulevard (Receptor R-014G) to 72.9 dBA at the H Hotel/Homewood Suites and residences northeast of the intersection of Kittyhawk Avenue and Westchester Parkway (Receptors R-002G and R-008G, respectively). As indicated in Table 4.7.2-4, the existing peak-hour L_{eq} roadway traffic noise levels range from 43.3 dBA at residences located north of W. 88th Street and east of Sepulveda Westway (Receptor R-012G) to 66.1 dBA at the H Hotel/Homewood Suites (Receptor R-002G).

Table 4.7.2-3
Change in Average Daily Traffic CNEL Compared to Existing Conditions

Receiver ID	Land Use	City of Los Angeles Land Use Noise Compatibility Maximum Acceptable CNEL	Existing 2019 CNEL	Project 2028 CNEL	Change between Existing (2019) and Project (2028) CNEL	Applicable CNEL Increase Threshold of Significance	Significant Impact for Project?
R-001G	Hotel	70	71.8	72.0	0.3	3	No
R-002G	Hotel	70	72.9	72.3	-0.6	3	No
R-003G	Hotel	70	69.1	70.0	0.8	3	No
R-004G	Hotel	70	69.7	70.1	0.4	3	No
R-005G	Hotel	70	71.9	72.0	0.0	3	No
R-006G	Hotel	70	70.7	70.8	0.1	3	No
R-007G	Hotel	70	70.0	70.8	0.8	3	No
R-008G	SF Residential	70	72.9	73.0	0.0	3	No
R-009G	SF Residential	70	72.6	72.6	0.0	3	No
R-010G	SF Residential	70	68.8	68.8	0.0	5	No
R-011G	SF Residential	70	68.8	68.8	0.0	5	No
R-012G	SF Residential	70	68.9	68.9	0.0	5	No
R-013G	SF Residential	70	68.9	68.9	0.0	5	No
R-014G	MF Residential (1st Floor)	70	63.9	63.9	-0.1	5	No
R-014F2	MF Residential (2nd Floor)	70	64.3	64.2	-0.1	5	No
R-014F3	MF Residential (3rd Floor)	70	66.0	65.9	-0.1	5	No
R-015G	Recreation	70	68.2	68.3	0.1	5	No
R-016G	Recreation	70	64.4	64.2	-0.2	5	No
R-017G	Recreation	70	65.3	65.2	0.0	5	No
R-018G	Recreation	70	65.2	65.2	0.0	5	No

Source: **Appendix F.2** of this EIR.

Key:
G = Ground Floor; F2 = 2nd Floor; F3 = Third Floor; SF = single family; MF = multi-family

Table 4.7.2-4
Change in Peak Hour Traffic L_{eq} Compared to Existing Conditions (dBA)

Receiver ID	Land Use	Existing 2019 Peak Hour L_{eq}	Project 2028 Peak Hour L_{eq}	Change between Existing (2019) and Project (2028) Peak Hour L_{eq}	Significant Impact for Project?[1]
R-001G	Hotel	53.0	57.5	4.5	No
R-002G	Hotel	66.1	64.6	-1.5	No
R-003G	Hotel	54.7	59.9	5.2	No
R-004G	Hotel	54.9	57.9	3.0	No
R-005G	Hotel	62.5	62.7	0.2	No
R-006G	Hotel	52.6	54.4	1.8	No
R-007G	Hotel	58.1	61.7	3.6	No
R-008G	SF Residential	63.9	64.1	0.2	No
R-009G	SF Residential	62.6	62.8	0.2	No
R-010G	SF Residential	44.4	45.2	0.8	No
R-011G	SF Residential	44.3	45.0	0.7	No
R-012G	SF Residential	43.3	43.4	0.1	No
R-013G	SF Residential	44.6	45.2	0.6	No
R-014G	MF Residential (1st Floor)	49.0	48.4	-0.6	No
R-014F2	MF Residential (2nd Floor)	51.8	51.2	-0.6	No
R-014F3	MF Residential (3rd Floor)	58.4	58.1	-0.3	No
R-015G	Recreation	62.7	62.3	-0.4	No
R-016G	Recreation	56.3	55.7	-0.6	No
R-017G	Recreation	54.8	54.3	-0.5	No
R-018G	Recreation	56.6	56.2	-0.4	No

Source: **Appendix F.2** of this EIR.

Note:
[1] Threshold of significance is 12 dB.

Key:
G = Ground Floor; F2 = Second Floor; F3 = Third Floor; SF = single family; MF = multi-family

4.7.2.4 Thresholds of Significance

The proposed Project would result in a significant impact related to roadway traffic noise if:

Threshold 4.7.2-1 Roadway traffic from the proposed Project causes the ambient noise level measured at the property line of affected noise-sensitive uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" compatibility category, or by 5 dBA or greater within any category.

Threshold 4.7.2-2 Roadway traffic from the proposed Project causes the peak-hour L_{eq} to substantially exceed the existing L_{eq}, defined as an increase of 12 dB or more, at noise-sensitive receptors.

Threshold 4.7.2-1 is based on the City of Los Angeles' *L.A. CEQA Thresholds Guide*, which provides a significance threshold for operational noise, including roadway noise.[3] Threshold 4.7.2-2 is based upon FHWA and Caltrans regulations and guidelines pertaining to the evaluation of roadway traffic noise impacts, as described in Section 4.7.2.3.1.

4.7.2.5 Project Impacts

This section evaluates the potential for the proposed Project to result in a significant roadway traffic noise impact due to Project operation. Construction-related roadway traffic noise is addressed in Section 4.7.3, *Construction Traffic and Equipment Noise and Vibration*.

4.7.2.5.1 Impact 4.7.2-1

Summary Conclusion for Impact 4.7.2-1: Future roadway traffic associated with proposed Project operations would not cause existing ambient noise levels at noise-sensitive uses to increase by more than the allowable limits (i.e., 3 dBA CNEL or 5 dBA CNEL, as applicable). As such, this would be a *less than significant impact*.

4.7.2.5.1.1 Operational Impacts

As described in Chapter 2, *Description of the Proposed Project,* future growth in passenger activity is expected to occur at LAX with or without Project implementation. This growth in passenger activity will be accompanied by increased airport-related traffic on Project area roadways. In addition, the proposed Project would implement roadway improvements to improve queuing capacity into and out of the CTA and provide access to the new Terminal 9. These improvements would modify traffic patterns and introduce new elevated roadways in the Project area. Together, these changes associated with proposed Project operations would result in changes to roadway noise in the Project vicinity. Table 4.7.2-3 summarizes the change in the CNEL for the proposed Project in 2028 relative to existing baseline conditions.

As shown in Table 4.7.2-3, there are no instances in which the future CNEL from roadway noise under the proposed Project would exceed the allowable CNEL increase. Specifically, there are no instances in which the future CNEL from roadway noise under the proposed Project would increase by more than 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, nor are there instances in which the future CNEL from roadway noise under the proposed Project would increase by more than 5 dBA CNEL in any category.

For example, as shown in Table 4.7.2-3, the existing exterior noise level at the Hyatt Regency hotel (Receptor R-001G) is 71.8. This receptor is classified under a "Hotel" land use category. As shown in Table 4.7.2-2, the 71.8 dBA CNEL corresponds to a "normally unacceptable" condition for the "Hotel" land use category. Because this receptor already falls within the "normally unacceptable" category, the significance threshold for this receptor is a 3 dBA CNEL increase in noise. As identified in Table 4.7.2-3, the proposed Project would result in a 0.3 dBA CNEL increase in noise levels relative to existing baseline conditions at this receptor. Since 0.3 dBA CNEL is less than the 3 dBA threshold, Project-related roadway traffic noise levels at this receptor would not exceed the significance threshold and would not result in a significant impact.

There are no receptor locations where existing roadway traffic noise CNELs would be increased by 3 dBA CNEL or more such that the noise level would increase to or within the "normally unacceptable" or "clearly unacceptable" categories. There are also no receptor locations where existing traffic noise CNELs

[3] City of Los Angeles, *L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analyses in Los Angeles*, 2006. Available: https://planning.lacity.org/odocument/cc8fb2f5-dc6c-47f1-bfc3-864b84621abb/CEQAThresholdsGuide.pdf.

would be increased by 5 dBA CNEL or more in any category. Therefore, roadway traffic noise associated with operation of the proposed Project would not exceed the levels established for noise compatible land uses, and noise impacts would be ***less than significant***.

4.7.2.5.1.2 Mitigation Measures

Because the proposed Project would result in a ***less than significant impact*** relative to roadway traffic noise, no mitigation is required.

4.7.2.5.1.3 Significance of Impact After Mitigation

As indicated above, no mitigation is required to address roadway traffic noise. The proposed Project would result in a ***less than significant impact***.

4.7.2.5.2 Impact 4.7.2-2

Summary Conclusion for Impact 4.7.2-2: Future roadway traffic associated with proposed Project operations would not cause future noise levels in the worst-hour to exceed existing ambient noise levels at noise-sensitive uses by 12 dBA or more. As such, this would be a *less than significant impact*.

4.7.2.5.2.1 Operational Impacts

In addition to considering impacts to 24-hour average noise levels, operational impacts were also evaluated based on the predicted worst-hour noise levels in 2028 associated with operation of the proposed Project. Table 4.7.2-4 provides the TNM-computed $L_{eq}(h)$ for existing baseline conditions (from SoundPLAN) during the loudest hour of the day. This table also summarizes the change in noise levels (L_{eq}) from worst-hour traffic for the proposed Project in 2028, and compares those peak noise levels to existing baseline conditions.

As shown in Table 4.7.2-4, the change in the hourly $L_{eq}(h)$ associated with the proposed Project would range from approximately -1.5 to 5.2 dBA relative to existing baseline conditions. The largest increases in hourly traffic noise levels would be expected to occur along new Project roadways located east of Sepulveda Boulevard and north of Century Boulevard, as well as from future increases in traffic on existing roadways in that general area. The roadway noise receptor points shown in Figure 4.7.2-1 represent noise-sensitive land uses in the Project area considered to be most vulnerable to noise resulting from future increases in traffic. As shown in Table 4.7.2-4, all the increases in the future hourly $L_{eq}(h)$ relative to existing baseline conditions would be substantially less than 12 dBA. Therefore, the predicted worst-hour roadway noise impacts from operation of the proposed Project would be ***less than significant***.

4.7.2.5.2.2 Mitigation Measures

Because the proposed Project would result in a ***less than significant impact*** relative to roadway traffic noise, no mitigation is required.

4.7.2.5.2.3 Significance of Impact After Mitigation

As indicated above, no mitigation is required to address roadway traffic noise. The proposed Project would result in a ***less than significant impact***.

4.7.2.6 Combined Roadway Traffic Noise and Aircraft Noise

The analysis above addresses the potential for proposed Project operations to result in significant noise impacts associated with future increases in roadway traffic in 2028. As noted in Section 4.7.2.2.1.3, it is recognized that increases in activity levels at LAX in the future that would result in more vehicle traffic would also result in more aircraft operations, as evaluated in Section 4.7.1, *Aircraft Noise*. Therefore, in addition to evaluating impacts of the proposed Project on aircraft noise and roadway noise individually,

the combined impacts of Project-related aircraft noise and roadway traffic noise in 2028 were also evaluated, measured in CNEL. **Table 4.7.2-5** presents the combined future roadway traffic noise levels and future aircraft noise levels calculated for each of the noise-sensitive receptors. As shown in Table 4.7.2-5, there are no instances in which the future CNEL from combined roadway traffic and aircraft noise under the proposed Project would exceed the allowable CNEL increase (3 dBA CNEL for "normally unacceptable" or "clearly unacceptable" land use compatibility categories, or 5 dBA CNEL for all categories). Therefore, combined roadway traffic noise and aircraft noise associated with operation of the proposed Project would not exceed the levels established for noise compatible land uses, and combined roadway and aircraft noise impacts would be ***less than significant***.

Table 4.7.2-5
Computed Noise Levels for Future Traffic Noise and Aircraft Noise Combined

Receiver ID	Land Use	Los Angeles Development Land Use Noise Compatibility-Maximum Acceptable CNEL	Existing 2019 CNEL	Project 2028 CNEL	Change between Existing (2019) and Project (2028) CNEL	Applicable CNEL Increase Threshold of Significance	Significant Impact for Project?
R-001G	Hotel	70	71.8	71.9	0.1	3	No
R-002G	Hotel	70	72.9	72.2	-0.7	3	No
R-003G	Hotel	70	69.1	69.8	0.7	5	No
R-004G	Hotel	70	69.7	69.9	0.2	5	No
R-005G	Hotel	70	71.9	71.8	-0.2	3	No
R-006G	Hotel	70	70.7	70.5	-0.2	3	No
R-007G	Hotel	70	70.0	70.6	0.6	3	No
R-008G	SF Residential	70	72.9	73.1	0.1	3	No
R-009G	SF Residential	70	72.6	72.7	0.2	3	No
R-010G	SF Residential	70	68.8	68.6	-0.2	5	No
R-011G	SF Residential	70	68.8	68.7	-0.2	5	No
R-012G	SF Residential	70	68.9	68.7	-0.2	5	No
R-013G	SF Residential	70	68.9	68.7	-0.2	5	No
R-014G	MF Residential (1st Floor)	70	63.9	63.7	-0.3	5	No
R-014F2	MF Residential (2nd Floor)	70	64.3	64.0	-0.3	5	No
R-014F3	MF Residential (3rd Floor)	70	66.0	65.8	-0.3	5	No
R-015G	Recreation	70	68.2	68.3	0.2	5	No
R-016G	Recreation	70	64.4	64.2	-0.2	5	No
R-017G	Recreation	70	65.3	65.3	0.1	5	No
R-018G	Recreation	70	65.2	65.3	0.1	5	No

Source: **Appendix F.2** of this EIR.

Key:
G = Ground Floor; F2 = Second Floor; F3 = Third Floor; SF = single family; MF = multi-family

The conclusion that the combined aircraft noise and roadway noise levels associated with operation of the Project in 2028 would not result in a significant impact is not inconsistent with the conclusion of the aircraft noise analysis in Section 4.7.1.5.1 (Impact 4.7.1-1) that the aircraft noise levels associated with operation of the Project in 2028 alone would result in a significant impact. The reason for these different conclusions is that the nature and locations of the impacts are fundamentally different. As shown in Figure 4.7.1-9 in the aircraft noise analysis (Section 4.7.1), the significant aircraft noise impacts, defined in terms of noise sensitive uses being newly exposed in 2028 to an exterior noise level of 65 dBA CNEL

compared to 2018 Baseline conditions, would occur in areas located several miles east of LAX. As indicated in that figure, areas closer to the airport, such as those represented by noise Receptors R-001 through R-0018, would not be newly exposed to an exterior noise level of 65 dBA CNEL, and would experience little, if any, increase over baseline noise levels.[4] This is reflected in Table 4.7.2-5, which shows only small increases in existing (baseline) noise levels even when Project-related traffic volumes are added; hence, the increases would be less than the 5 dBA threshold of significance for roadway noise. In those areas farther to the east where the increases in aircraft noise are projected to result in a significant impact, the addition of Project-related traffic would be negligible because it would be dispersed onto many other roadways in many other directions before reaching such areas. As such, the differences in significance conclusions are sound, based on differences in the nature and locations of impacts.

4.7.2.6.1 Mitigation Measures

Because the proposed Project would result in a ***less than significant impact*** relative to combined roadway traffic and aircraft noise, no mitigation is required.

4.7.2.6.2 Significance of Impact After Mitigation

As indicated above, no mitigation is required to address combined roadway traffic and aircraft noise. The proposed Project would result in a ***less than significant impact***.

4.7.2.7 Cumulative Impacts

The geographical area of the cumulative impacts analysis for roadway traffic noise includes the area surrounding LAX that includes major access routes to the airport. As illustrated in Figure 4.7.2-1, the geographical area is generally bound by Manchester Boulevard to the north, Aviation Boulevard to the east, Century Boulevard to the south, and Lincoln Boulevard to the west. Table 3-1 in Chapter 3, *Overview of Project Setting*, identifies development projects at or adjacent to LAX. These projects are shown in Figure 3-1. Of the projects identified in Table 3-1, those whose operational traffic would be most likely to use the same roads as the proposed Project due to their location include the LAX Northside Development, the LAX Landside Access Modernization Program, the various terminal projects, and the Airport Metro Connector 96th Street Transit Station.

Although the cumulative development projects would result in an increase in traffic on portions of the same roadway system used by operational traffic from the proposed Project, traffic from the combination of these cumulative projects and the proposed Project would not result in roadway traffic noise levels that would exceed the significance thresholds. Project-related roadway traffic noise levels in 2028 were calculated using hourly traffic volume data from the traffic demand model developed for the proposed Project, including vehicle mix and distributions. As described in Section 4.8, *Transportation,* the approach used in the transportation analysis is inherently cumulative in nature. The Project Travel Demand Model included future development projects, including both the LAX projects listed above and projects in surrounding jurisdictions. In addition, the Project Travel Demand Model was based on future socioeconomic and demographic information from the Southern California Association of Governments (SCAG). As a result, the traffic volume data used to calculate roadway traffic noise, and the associated roadway noise impacts identified in Section 4.7.2.5 and Section 4.7.2.6, account for future cumulative conditions; hence, traffic from such cumulative projects in included in the roadway noise calculations. As shown in Table 4.7.2-3 and Table 4.7.2-4, and discussed in Section 4.7.2.5 and Section 4.7.2.6, future roadway traffic noise would not exceed the significance thresholds and cumulative roadway traffic noise would be ***less than significant***.

[4] Those areas would also not experience an increase of 1.5 dBA CNEL or more in exterior noise levels, which is the other threshold of significance applied to aircraft noise impacts – see Figure 4.7.1-10.

Table 4.7.2-5, which represents combined roadway traffic noise and aircraft noise, is also inherently cumulative. As described above, the roadway traffic noise component of the combined noise analysis accounts for cumulative development in the Project area. The aircraft noise component of the combined analysis similarly accounts for all future aircraft-related noise, as none of the cumulative projects would contribute to aircraft noise (i.e., none of the cumulative projects would add aircraft operations or change the operational characteristics of flights). As described in Section 4.7.2.6, future combined roadway traffic and aircraft noise would not exceed the significance thresholds; therefore, combined roadway and aircraft noise impacts would be ***less than significant***.

4.7.2.8 Summary of Impact Determinations

Table 4.7.2-6 summarizes the impact determinations of the proposed Project related to roadway traffic noise, as described above in Sections 4.7.2.5 and 4.7.2.6. Impact determinations are based on the significance criteria presented in Section 4.7.2.4, and the information and data sources cited throughout Section 4.7.2.

Table 4.7.2-6
Summary of Impacts and Mitigation Measures Associated with the Proposed Project Related to Roadway Traffic Noise

Environmental Impacts	Impact Determination	Mitigation Measures	Level of Significance After Mitigation
Impact 4.7.2-1: Future roadway traffic associated with proposed Project operations would not cause existing ambient noise levels at noise-sensitive uses to increase by more than the allowable limits. This would result in a ***less than significant impact*** for operations.	Operations: Less than Significant Construction: Not applicable	Operations: No mitigation is required Construction: Not applicable	Operations: Less than Significant Construction: Not applicable
Impact 4.7.2-2: Future roadway traffic associated with proposed Project operations would not cause future noise levels in the worst-hour to exceed existing ambient noise levels at noise-sensitive uses by 12 dBA or more. This would result in a ***less than significant impact*** for operations.	Operations: Less than Significant Construction: Not applicable	Operations: No mitigation is required Construction: Not applicable	Operations: Less than Significant Construction: Not applicable
Impact 4.7.2-6: Combined roadway traffic noise and aircraft noise associated with operation of the proposed Project would not cause ambient noise levels at noise-sensitive uses to increase by more than the allowable limits. This would result in a ***less than significant impact*** for operations.	Operations: Less than Significant Construction: Not applicable	Operations: No mitigation is required Construction: Not applicable	Operations: Less than Significant Construction: Not applicable