4.9 Noise

This section evaluates the potential for impacts on noise resulting from implementation of the proposed French Hotel Project (Proposed Project). This section is partially based on the following technical report:

- Noise and Vibration Analysis for The French Hotel San Juan Capistrano. MIG, November 24, 2025. (Appendix I)

A Notice of Preparation for the Project was released for public review on March 19, 2026, and an EIR Scoping Meeting was held on April 6, 2026. Comments pertaining to noise were received during the public scoping period from UNITE HERE Local 11. The comments expressed concerns regarding the adequacy of the Project's noise analysis and recommended evaluation of both construction and operational noise impacts, including consideration of low-frequency noise and implementation of effective and enforceable noise mitigation measures. No comments related to noise were raised during the public scoping meeting.

4.9.1 Environmental Setting

The following sections describe the environmental setting for the project as it relates to noise.

4.9.1.1 Fundamentals of Environmental Noise

Quantification of Noise

The California Department of Transportation (Caltrans) defines noise as sound that is loud, unpleasant, unexpected, or undesired. Further, for the purposes of noise analysis, noise only exists if a source, path, and receiver are present. Sound pressure waves must be produced by a source and transmitted through a medium, such as air. The sound must be perceived by, registered by, or affect a receptor, such as an ear or noise monitoring device (Caltrans 2013a).

Sound pressure levels are quantified using a logarithmic ratio of actual sound pressures to a reference pressure squared, called bels. A bel is typically divided into tenths, or decibels (dB). Sound pressure alone is not a reliable indicator of loudness because frequency (or pitch) also affects how receptors respond to the sound. To account for the pitch of sounds and the corresponding sensitivity of human hearing to them, the raw sound pressure level is adjusted with a frequency-dependent A-weighting scale that is stated in units of decibels (dBA) (Caltrans 2013a). Typical A-weighted noise levels are listed in Table 4.9-1, Typical A-Weighted Noise Levels**.**

Table 4.9-1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet flyover at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 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 daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: Caltrans 2013a.

Note: dBA = A-weighted decibel

A receptor's response to a given noise may vary depending on the sound level, duration of exposure, character of the noise sources, the time of day during which the noise is experienced, and the activity affected by the noise. Activities most affected by noise include rest, relaxation, recreation, study, and communications, such as quiet conversation or telephone calls. In consideration of these factors, different measures of noise exposure have been developed to quantify the extent of the effects from a variety of noise levels. For example, some measures consider the 24-hour noise environment of a location by using a weighted average that penalizes noise levels during normal relaxation and sleep hours. Other measures consider an average noise level over a period of time that includes ambient noise and a steady-state noise source for a given period of time within the averaging period (Caltrans 2013a). The indices for measuring community noise levels that are used in this report are defined below:

Leq, the equivalent energy level, provides an average acoustic or sound energy content of noise, measured during a prescribed period, such as 1 minute, 15 minutes, 1 hour, or 8 hours. The sound level may not be constant over the measured time period, but the average decibel sound level, given as dBA Leq, contains an equal amount of energy as the fluctuating sound level.

CNEL, the community noise equivalent level, is the average equivalent A-weighted sound level over a 24-hour period. This measurement applies weights to noise levels during evening and nighttime hours to compensate for the increased disturbance response of people at those times. CNEL is the equivalent sound level for a 24-hour period with a +5 dBA weighting applied to all sound occurring between 7:00 p.m. and 10:00 p.m. and a +10 dBA weighting applied to all sound occurring between 10:00 p.m. and 7:00 a.m.

Ldn, the day-night noise level, is a 24-hour Leq, except that the nighttime hours (10:00 p.m. to 7:00 a.m.) are assessed a 10 dBA penalty. This penalty attempts to account for the fact that nighttime noise levels are potentially more disturbing than equal daytime noise levels.

The decibel level of a sound decreases (or attenuates) as the distance from the source of that sound increases. For a single point source, such as a piece of mechanical equipment, the sound level normally decreases by approximately 6 dBA for each doubling of distance from the source. Sound that originates from a linear (or "line") source, such as vehicular traffic, attenuates by approximately 3 dBA per doubling of distance. Other contributing factors that affect sound reception include ground absorption, topography that provides a natural barrier, meteorological conditions, or the presence of human-made obstacles, such as buildings and sound barriers (Caltrans 2013a).

Noise Effects

Reaction to a given sound varies depending on acoustic characteristics of the source and the environment of the receptor. The A-scale deemphasizes low-frequency sounds because humans are more sensitive to high-frequency sounds that are more likely to cause hearing damage. People tend to compare an intruding noise to existing background noise levels. If a new noise is considerably louder or noticeable above existing levels, it is generally considered objectionable. The activity that the receptor is engaged in also affects response. For example, the same noise source, such as constant freeway traffic, may be more objectionable to people sleeping than to workers in a factory. A 3 dBA change is the smallest increment that is perceptible by most receivers, and a 5 dBA change in community noise level is clearly noticeable. Generally, 1 to 2 dBA changes are not detectable, except under controlled laboratory conditions. A sound that is 10 dBA greater than the reference sound is typically perceived as twice as loud (Caltrans 2013a).

4.9.1.2 Fundamentals of Environmental Vibration

Vibration is defined as dynamic excitation of an elastic system, such as the ground or a structure, that results in oscillatory movement of the system (Caltrans 2013b). Typical human-made causes of earthborne vibration include trains and construction activities such as blasting, pile-driving, and operation of heavy earthmoving equipment. The resulting waves transmitted through solid material are referred to as structureborne or groundborne vibration. Vibration energy spreads out as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. The vibration levels inside a building depend on the vibration energy that reaches the foundation and the characteristics of the structure that affect propagation of the vibration through it. A heavier building will typically experience lower vibration levels. The most common impact associated with vibration is annoyance resulting from the effects of vibration, such as building movement, rattling of windows, shaking of items on shelves or walls, and rumbling sounds. In more extreme cases, building damage may occur. Because the effects of vibration elicit a greater response than the vibration itself, vibration is typically only perceptible to people inside buildings (FTA 2018).

Vibration levels are typically expressed in terms of the peak particle velocity (PPV) and root mean square (rms) amplitude, both in inches per second (in/sec). PPV is most appropriate for evaluating building damage potential. Caltrans estimates that continuous vibration levels of less than 0.08 PPV and single-event vibration levels of less than 0.12 PPV do not result in damage to even the most fragile historic buildings (Caltrans 2013b). The Federal Transit Administration (FTA) has identified a maximum PPV of 0.2 in/sec for fragile buildings and 0.12 in/sec for extremely fragile historic buildings (FTA 2018).

PPV does not account for human response to vibration. The rms amplitude is used to represent average vibration amplitude, which accounts for the time it takes for the human body to respond to vibration signals. The rms amplitude is also given in decibel notation, referenced as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration relative to human response. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Like airborne noise, groundborne noise is measured in dBA. The sound level accompanying vibration is generally 25 to 40 dBA lower than the vibration velocity level in VdB. Due to its low-frequency components, groundborne noise sounds louder than broadband noise with the same noise level. Typical vibration levels from various sources are shown in Table 4.9-2, Typical Levels of Groundborne Vibration. As shown in this table, the background vibration velocity level in residential areas is usually around 50 VdB, which is below the 65 VdB threshold of human perception (FTA 2018). The same human reaction corresponds to a given vibration velocity level and its resulting noise level; therefore, for simplicity, this analysis refers only to a source's VdB to describe potential human response to groundborne vibration and noise.

Table 4.9-2. Typical Levels of Groundborne Vibration

Vibration Level VdB[1]	in/sec RMS	Typical Sources (50 feet from source)	Human/Structural Response
100	0.01	Blasting from construction projects	Threshold, minor cosmetic damage to fragile buildings
90–100	0.003–0.01	Bulldozers and other heavy tracked construction equipment	Difficulty with tasks such as reading
80–90	0.001–0.003	Commuter rail and rapid transit, upper range	Residential annoyance, infrequent events (e.g., commuter rail)
70–80	0.0003–0.001	Typical commuter rail, bus or truck over bump, typical rapid transit	Residential annoyance, frequent events (e.g., rapid transit)
60–70	0.0001–0.0003	Bus or truck, typical	Limit for vibration-sensitive equipment, approximate threshold for human perception
50	0.00003	Typical background vibration	Not detectable

Source: FTA 2018.

Notes: in/sec = inches per second; rms = root mean square; VdB = vibration decibel

[1] RMS vibration velocity level in VdB relative to 10–6 in/sec.

The general human response to different groundborne vibration velocity levels is described in Table 4.9-3, Human Response to Different Levels of Groundborne Vibration.

Table 4.9-3. Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Noise Level		Human Reaction
	Low Frequency	Mid Frequency	
65 VdB	25 dBA	40 dBA	Approximate threshold of perception for many people. Mid-frequency sound may disturb sleep.
75 VdB	35 dBA	50 dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is annoying. Mid-frequency noise disturbs sleep and is considered annoying in more quiet areas.
85 VdB	45 dBA	60 dBA	Vibration acceptable only if there are an infrequent number of events per day. Low-frequency noise disturbs sleep and mid-frequency noise can be annoying to daytime NSLUs, such as schools.

Source: FTA 2018.

Note: dBA = A-weighted decibel; NSLU = noise-sensitive land use; VdB = vibration decibel

4.9.2 Regulatory Setting

This section describes the federal, state, and local regulatory framework adopted to address noise.

4.9.2.1 Federal

Noise Control Act of 1972

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to (1) establish a means for effective coordination of Federal research and activities in noise control; (2)

authorize the establishment of Federal noise emission standards for products distributed in commerce; and (3) provide information to the public respecting the noise emission and noise reduction characteristics of such products.

While primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. The Environmental Protection Agency (EPA) is directed by Congress to coordinate the programs of all Federal agencies relating to noise research and noise control.

Federal Aviation Administration Standards (Code of Federal Regulations, Title 14, Part 150)

Enforced by the Federal Aviation Administration (FAA), Code of Federal Regulations, Title 14, Part 150, prescribes the procedures, standards, and methods governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. The code also identifies those land uses that are normally compatible with various levels of exposure to noise by individuals. The FAA considers residential land uses to be compatible with exterior noise levels at or less than 65 dBA Ldn.

Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency responsible for administering the Federalaid highway program in accordance with Federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, applies to highway construction projects where a State department of transportation has requested Federal funding for participation in the project. The regulation requires the highway agency to investigate traffic noise impacts in areas adjacent to federally-aided highways for proposed construction of a highway on a new location or the reconstruction of an existing highway to either significantly change the horizontal or vertical alignment or increase the number of throughtraffic lanes. If the highway agency identifies impacts, it must consider abatement. The highway agency must incorporate all feasible and reasonable noise abatement into the project design.

The FHWA regulations for mitigation of highway traffic noise in the planning and design of federally aided highways are contained in Title 23 of the United States Code of Federal Regulations Part 772. The regulations require the following during the planning and design of a highway project:

- Identification of traffic noise impacts;
- Examination of potential mitigation measures;

- The incorporation of reasonable and feasible noise mitigation measures into the highway project; and
- Coordination with local officials to provide helpful information on compatible land use planning and control.

The regulations contain noise abatement criteria, which represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require meeting the abatement criteria in every instance. Rather, they require highway agencies make every reasonable and feasible effort to provide noise mitigation when the criteria are approached or exceeded. Compliance with the noise regulations is a prerequisite for the granting of Federal-aid highway funds for construction or reconstruction of a highway.

Federal Transit Administration Standards

Although the FTA standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the FTA Transit Noise and Vibration Impact Assessment Manual (September 2018) are routinely used for projects proposed by local jurisdictions. The manual includes criteria for assessing the impacts of groundborne vibration, presented in Table 4.9-4, Federal Transit Administration Groundborne Vibration Impact Criteria.

Table 4.9-4. Federal Transit Administration Groundborne Vibration Impact Criteria

Land Use Category	Impact Levels (VdB)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations	65	65	65
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Source: FTA 2018.

Notes: VdB = vibration decibel

Vibration levels are measured in or near the vibration-sensitive use.

[1] "Frequent Events" are defined as more than 70 vibration events of the same source per day.

[2] "Occasional Events" are defined as between 30 and 70 vibration events of the same source per day.

[3] "Infrequent Events" are defined as fewer than 30 vibration events of the same source per day.

4.9.2.2 State

California Noise Control Act (California Health and Safety Code, Sections 46000–46080)

California Health and Safety Code, Sections 46000–46080, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act declares that the State of California has a responsibility to protect the health and

welfare of its citizens through the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare. Section 46050.1 mandates development guidelines for the preparation and content of General Plan Noise Elements.

California Assembly Bill (AB) 2496

AB 2496 Vehicles: Exhaust Systems requires a court to require a certificate of compliance for a violation of the noise limit requirements mentioned for mufflers or exhaust systems for specified vehicles. The bill requires the court to utilize notification procedures and if a certificate of compliance is not provided to the court within three months of the violation date, the bill requires the court to treat this failure as noncompliance and inform the Department of Motor Vehicles. This bill would also require stations providing referee functions to provide for the testing of exhaust systems of motor vehicles and the issuance of certificates of compliance for vehicles that have received a citation for installing, operating, or engaging in the business of installing a whistle-tip onto a vehicle's exhaust system and for motorcycles that have received a citation for the violations mentioned above.

California Senate Bill (SB) 1079

SB 1079 Vehicles: sound-activated enforcement devices authorizes local jurisdictions to use sound-activated enforcement devices to capture vehicle noise levels that exceed legal limits. Under California Vehicle Code, exhaust noise is limited to 95 decibels (dbA) for vehicles and 80 dbA for motorcycles. However, vehicle owners can install new exhaust systems or make other vehicle modifications that change the level of sound produced by their vehicle. These illegal modifications are accessible and easily installed at any in-home garage, resulting in much louder noise disruptions than would be allowed by law.

Building Standards Code

The California Building Standards Code is contained in Title 24 of the California Code of Regulations and consists of 11 different parts that set various construction and building requirements. Part 2, California Building Code, Section 1206, Sound Transmission, establishes sound transmission standards for interior walls, partitions, and floor/ceiling assemblies between adjacent dwelling units and sleeping units and between dwelling units and sleeping units and adjacent public areas. In summary, this code section requires:

- Airborne Sound: Walls, partitions, and floor-ceiling assemblies separating dwelling units and sleeping units from each other or from public or service areas shall have a sound transmission class (STC) of not less than 50 if laboratory tested or have a Normalized Isolation Class of not less than 45 if field tested (Section 1206.2).

- Structure-borne Sound: Floor-ceiling assemblies between dwelling units and sleeping units or between a dwelling unit or sleeping unit and a public or service area within the structure shall have an impact insulation class rating of not less than 50 if laboratory tested or have a Normalized Impact Sound Rating of not less than 45 if field tested. Impact sound insulation is not required for floor-ceiling assemblies over nonhabitable rooms or spaces not designed to be occupied such as garages, mechanical rooms, and storage areas (Section 1206.3).
- Allowable Interior Noise Levels: Interior noise levels attributable to exterior noise sources shall not exceed 45 DNL or CNEL (as set by the local General Plan) in any habitable room.

The California Green Building Standards (CALGreen) Code is Part 11 to the California Building Standards Code. Chapter 5, Nonresidential Mandatory Standards, establishes acoustical control requirements for non-residential buildings. In summary, this code section requires:

- • Prescriptive Exterior Noise Transmission Control: Wall and roof-ceiling assemblies that are part of the building envelope within the 65 CNEL noise contour of an airport or within the 65 DNL or 65 CNEL noise contour of a freeway, expressway, railroad, industrial source, or fixed-guideway source, shall meet a composite STC rating of at least 50 (with exterior windows a minimum STC of 40) or a composite Outdoor-Indoor Sound Transmission Class (OITC) of no less than 40 (with exterior windows a minimum OITC of 30) (Section 5.507.4.1). Buildings exposed to a noise of 65 dB Leq (1-hour) during any hour of operation shall have wall and roof-ceiling assemblies meeting a composite STC of at least 45 (or OITC of at least 35), with exterior windows a minimum STC of 40 (or OITC 30) (Section 5.507.4.1.1).
- • Performance Method Exterior Noise Transmission Control: For buildings located within the 65 DNL, 65 CNEL, or 65 db Leq (1-hour) areas described above, wall and roof-ceiling assemblies shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an Leq (1-hour) of 50 dBA in occupied areas during any hour of operation (Section 5.507.4.2). This requirement shall be documented by preparing an acoustical analysis documenting interior sound levels prepared by personnel approved by the architect or engineer of record.
- • Interior Sound Transmission: Wall and floor assemblies separating tenant spaces and tenant spaces and public spaces shall have an STC of at least 40 (Section 5.507.4.3).

California Noise Insulation Standards

The California Noise Insulation Standards (CCR Title 25 Section 1092) establish uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 25 specifies

that interior noise levels attributable to exterior sources shall not exceed 45 dBA Ldn/CNEL (i.e., the same levels that the EPA recommends for residential interiors) in any habitable room of a new dwelling. An acoustical study must be prepared for proposed multiple unit residential and hotel/motel structures where outdoor Ldn/CNEL is 60 dBA or greater. The study must demonstrate that the design of the building would reduce interior noise to 45 dBA Ldn/CNEL or lower. Because noise levels can increase over time in developing areas, Title 25 also specifies that dwellings are to be designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application. (MLA, n.d.)

California Department of Transportations (Caltrans)

The Caltrans' Transportation and Construction Vibration Guidance Manual provides a summary of vibration criteria that have been reported by researchers, organizations, and governmental agencies and provides recommended thresholds for evaluating potential vibration impacts on buildings (i.e., structural damage). These thresholds are summarized in Table 4.9-5. The thresholds vary depending on whether the vibration source is continuous or transient in nature. A transient source creates an isolated vibration event, such as blasting. Continuous sources also include sources with intermittent but frequent vibration events. While vehicle traffic is considered a continuous vibration source, many types of construction activities fall between continuous and transient in nature.

Table 4.9-5. Caltrans' Vibration Threshold Criteria for Building Damage

	Maximum PPV (in/sec)	
Structural and Condition	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some older buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial and commercial structures	2.0	0.5

Source: Caltrans, 2020.

4.9.2.3 Local

City of San Juan Capistrano Municipal Code

Title 5 (Public Welfare), Chapter 30 (Noise Regulations) of the City's Municipal Code generally prohibits loud noise and establishes that no person shall make, cause or suffer, or permit to be made any noise or sound that is unreasonably loud or disturbing to persons of ordinary sensitivity, or that is so harsh or so prolonged or unnatural or unusual in its use, time or place as to occasion discomfort to persons of ordinary sensitivity. This includes, but is not limited to, noise that is

plainly audible from a distance of twenty-five (25) feet (Section 5-30.01(a)). Exceptions include emergency vehicles, safety devices, public works projects, school activities, and City or permitted community events.

Title 9, (Land use) Chapter 3, (Zoning Districts and Standards), Article 5 (Supplemental District Regulations) establishes the following exterior and interior noise standards for residential and non-residential land uses:

- **Section 9-3.531 (b) Minimum Exterior Noise Standards:** This section establishes the noise standards shown in Table 4.9-6 as the base of measurement for determining noise violations affecting residential, public and institutional, and commercial districts.

Table 4.9-6. City of San Juan Capistrano Noise Standards for Stationary Noise Sources

Exterior Noise Level	Time Period
Residential & Public and Institutional Land Uses	
65 dBA L_{eq}	7:00 A.M. to 7:00 P.M.
55 dBA L_{eq}	7:00 P.M. to 10:00 P.M.
45 dBA L_{eq}	10:00 P.M. to 7:00 A.M.
Commercial Land Uses	
65 Dba L_{eq}	At any time during the day

Source: City of San Juan Capistrano Municipal Code.

Notes: dBA = A-weighted decibels (The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.) Leq = equivalent continuous sound level (The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically 1, 8, or 24 hours.).

- **Section 9-3.531 (c) Interior Noise Standards:** This section establishes that no person shall create any noise which causes the noise level when measured inside a dwelling unit on any residential property during the period of 10 PM to 7 AM to exceed the noise standards in Table 4.9-6 for a cumulative period of more than five (5) minutes in any hour, the noise standard plus 5 dBA for a cumulative period of more than one (1) minute in any hour, or the noise standard plus 10 dBA for any period of time.

- **Section 9.3-531 (d) Special Provisions:** This section exempts certain activities from the City's noise standard, including:

    - Noise sources associated with construction, repairs, remodeling, or the grading of any real property, except that such activities shall not be exempt from the provisions of this section if conducted from 6:00 p.m. to 7:00 a.m. on Monday through Friday, or from 4:30 p.m. to 8:30 a.m. on Saturday, or at any time on Sunday or a national holiday (Section 9-3.53 (d) (4)).

- Noise sources associated with the maintenance of real property used for residential purposes provided such activities take place from 7:00 a.m. to 8:00 p.m. on any day except Sunday or from 9:00 a.m. to 8:00 p.m. on Sunday, for example, mowing lawns and carpentry repairs (Section 9-3.53 (d) (8)).

Title 9, (Land use) Chapter 2, (Administration), Article 4 (Nuisances) establishes that the generation of vibration of a duration and intensity so as to be excessive, disturbing, or objectionable to persons of ordinary sensibility located off-site shall not be permitted.

City of San Juan Capistrano General Plan

A complete rewrite of the City's General Plan was last adopted in December 1999. In May 2002, the City Council approved a variety of changes to several of elements of the General Plan. In February 2022, a new Environmental Justice Element was added to the General Plan. The General Plan's Housing Element is updated every eight years with the latest update adopted in August 2022. The City's General Plan is the principal land use document guiding development within the City. The City's General Plan is a comprehensive plan that establishes goals, objectives, and policies intended to guide growth and development in the City. The General Plan also serves as a blueprint for development throughout the community and is the vehicle through which the community needs, desires, and aspirations are balanced. The San Juan Capistrano General Plan is the fundamental tool for influencing the quality of life in the City.

Noise Element

The Noise element (last updated in 1999) addresses noise sources, identifies ways to reduce the impacts of noise on the community, and lays out policies and programs to set and maintain ambient noise levels compatible with various types of land uses. The Noise Element contains a land use compatibility table (Table 4.9-7 below) that serves as a tool for decision makers to gauge compatibility of new land uses relative to existing noise levels. Additionally, the Noise Element contains noise compatibility standards for exterior and interior noise levels for land uses (see Table 4.9-8, below).

The Noise Element also contains goals and policies that must be used to guide decisions concerning land uses that are common sources of excessive noise levels. The General Plan goals and policies most applicable to the proposed project include the following:

- **Goal N-1:** Minimize the effects of noise through proper land use planning.

  Policy N-1.1: Utilize noise/land use compatibility standards as a guide for future planning and development decisions.

  Policy N-1.2: Provide noise control measures and sound attenuating construction in areas of new construction or rehabilitation.

- **Goal N-2:** Minimize transportation-related noise impacts.

Policy N-2.1: Reduce transportation-related noise impacts to sensitive land uses through the use of noise control measures.

Policy N-2.2: Control truck traffic routing to reduce transportation-related noise impacts to sensitive land uses.

- **Goal N-3:** Minimize non-transportation-related noise impacts.

Policy N-3.1: Reduce the impacts of noise-producing land uses and activities on noise-sensitive land uses.

Policy N-3.2: Incorporate sound-reduction design in new construction or rehabilitation projects impacted by non transportation related noise.

Table 4.9-7. Land Use Compatibility for Community Noise Environments

	Community Noise Exposure (CNEL)			
Land Use Type	**Normally Acceptable**	**Conditionally Acceptable**	**Normally Acceptable**	**Clearly Unacceptable**
Residential – Single Family, Multifamily, Duplex	50 – 60	60 – 70	70 – 75	≥ 75
Residential – Mobile Homes	50 – 60	60 – 65	65 – 75	≥ 75
Transient Lodging - Motel, Hotels	50 – 60	60 – 70	70 – 80	≥ 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 60	60 – 65	65 – 75	≥ 75
Auditoriums, Concert Halls, Amphitheaters	N/A	50 – 60	60 – 70	≥ 70
Sports Arenas, Outdoor Spectator Sports, amusement Parks	50 – 65	65 – 75	N/A	≥ 75
Playgrounds, Neighborhood Parks	50 – 65	65 – 70	70 – 75	≥ 75
Golf Courses, Riding Stables, Cemeteries	50 – 70	70 – 75	75 – 85	≥ 85
Office and Profession Buildings	50 – 65	65 – 75	75 – 80	≥ 80
Commercial Retail, Banks, Restaurants, Theaters	50 – 70	70 – 80	80 – 85	≥ 85
Industrial, Manufacturing, Utilities, Wholesale, Service Stations	50 – 70	70 – 85	N/A	N/A
Agriculture	≥ 50	N/A	N/A	N/A

Source: City of San Juan Capistrano Municipal Code.

Notes: 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. CNEL = Community Noise Equivalent Level N/A = not applicable

Table 4.9-8. City of San Juan Capistrano Interior and Exterior Noise Standards

Land Use Category	Exterior Standards (CNEL)	Interior Standards (CNEL)
Residential – Single Family, Multifamily, Duplex, Mobile Home	65 dBA	45 dBA
Residential – Transient Lodging, Hotels, Motels, Nursing Homes, Hospitals, Assisted Care Facilities	65 dBA	45 dBA
Private Offices, Churches, Libraries, Theaters, Concert Halls, meeting Halls, Schools	65 dBA	45 dBA
General Commercial, Retail, Reception, Restaurant	65 dBA	50 dBA
Manufacturing, Industrial	--	--
Parks, Playgrounds	65 dBA	--
Golf Courses, Riding Stables, Cemeteries	70 dBA	--

Source: City of San Juan Capistrano General Plan (1999).
Notes: Noise standards not applied to Industrial districts.
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels

4.9.3 Existing Conditions

Existing Noise Environment

The Project site is located in the Town Center area of the City of San Juan Capistrano and is bounded by Camino Capistrano to the east, commercial uses to the north and south, and the LOSSAN rail corridor utilized by Amtrak, Metrolink, and freight rail operations to the west. I-5 and SR- 74 are located approximately 0.2 mile and 0.3 mile east of the Project site, respectively. As a result, the existing noise environment is influenced primarily by rail operations, roadway traffic, and surrounding commercial activity.

Ambient noise monitoring was conducted by MIG from April 24 through April 25, 2023, using one long-term monitoring location and two short-term monitoring locations positioned to characterize existing noise conditions throughout the Project site. Monitoring locations included an area adjacent to the rail corridor along the western property boundary, an area adjacent to Camino Capistrano along the eastern property boundary, and a central location within the Project site.

Based on field observations and monitoring results, passenger rail, commuter rail, freight rail activity, roadway traffic along Camino Capistrano, and nearby commercial uses are the dominant contributors to the existing noise environment.

The long-term monitoring location adjacent to the rail corridor recorded a calculated Community Noise Equivalent Level (CNEL) of 70.8 dBA. Hourly daytime noise levels ranged from 57.2 to 62.8 dBA Leq, evening noise levels ranged from 59.5 to 70.1 dBA Leq, and nighttime noise levels ranged from 45.4 to 70.1 dBA Leq. Elevated noise levels during evening and nighttime periods were associated primarily with freight rail activity. See Table 4.9-9, Summary of Measured Long-Term Ambient Noise Levels.

Table 4.9-9. Summary of Measured Long-Term Ambient Noise Levels

Day/Site	Duration	L_{min}	L_{max}	Measured Hourly L_{eq} Range (dBA)[a]			Calculated 24-Hour CNE[b]
				Daytime (7 A.M. to 7 P.M.)	Evening (7 P.M. to 10 P.M.)	Nighttime (10 P.M. to 7 A.M.)	
2 P.M. Monday, April 24, 2023, to 2 P.M. Tuesday, April 25th, 2023							
LT-1	24 Hours	41.2	98.3	57.2 – 62.8	59.5 – 70.1	45.4 – 70.1	70.8

Source: MIG (Appendix I).

Notes: a: Values are the lowest and highest average hourly Leq value during the listed time.

b: CNEL data is presented for a full 24-hour monitoring period (2 PM on 04/24/23 to 2 PM on 4/25/23).

Short-term monitoring locations recorded equivalent noise levels ranging from approximately 57.8 to 62.8 dBA Leq, demonstrating that noise levels are relatively consistent across the site, although noise characteristics differ by location. Areas closer to the rail corridor experience intermittent high-level noise events associated with train pass-bys, while areas closer to Camino Capistrano are influenced by more continuous roadway traffic noise. See Table 4.9-10, Summary of Measured Short-Term Ambient Noise Levels.

Table 4.9-10. Summary of Measured Short-Term Ambient Noise Levels

Day/Site	Duration	Measured Noise Level (dBA)		
		L_{min}	L_{max}	L_{eq}
Monday, April 24, 2023 (2:10 P.M. to 2:39 P.M.)				
ST-1	30 minutes	48.7	82.8	62.1
LT-1	30 minutes	49.8	67.6	54.4
Monday, April 24, 2023 (4:16 P.M. to 4:45 P.M.)				
ST-2	30 minutes	48.2	87.2	61.5
LT-1	30 minutes	49.9	87.8	62.9
Monday, April 24, 2023 (5:20 P.M. to 6:20 P.M.)				
ST-1	60 minutes	49.1	87.2	62.2
LT-1	60 minutes	50.0	83.5	58.4
Tuesday, April 25, 2023 (12:07 P.M. to 1:46 P.M.)				
ST-1	100 minutes	48.6	87.2	62.8
LT-1	100 minutes	48.8	88.6	61.3
Tuesday, April 25, 2023 (6:30 P.M. to 10:00 P.M.)				
ST-1	210 minutes	44.7	79.7	57.8

Source: MIG (Appendix I).

As shown in Table 4.9-9, measured hourly noise levels at the proposed project site were consistently above 57 dBA Leq during daytime and evening periods, reaching up to 70 dBA Leq during hours with freight train activity. Nighttime hours were generally quieter, but also reached up to 70 dBA Leq due to freight rail activity. As shown in Table 4.9-9 and Table 4.9-10, overall noise levels are similar across the site. While the western half of the site (LT-1, ST-2) is more impacted by shorter, relatively higher railroad noise that reached 70 dBA Leq, the eastern part of the site (ST-1) is exposed to more consistent but relatively lower traffic noise levels that were less than 63 dBA Leq. The calculated CNEL value at LT-1 was 70.8 dBA.

Existing Vibration Environment

Groundborne vibration monitoring was conducted on April 25, 2023, approximately 29 feet from the centerline of the nearest rail track adjacent to the Project site. Measurements were collected during six train events consisting of three Amtrak trains, two Metrolink trains, and one freight train.

The highest vibration level measured was associated with a freight locomotive and recorded a peak particle velocity (PPV) of 0.106 inch per second, corresponding to 88.6 vibration decibels (VdB). Passenger rail and commuter rail operations generated lower vibration levels because trains were observed to be operating at relatively slow speeds while arriving at or departing from the nearby San Juan Capistrano station.

Accordingly, the existing vibration environment at the Project site is dominated by periodic train-related vibration events generated by freight, Amtrak, and Metrolink operations along the adjacent rail corridor.

Sensitive Receptors

Noise-sensitive receptors are land uses where occupants are particularly susceptible to noise disturbance, including residences, hotels, parks, schools, places of worship, hospitals, and similar uses.

The closest off-site sensitive receptors to the Project site include residences located west of the rail corridor within the Los Rios Historic District and recreational users of Veterans Park located east of Camino Capistrano. Commercial uses surrounding the Project site are generally not considered noise-sensitive receptors.

The Proposed Project itself would introduce a noise-sensitive land use in the form of transient lodging accommodations. The City of San Juan Capistrano General Plan Noise Element identifies hotels and motels as transient lodging uses and considers such uses conditionally acceptable within noise environments between 65 and 70 dBA CNEL and normally unacceptable above 70 dBA CNEL unless appropriate noise attenuation measures are incorporated.

4.9.4 Method of Analysis

The noise and vibration analysis is based on the French Hotel Project Noise and Vibration Technical Memorandum prepared by MIG, Inc. The analysis evaluates existing and future noise and vibration conditions associated with construction and operation of the Proposed Project using established acoustical engineering methods and applicable federal, state, and local standards.

Existing ambient noise conditions were characterized through field measurements conducted on April 24 and 25, 2023. The monitoring program included one long-term noise monitoring location and two short-term noise monitoring locations strategically placed to characterize noise levels adjacent to the rail corridor, Camino Capistrano, and within the Project site. Noise measurements were collected using calibrated sound level meters and reported using standard acoustical descriptors, including the equivalent sound level (Leq), maximum sound level (Lmax), and Community Noise Equivalent Level (CNEL). Existing noise sources observed during the monitoring period included passenger and freight rail operations, vehicular traffic, and commercial activities in the surrounding area.

Existing vibration conditions were evaluated through field measurements collected on April 25, 2023, adjacent to the rail corridor west of the Project site. Vibration measurements were recorded during Amtrak, Metrolink, and freight train pass-bys and were evaluated using peak particle velocity (PPV) and vibration decibel (VdB) metrics.

Construction noise impacts were evaluated using methodologies published by the Federal Transit Administration (FTA), Federal Highway Administration (FHWA), and the California Department of Transportation (Caltrans), as applicable. Construction equipment noise levels were estimated based on the anticipated construction activities and equipment types associated with implementation of the Proposed Project.

Operational noise impacts were evaluated using a combination of field measurements, project-specific operational information, and industry-standard acoustical modeling techniques. Noise generated by project-related activities, including hotel operations, restaurant uses, mechanical equipment, parking operations, and vehicle circulation, was assessed relative to applicable City noise standards and surrounding sensitive receptors.

Traffic noise impacts were evaluated based on projected roadway traffic volumes generated by the Proposed Project and accepted traffic noise prediction methodologies. Interior and exterior noise exposure associated with rail and roadway noise sources was evaluated for consistency with applicable City of San Juan Capistrano General Plan Noise Element compatibility criteria and California Building Code requirements.

Potential noise and vibration impacts were evaluated using the significance thresholds identified in Appendix G of the State CEQA Guidelines, the City of San Juan Capistrano General Plan Noise Element, and other applicable local standards and regulations.

This methodology is thorough enough for an EIR while avoiding the level of detail that belongs in the technical appendix. It also sets up the analysis sections nicely because it references all the major components addressed in the MIG study: ambient monitoring, vibration monitoring, construction noise, operational noise, traffic noise, and rail-related noise exposure.

4.9.5 Thresholds of Significance

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the project would have a significant impact on noise if it would result in:

- **Threshold NOI-a:** Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- **Threshold NOI-b:** Generation of excessive groundborne vibration or groundborne noise levels.
- **Threshold NOI-c:** For a project located within the vicinity of a private airstrip or 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.

The Initial Study, provided as Appendix A, substantiates that there would be no impact associated with Threshold NOI-c because the Project is not located within the vicinity of a private airstrip. This threshold will not be addressed further in the following analysis.

4.9.6 Plans, Programs, and Policies

Compliance measures are uniformly applied regulations or requirements imposed by the approving agency based on the type of action proposed. Because these measures are standard requirements, they are not considered mitigation measures. The following existing plans, programs, and policies (PPPs) apply to development allowed under the Proposed Project and help reduce or avoid potential impacts related to noise:

PPP NOI-1 **Restrict Work Hours per Municipal Code Section 9-3.531(d)(4):** All construction activities, including deliveries, shall be subject to the requirements of City Municipal Code Section 9-3.531(d)(4). Unless otherwise approved by the City, construction activities shall only occur during the following times:

a. Monday through Friday: 7 AM to 6 PM.

b. Saturday: 8:30 AM to 4:30 PM.

Construction shall be prohibited on Sundays and national holidays: The construction contractor shall post a sign at all entrances to the construction site informing contractors, subcontractors, construction workers, etc. of this requirement.

4.9.7 Environmental Impacts

The following sections address various potential impacts relating to noise that could result from implementation of the project.

Project Design Features

Construction Vibration Control Measures

The Project has incorporated the following construction vibration control measures into the Proposed Project. Accordingly, these PDFs shall be included in all bid, contract, and engineering and site plan documents (e.g., grading and other improvement plans) developed for the Proposed Project.

PDF NOI-1 **Construction Sequencing.** Construction activities associated with the adaptive reuse of the Casa Manuel Garcia Adobe and Domingo Yorba Adobe shall be conducted in accordance with the recommendations contained in the Structural Evaluation and Seismic Retrofit Recommendations prepared by Structural Focus (2022). These recommendations include, but are not limited to, demolition methods that limit vibration and incidental contact with the adobe walls and construction sequencing that provides for repair of the adobe walls prior to installation of anchor rods in order to minimize potential vibration impacts to the historic structures. These requirements shall be incorporated into the project's bid, contract, grading, engineering, and improvement plan documents.

PDF NOI-2 **Prohibit Vibratory Equipment.** The project shall prohibit the use of vibratory rollers, vibratory/impact hammers, and other potential large vibration-generating equipment (e.g., hydraulic breakers, hoe rams, large tracked equipment) at the site. Plate compactors and compactor rollers are acceptable.

a. If it is not feasible to prohibit the use of vibratory equipment within 50 feet of the parts of the adobe structures to remain on-site, the construction contractor shall, in consultation with a licensed structural engineer, develop a project-specific construction vibration plan that identifies planned vibration-generating construction activities and potential ground-borne vibration levels (given specific equipment and soil conditions) at the adobe

structures and the vibration control measures that will be employed to ensure equipment and work activities would not result in vibrations that exceed Caltrans' damage criterion for historic and older buildings of 0.25 inches/second peak particle velocity. Such measures may include but are not limited to the use of vibration monitoring to measure actual vibration levels, the use of photo monitoring or documentation of building conditions prior to, during, and after construction activities, and/or the use of trenches or barriers that attenuate ground-borne vibration. These requirements shall be incorporated into the project's construction documents, including the grading, engineering, and improvement plans, and shall be implemented throughout construction.

4.9.7.1 Threshold NOI-a: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact Analysis

Construction

Construction of the Proposed Project would generate temporary noise from demolition, site preparation, grading, trenching, building construction, paving, and architectural coating activities. Construction noise would primarily originate from operation of heavy equipment, construction vehicles, delivery trucks, and worker traffic accessing the site from Camino Capistrano. Project construction is anticipated to occur over an approximately 50-week period.

The City of San Juan Capistrano Municipal Code exempts construction activities from the City's quantitative noise standards provided such activities occur during allowable construction hours. Pursuant to Municipal Code Section 9-3.531(d)(4), construction activities are permitted between 7:00 a.m. and 6:00 p.m. Monday through Friday and between 8:30 a.m. and 4:30 p.m. on Saturday, with no construction permitted on Sundays or national holidays.

The nearest sensitive receptors to the Project Site include residences within the Los Rios Historic District located west of the site beyond the railroad corridor and Veterans Park located east of the site across Camino Capistrano. Commercial uses immediately north and south of the site would also be exposed to construction noise; however, these uses are not considered noise-sensitive receptors.

As shown in Table 4.9-11, Project Construction Equipment Noise Levels, construction equipment could generate noise levels ranging from approximately 72 dBA L_{eq} to 82 dBA L_{eq} at distances between 50 and 75 feet, depending on the equipment type and operational characteristics. At a

distance of 50 feet, the loudest equipment anticipated during Project construction could generate sustained noise levels of up to 82 dBA L_{eq}.

Table 4.9-11. Project Construction Equipment Noise Levels

Equipment	Noise Level at 50 feet (L_{max})	Percent Usage Factor[a]	Predicted Equipment Noise Levels (L_{eq})					
			50 Feet	75 Feet	100 Feet	150 Feet	200 Feet	250 Feet
Bulldozer	85	40%	81	77	75	71	69	67
Backhoe	80	40%	76	72	70	66	64	62
Concrete Mixer	85	40%	81	77	75	71	69	67
Crane	85	16%	77	74	71	67	65	63
Excavator	85	40%	81	77	75	71	69	67
Man Lift	85	20%	78	74	72	68	66	64
Paver	85	50%	82	78	76	72	70	68
Roller	85	20%	78	74	72	68	66	64
Delivery Truck	85	40%	81	77	75	71	69	67

Source: MIG (Appendix I).

Notes: a: Usage factors referes to the amount (percent) of time the equipment produces noise over the time period.

The residences west of the site are located approximately 75 feet from the Project boundary, approximately 90 feet from the nearest anticipated construction work areas, and more than 250 feet from the center of the site. Construction equipment operating along the western edge of the site could generate noise levels ranging from approximately 72 dBA L_{eq} to 78 dBA L_{eq} at the nearest residences. Construction activities occurring nearer the center of the site would generate noise levels ranging from approximately 62 dBA L_{eq} to 68 dBA L_{eq} at those same receptors.

Ambient noise monitoring conducted for the Project determined that existing daytime and evening noise levels adjacent to the rail corridor generally range from approximately 57 dBA L_{eq} to 70 dBA Leq due primarily to Amtrak, Metrolink, freight rail operations, and surrounding commercial activity. Accordingly, Project construction could temporarily increase ambient noise levels at nearby residential receptors by approximately 8 dBA L_{eq} to 21 dBA L_{eq}, depending on the location of active construction, equipment in use, and existing background conditions.

Although these temporary increases would be audible and periodically noticeable, they would occur only during active construction, would move throughout the site as construction progresses, and would cease upon completion of construction. More importantly, the City's General Plan and Municipal Code do not establish quantitative noise limits for temporary construction activities conducted during permitted construction hours. Rather, construction noise is regulated through restrictions on the hours of construction and implementation of reasonable construction practices. As discussed below, the Proposed Project would comply with the City's allowable construction hours and incorporate project design features intended to minimize construction noise.

Accordingly, while temporary construction noise increases would occur, they would not exceed the applicable standards established by the City for construction activities.

Several characteristics of the Proposed Project would limit the intensity and duration of construction noise. First, the Proposed Project generally follows the existing site topography and does not require extensive below-grade construction, major excavation, or deep shoring activities that typically generate the highest construction noise levels. Second, construction activities associated with the rehabilitation of the historic Domingo Yorba Adobe and Casa Manuel Garcia Adobe would be conducted in accordance with the Structural Evaluation and Seismic Retrofit Recommendations prepared by Structural Focus (2022), including demolition methods that limit vibration and incidental contact with the adobe walls and construction sequencing intended to minimize structural disturbance to the historic resources. These methods reduce the need for heavy demolition and high-impact construction activities in proximity to the adobes. Finally, construction would occur over an approximately 50-week period and would progress through discrete phases, such that the loudest construction activities would occur only intermittently and within limited portions of the site.

In addition, construction activities would comply with the City's allowable construction hours pursuant to Municipal Code Section 9-3.531(d)(4). The Project also incorporates construction noise control features evaluated as part of the Noise and Vibration Technical Memorandum, including the use of properly maintained equipment equipped with standard noise suppression devices, shielding and placement of stationary equipment away from sensitive receptors where practical, use of pneumatic tool mufflers, and connection to existing electrical service in lieu of portable generators where feasible. These project design features reduce temporary construction noise at nearby sensitive receptors and were incorporated into the construction noise analysis contained in Appendix I.

Accordingly, although construction activities would temporarily increase ambient noise levels at nearby receptors, the increases would occur only during permitted daytime construction hours, would be intermittent as construction progressed across the site, and would comply with the City's applicable construction noise regulations. Because the City regulates temporary construction noise through allowable construction hours and implementation of reasonable noise-control practices, rather than quantitative construction noise limits, the Proposed Project would not generate a substantial temporary increase in ambient noise in excess of applicable standards.

Importantly, neither the City's General Plan nor Municipal Code establishes quantitative noise limits for temporary construction activities conducted during permitted construction hours. Instead, construction noise is regulated through restrictions on hours of operation and implementation of reasonable noise-control practices. Although the City does not establish a quantitative construction noise threshold, the Federal Transit Administration (FTA) identifies 80

dBA Leq as a criterion for evaluating daytime construction noise at residential receptors. As shown in Table 4.9-11, the highest predicted construction noise level at the nearest residential receptors would be approximately 78 dBA Leq, which is below the FTA's daytime construction noise criterion. In addition, construction activities would occur only during allowable hours pursuant to Municipal Code Section 9-3.531(d)(4) and would incorporate the project design features described above to minimize construction noise. Accordingly, construction activities would comply with applicable City regulations and would not generate a substantial temporary increase in ambient noise levels in excess of applicable standards.

While construction would result in a temporary increase in ambient noise levels at nearby receptors, the increase would be temporary, intermittent, limited to daytime construction periods, and consistent with applicable City regulations. Therefore, the Proposed Project would not generate a substantial temporary increase in ambient noise levels in excess of applicable standards.

Operation

Operation of the Proposed Project would generate noise from hotel guest activity, restaurant operations, outdoor gathering areas, valet services, vehicle circulation, mechanical equipment, deliveries, and maintenance activities. The Noise and Vibration Analysis prepared by MIG evaluated these operational noise sources relative to the noise standards contained in the City of San Juan Capistrano General Plan Noise Element and Municipal Code.

Existing ambient noise conditions at the Project site are primarily influenced by passenger, commuter, and freight rail activity along the adjacent LOSSAN rail corridor, traffic along Camino Capistrano, and surrounding commercial activity. Ambient noise monitoring conducted at the site recorded daytime noise levels ranging from 57.2 to 62.8 dBA L_{eq} and evening noise levels ranging from 59.5 to 70.1 dBA L_{eq}, with noise levels reaching approximately 70 dBA Leq during freight rail activity. The calculated 24-hour CNEL at the western portion of the site was 70.8 dBA. Existing ambient noise conditions therefore reflect an urban environment already influenced by transportation and commercial noise sources.

The properties adjacent to the Project site are primarily designated and developed with commercial uses. Pursuant to Municipal Code Section 9-3.531, the applicable exterior noise standard for commercial land uses is 65 dBA L_{eq} at any time of day. Residential properties located west of the rail corridor are subject to more restrictive standards of 65 dBA L_{eq} during daytime hours, 55 dBA L_{eq} during evening hours, and 45 dBA L_{eq} during nighttime hours.

The Noise and Vibration Analysis (Appendix I) notes that hotels generally are not substantial noise-generating land uses because they do not typically involve intensive nighttime activities and most mechanical equipment is enclosed within equipment rooms or integrated into building design. The Proposed Project incorporates numerous design features intended to minimize operational

noise, including retention of the historic Manuel Garcia and Domingo Yorba Adobes along Camino Capistrano, placement of the pool, spa, outdoor dining, and other activity areas within the interior of the site, enclosure of pool equipment within an equipment room, enclosure of refuse facilities, and installation of masonry walls along the western property boundary. These features provide shielding between operational activities and adjacent off-site receptors. For purposes of the operational noise analysis, the restaurant, bar, and event barn are assumed to operate from 7:00 a.m. to 10:00 p.m. Monday through Thursday and from 7:00 a.m. to 11:00 p.m. Friday through Sunday. The pool deck area is assumed to operate daily from 7:00 a.m. to 10:00 p.m. These operating hours were incorporated into the Noise and Vibration Analysis (Appendix I) and reflect that outdoor activity areas would not operate during the late-night hours when the City's most restrictive exterior noise standards apply.

The primary stationary noise sources associated with operation of the Proposed Project would consist of rooftop heat pump units and the mechanical car-lift parking system. The noise analysis evaluated the maximum potential noise levels associated with these sources at the nearest affected property line. Results of the analysis are summarized in Table 4.9-12.

As shown in Table 4.9-12, the highest predicted combined operational noise level from the car-lift and all heat pump units operating simultaneously would be approximately 63.2 dBA L_{eq} at the southern property line. This level remains below the City's commercial exterior noise standard of 65 dBA L_{eq}. The analysis further determined that individual and cumulative heat pump noise levels would remain below measured ambient daytime, evening, and nighttime noise levels at the site.

Table 4.9-12. Estimate Project Stationary Source Noise Levels

Source(s)	Sound Power Rating[a]	Distance to Southern Property Line	Estimated Hourly Noise Level (dBA L_{eq})		
			Lift Operation[a]	1 Heat Pump[b]	All Building Heat Pumps[c]
Building 3B Heat Pump	75 dBA	85 Feet	--	35.5	51.7
Building 3C Heat Pump	75 dBA	30 Feet	--	45.5	58.0
Car Lift	63 dBA	5 Feet	63.0	--	--
Combined Car Lift and All Heat Pumps	--	5 Feet	63.2	--	--
City Commercial Noise Standard (any time)[d]			65	65	65
Standard Exceeded[e]			No	No	No

Source: MIG (Appendix I).

Notes: (a) The car lift is assumed to operate at a maximum of 63 dBA at 5 feet (Automated Parking Company 2025). The shielding from Building 5 is not accounted for in the estimation.

(a) Each York R-410 split-system heat pump unit is rated according to the American Hearing and Refrigeration Institute (AHRI) Standard 270. Sound power rating is a measure of how much sound power is emitted from a source. For typical point source propagation, sound pressure levels are equal to sound power levels at approximately 1-foot from the source.

(c) The estimated noise level at distance and with multiple sources in operation is calculated according to Equation 1 and Equation 4 shown in Attachment 01. All units are assumed to be in operation, and no shielding is assumed for the heat pump units.

(d) See Table 4.9-4.

(e) This table estimates noise levels for each stationary source at the nearest property line, the commercial property south of the proposed Project. This table uses the shortest distance between each source and the property line. Using the point for the highest noise source, the property line five feet from the car-lift, Building 3B and Building 3C distances would increase to approximately 110 feet and 175 feet, respectively. The combined noise levels for the car lift and all building HVAC units would be approximately 63.2 dBA).

The analysis also evaluated noise levels at the nearest residential receptor west of the rail corridor. The closest residential property line is located more than 230 feet from the nearest on-site heat pump unit. At that distance, operation of all heat pump units serving the nearest building simultaneously would generate approximately 40.3 dBA L_{eq}, which is below the City's residential nighttime exterior noise standard of 45 dBA L_{eq}.

Importantly, the operational noise modeling was intentionally conservative. The analysis assumed all building heat pump units and the mechanical car-lift would operate simultaneously for a full hour and did not account for additional noise attenuation provided by parapets, roof walls, Building 5, or other site features. The Noise and Vibration Analysis concluded that actual operational noise levels would likely be lower than those predicted.

Off-Site Traffic Noise Increases

Operation of the Proposed Project would also generate vehicle trips on local roadways. According to the project's traffic analysis, the Project would generate approximately 409 daily trips and up to 57 peak-hour trips. According to traffic volume data reported by the City of San Juan Capistrano (2019), Camino Capistrano carries approximately 15,000 average daily trips. Caltrans guidance indicates that a doubling of traffic volume is generally required to produce an approximately 3 dBA increase in roadway traffic noise levels. Because the Proposed Project would increase daily traffic volumes on Camino Capistrano by only a small fraction of existing traffic volumes and would not approach a doubling of traffic on Camino Capistrano or any other roadway serving the Project Site, Project-generated traffic would not result in a substantial increase in roadway traffic noise levels.

Based on the foregoing, operation of the Proposed Project would not cause operational noise levels to exceed applicable City standards, would not result in a substantial permanent increase in ambient noise levels in the vicinity of the Project site, and would not substantially increase traffic-related noise levels on surrounding roadways. Therefore, operational impacts associated with noise generation would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are required.

4.9.7.2 Threshold NOI-b: Generation of excessive groundborne vibration or groundborne noise levels.

Impact Analysis

Construction

Construction of the Proposed Project would involve demolition, site preparation, grading, trenching, foundation construction, and paving activities that have the potential to generate temporary groundborne vibration and groundborne noise. As identified in the Noise and Vibration Technical Memorandum, the Project site contains the historic Manuel Garcia Adobe and Domingo Yorba Adobe, which would be preserved and adaptively reused as part of the Proposed Project. Because historic adobe structures are particularly sensitive to vibration-related damage, the Project has been specifically designed to minimize vibration-generating construction activities and incorporate construction methods intended to protect these resources through incorporation of PDF NOI-1 and PDF NOI-2.

The Noise and Vibration Technical Memorandum notes that the Proposed Project follows the site's existing grade and therefore avoids major excavation and shoring activities that would otherwise generate elevated vibration levels. In addition, the Structural Evaluation and Seismic Retrofit Recommendations prepared by Structural Focus (2022) identify construction methods necessary to protect the retained Domingo Yorba Adobe and Casa Manuel Garcia Adobe during rehabilitation, including demolition methods that minimize vibration and incidental contact with the adobe walls and construction sequencing that provides for stabilization and repair of the adobe walls prior to installation of anchor rods and other retrofit elements. These recommendations have been incorporated into the Proposed Project as Project Design Features and were assumed in the Noise and Vibration Technical Memorandum's evaluation of construction vibration. The recommendations shall be incorporated into the project's grading, engineering, and construction documents and implemented by the contractor during construction, subject to review through the City's building permit and construction inspection process.

To further reduce the potential for vibration impacts, the Project includes construction vibration control measures (PDF NOI-1 and PDF NOI-2) that prohibit the use of major vibration-generating equipment, including vibratory rollers, vibratory and impact hammers, hydraulic breakers, hoe-rams, and similar equipment. If use of vibration-generating equipment within 50 feet of retained portions of the adobe structures cannot be avoided, preparation of a project-specific Construction Vibration Plan by a licensed structural engineer would be required. The plan would evaluate anticipated vibration levels and identify measures necessary to ensure compliance with the Caltrans vibration damage criterion for historic and older buildings. Such measures may include vibration monitoring, photographic documentation of existing conditions, and vibration attenuation measures.

Through implementation of PDF NOI-1 and PDF NOI-2, the Proposed Project would prohibit the use of the construction equipment that typically generates the highest levels of groundborne vibration, including vibratory rollers, vibratory/impact hammers, hydraulic breakers, and hoe-rams. If use of such equipment within 50 feet of the retained portions of the adobe structures cannot be avoided, a project-specific Construction Vibration Plan prepared by a licensed structural engineer would be required to evaluate anticipated vibration levels and identify measures necessary to ensure compliance with the Caltrans recommended vibration damage criterion of 0.25 inches per second peak particle velocity (PPV) for historic and older buildings. Accordingly, the Proposed Project has been specifically designed to avoid excessive construction vibration and to ensure that, if higher-vibration equipment becomes necessary, construction activities would be evaluated and controlled to prevent vibration levels from exceeding the applicable damage criterion. Therefore, temporary construction-related groundborne vibration and groundborne noise impacts would be less than significant.

Operation

Operation of the Proposed Project would not involve substantial vibration-generating equipment or activities. Hotel operations, restaurant uses, guest amenities, HVAC systems, and the valet-operated parking lift would not generate vibration levels that would be considered excessive. Accordingly, operation of the Proposed Project would not generate excessive groundborne vibration or groundborne noise.

The Project site is located immediately adjacent to the LOSSAN rail corridor and existing rail operations currently generate measurable groundborne vibration at the site. Vibration monitoring conducted by MIG recorded a maximum vibration level of 88.6 VdB during passage of a freight locomotive approximately 29 feet from the nearest track. Amtrak and Metrolink train events generated lower vibration levels of 77.5 VdB and 75.9 VdB, respectively.

Using the Federal Transit Administration (FTA) methodology, MIG evaluated future vibration exposure at the hotel buildings closest to the rail corridor (Buildings 3A and 3C). The analysis accounted for increased distance from the tracks as well as vibration attenuation associated with the proposed podium foundation design and estimated a minimum reduction of 13 VdB between the measured vibration source and occupied hotel rooms. Nevertheless, the analysis determined that certain freight rail events may exceed the applicable FTA vibration annoyance criteria for hotel uses.

As shown in Table 4.9-13, estimated vibration levels associated with freight locomotives and freight cars are predicted to exceed the applicable FTA vibration annoyance criteria at portions of Buildings 3A and 3C, while vibration levels associated with Amtrak and Metrolink operations would remain below applicable thresholds. The Noise and Vibration Technical Memorandum (Appendix I) concludes that these exceedances are attributable to existing freight rail operations

adjacent to the site and that the majority of the Project site would not be exposed to vibration levels exceeding FTA criteria. Because the Proposed Project would not increase rail activity, alter train operations, or otherwise contribute to railroad-generated vibration levels, the Project would not generate excessive groundborne vibration or groundborne noise. Rather, the identified vibration levels represent an existing environmental condition affecting portions of the site.

Table 4.9-13. Estimated Vibration Levels at Building 1A and Building 1C

Event Category[a]	Events per Day	FTA Impact Criteria[b]	Estimated VdB[c]		FTA Criteria Exceeded?
			Building 3A	Building 3C	
Infrequent Events (<10 day)					
Freight Locomotive	≤10	80	85.3	84.7	Yes
Occasional Events (30 to 70 events per day)					
Freight Cars	≤20[d]	75	83.3	82.7	Yes
Amtrack Train	20	75	73.1	72.5	No
Metrolink Train	12	75	75.0	74.4	No

Source: FTA, 2018 and MIG (see Attachment 04)

(a) Events are categorized according to the FTA general vibration assessment criteria, which recommends evaluating freight locomotive and freight car/non-freight train events separately. The number of events per day is not anticipated to substantially change in the future.

(b) See Table 4.9-4.

(c) Estimated VdB assumed Building 3A and Building 3C are located 42 and 45 feet from the center of the nearest track, on an elevated podium.

(d) Freight car frequency assumes up to two minute of freight car pass by activity for each freight train.

Accordingly, the Proposed Project would not generate excessive groundborne vibration or groundborne noise levels, and impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are required.

4.9.8 Cumulative Impacts

The following sections address various potential cumulative impacts relating to noise that could result from implementation of the project.

4.9.8.1 Cumulative Threshold NOI-a: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Implementation of the Proposed Project in combination with other past, present, and reasonably foreseeable future projects within the City and surrounding area would result in temporary and permanent noise-generating activities. Construction of cumulative projects could result in periodic overlap of construction activities, thereby temporarily increasing ambient noise levels at nearby

receptors. However, construction noise impacts are temporary, localized, and regulated through compliance with the City's allowable construction hours pursuant to Municipal Code Section 9-3.531(d)(4). In addition, the Proposed Project incorporates project design features intended to minimize construction noise, including implementation of construction equipment noise suppression measures, shielding of stationary equipment where practical, use of electrical service in lieu of portable generators where feasible, and prohibition of major vibration-generating equipment. Because construction noise associated with the Proposed Project would comply with applicable City requirements and remain below the FTA's 80 dBA Leq daytime construction noise criterion at the nearest residential receptors, the Proposed Project would not make a cumulatively considerable contribution to temporary construction noise impacts.

With respect to long-term operational noise, the Proposed Project would generate noise from hotel operations, restaurant activities, mechanical equipment, vehicle circulation, and associated site activities. As discussed above, the Noise and Vibration Technical Memorandum determined that the highest predicted combined operational noise level from simultaneous operation of the mechanical car lift and rooftop heat pump units would be approximately 63.2 dBA Leq at the nearest commercial property line, which is below the City's commercial exterior noise standard of 65 dBA Leq. Operational noise levels at the nearest residential receptors would also remain below the applicable residential exterior noise standards. Accordingly, operation of the Proposed Project would not generate stationary-source noise in excess of applicable City standards.

The Proposed Project would generate approximately 409 average daily trips. Compared to existing traffic volumes on surrounding roadways, including approximately 15,000 average daily trips on Camino Capistrano, Project-generated traffic would represent only a small increase in roadway traffic volumes. Consistent with Caltrans guidance, a doubling of traffic volumes is generally required to produce an approximately 3 dBA increase in roadway traffic noise, which is the minimum increase that is generally perceptible. Because the Proposed Project would increase traffic volumes by only a small fraction of existing traffic volumes and would not approach a doubling of traffic on Camino Capistrano or other surrounding roadways, Project-generated traffic would not result in a substantial increase in roadway traffic noise levels.

Accordingly, because the Proposed Project would not generate temporary or permanent noise levels in excess of applicable standards and would not substantially increase traffic-related noise levels, it would not make a cumulatively considerable contribution to cumulative noise impacts. Therefore, cumulative impacts would be less than significant.

4.9.8.2 Cumulative Threshold NOI-b: Generation of excessive groundborne vibration or groundborne noise levels.

Implementation of the Proposed Project in combination with other past, present, and reasonably foreseeable future projects within the City and surrounding area could result in temporary

construction-related groundborne vibration associated with demolition, grading, excavation, paving, and building construction activities. If construction activities associated with cumulative projects were to occur concurrently, nearby receptors could experience temporary increases in groundborne vibration levels. However, construction vibration is highly localized and rapidly attenuates with distance from the source. As a result, vibration impacts are generally limited to receptors immediately adjacent to active construction areas and do not combine across geographically separated projects in a manner that would result in a cumulatively considerable impact.

The Proposed Project incorporates project design features specifically intended to minimize construction-related vibration, including implementation of the Structural Evaluation and Seismic Retrofit Recommendations for the retained historic adobe structures, prohibition of major vibration-generating equipment, and preparation of a project-specific Construction Vibration Plan if the use of such equipment within 50 feet of the retained adobe structures cannot be avoided. These project design features were incorporated into the Proposed Project and evaluated as part of the Noise and Vibration Technical Memorandum. Similarly, cumulative development projects located near vibration-sensitive receptors or historic resources would evaluate construction vibration on a project-specific basis and implement appropriate design features, engineering controls, or mitigation, as necessary.

With respect to long-term operations, the Proposed Project would consist of hotel accommodations, restaurant uses, guest amenities, HVAC equipment, and a valet-operated parking lift system. These uses are not substantial sources of groundborne vibration and would not generate excessive groundborne vibration or groundborne noise. Accordingly, operation of the Proposed Project would not contribute to a cumulative operational vibration impact.

The vibration analysis also identified that portions of proposed Buildings 3A and 3C may experience vibration associated with existing freight rail operations on the adjacent LOSSAN rail corridor that exceeds the Federal Transit Administration's vibration annoyance criteria for building occupants. These vibration levels are attributable to existing railroad operations and represent an existing environmental condition rather than vibration generated by the Proposed Project. The Proposed Project would not alter railroad operations, increase train frequency, or otherwise contribute to rail-generated vibration. Therefore, the Project would not make a cumulatively considerable contribution to existing railroad-related vibration conditions.

Because construction-related vibration is temporary, localized, and addressed on a project-specific basis, and because operation of the Proposed Project would not generate excessive groundborne vibration or contribute to existing rail-generated vibration, the Proposed Project would not make a cumulatively considerable contribution to cumulative groundborne vibration or groundborne noise impacts. Therefore, cumulative impacts would be less than significant.

4.9.9 Level of Significance Before Mitigation

Environmental impacts related to Thresholds NOI-a and NOI-b would be less than significant.

4.9.10 Mitigation Measures

No mitigation measures are required.

4.9.11 Level of Significance After Mitigation

Not applicable.