Noise Technical Report

Santee Cannabis Business Ordinance

June 2022

Prepared for:

City of Santee
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Acronyms and Abbreviations

AUMA	Control, Tax, and Regulate the Adult Use of Marijuana Act
Caltrans	California Department of Transportation
CEQA	California Environmental Quality
City	City of Santee
CNEL	community noise equivalent level
dB	decibel
dBA	A-weighted decibel
FTA	Federal Transit Administration
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second
Ldn	day-night noise level
Leq	equivalent energy level
LLG	Linscott, Law & Greenspan, Engineers
Lmax	maximum noise level
Lmin	minimum noise level
MAUCRSA	Medicinal and Adult-Use of Cannabis Regulation and Safety Act
MCAS	Marine Corps Air Station
NA	not applicable
NSLU	noise-sensitive land use
Ordinance or project	Santee Cannabis Business Ordinance
PPV	peak particle velocity
SR-	State Route
VdB	vibration decibel

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Executive Summary

This noise and vibration analysis was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) to assess if significant noise and vibration impacts are likely to occur in conjunction with implementation of the proposed Santee Cannabis Business Ordinance (Ordinance or project). The project does not propose any specific new development; however, it would allow cannabis facilities to be permitted in the City of Santee (City), consistent with the Ordinance. This report examines the impacts of the project and recommends mitigation measures where necessary to address significant noise impacts.

Specifically, this report evaluates the project's potential to:

- Generate 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
- Generate excessive groundborne vibration or groundborne noise levels
- 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 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels

The noise and vibration analysis concludes that the project would not generate a substantial temporary or permanent increase in ambient noise levels in excess of applicable standards. However, implementation of the project would have the potential to result in two significant impacts: (1) groundborne vibration impacts during construction and (2) location of new facilities within the 70–75 A-weighted decibel (dBA) day-night noise level (Ldn) contour of Gillespie Field. Mitigation Measures NOI-1 and NOI-2 would reduce groundborne vibration impacts to a less than significant level. Mitigation Measure NOI-3 would reduce impacts related to aircraft operations at Gillespie Field to a less than significant level.

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Section 1 Project Description

The City of Santee (City) proposes a comprehensive Santee Cannabis Business Ordinance (Ordinance or project) amending the City's Municipal Code to regulate cannabis land uses consistent with the Medicinal and Adult-Use of Cannabis Regulation and Safety Act (MAUCRSA) and the Control, Tax, and Regulate the Adult Use of Marijuana Act (AUMA). The Ordinance would implement the provisions of the MAUCRSA to accommodate the needs of people with medical illnesses who need cannabis for medicinal purposes as recommended by their healthcare providers and to provide access to those resources. It would also provide access to adult-use cannabis for people aged 21 and over as authorized by the AUMA while imposing sensible regulations on the use of land to protect City residents, neighborhoods, and businesses from disproportionately negative impacts. The Ordinance would regulate the commercial cultivation, processing, manufacturing, testing, sale, delivery, and distribution of cannabis and cannabis products in a responsible manner to protect the health, safety, and welfare of the residents of the City and to enforce rules and regulations consistent with state law and in a fair and equitable manner.

Cannabis facilities would not be located within 900 feet of sensitive receptors, including kindergarten through 12th grade schools, commercial daycare centers, youth centers, religious locations, or parks. It is anticipated that certain types of cannabis facilities would only be allowed in the Light Industrial (IL), General Industrial (IG), and General Commercial (GC) zones in the City, subject to the City's siting requirements (see Figure 1, Areas Allowing Cannabis Facilities by Zone).

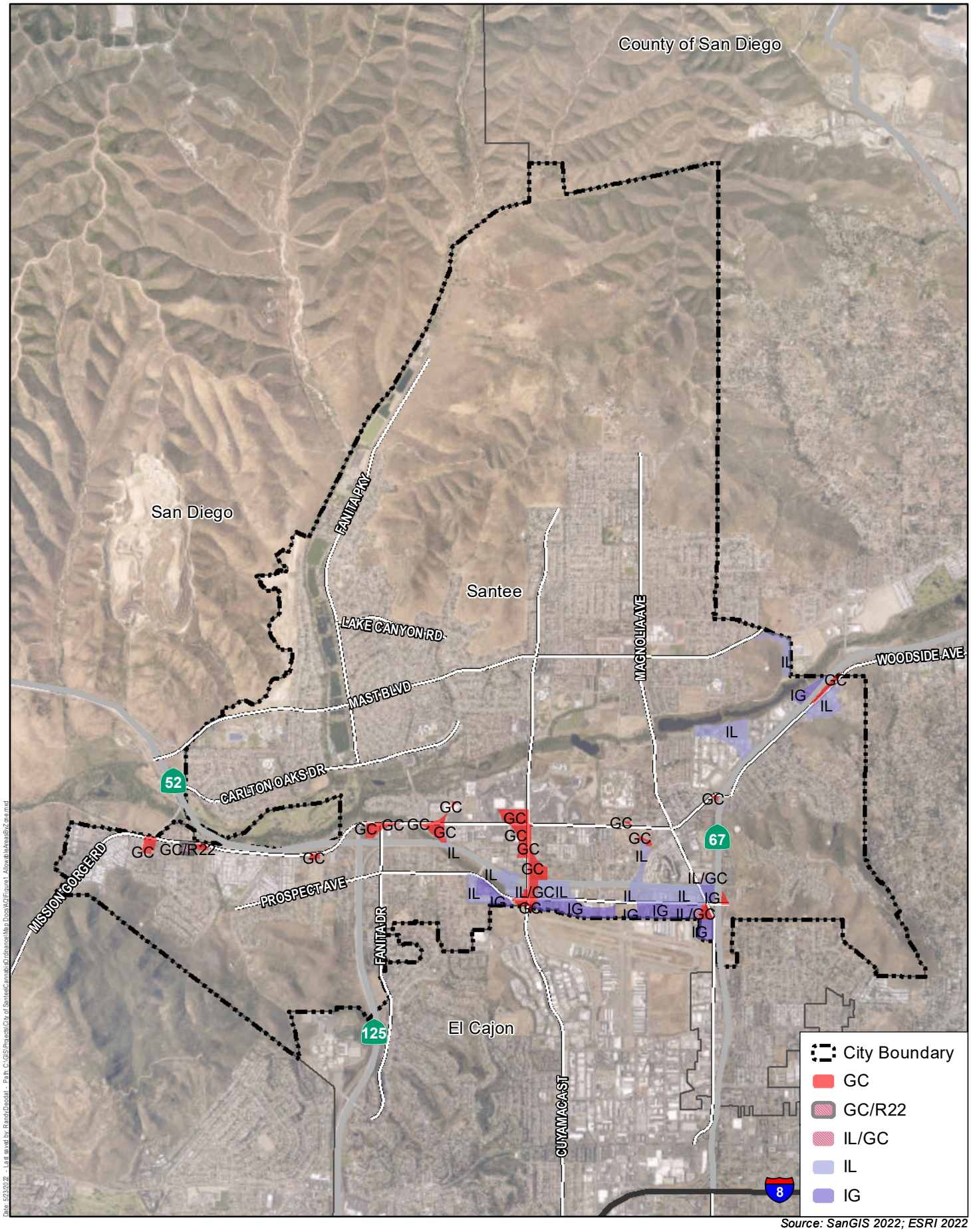
The project does not propose any specific new development; however, it would allow cannabis facilities to be permitted in the City, consistent with the Ordinance. For this analysis, a realistic, worst-case scenario was developed to evaluate the project's impacts. A total of 20 facilities—retail (two locations total), microbusiness with retail (two locations total), microbusiness without retail (two locations total), manufacturing (four locations total), testing (four locations total), and distribution (six locations total)—were assumed to be permitted by the Ordinance. At this time, the specific locations of the retail, microbusiness, manufacturing, testing, and distribution sites are not known, although they would occur in the Light Industrial (IL), General Industrial (IG), and General Commercial (GC) zones. The anticipated proposed land use square footage and allowed zones permitted by the Ordinance are identified in Table 1, Cannabis Facilities Assumptions.

Table 1. Cannabis Facilities Assumptions

Land Use Type	Allowed Zones	Square Footage per Facility	Proposed Santee Facilities	Total Square Footage per Land Use Type
Storefront Retail + Delivery	GC, IL, IG	5,000	2	10,000
Microbusiness with Retail (includes retail, distribution, and manufacturing – no cultivation)	GC, IL, IG	10,000	2	20,000
Microbusiness without Retail (includes cultivation,[1] manufacturing, and distribution)	IL, IG	15,000	2	30,000
Manufacturing	IL, IG	3,000	4	12,000
Testing	IL, IG	2,500	4	10,000
Distribution	IL, IG	2,000	6	12,000
Total	**—**		**20**	**94,000**

Notes: GC = General Commercial; IG = General Industrial; IL = Light Industrial

[1] Definition of a microbusiness includes a maximum cultivation canopy of 10,000 square feet.



Source: SanGIS 2022; ESRI 2022

Harris & Associates

Figure 1

Areas Allowing Cannabis Facilities by Zone

City of Santee Cannabis Business Ordinance

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Section 2 Existing Conditions

2.1 Noise Basics

2.1.1 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 2, Typical A-Weighted Noise Levels.

Table 2. 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

Table 2. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 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, time of day during which the noise is experienced, and activity affected by the noise. Activities most affected by noise include rest, relaxation, recreation, study, and communications. 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:

Lmax, the maximum noise level, is the highest instantaneous noise level during a specified time period.

Lmin, the minimum noise level, is the lowest instantaneous noise level during a specified time period.

Leq, the equivalent energy level, provides an average acoustical 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 dB sound level, given as dBA Leq, contains an equal amount of energy as the fluctuating sound level.

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 community noise equivalent level (CNEL) is similar to Ldn, except an additional 5 dBA weighting is applied to all sound occurring between 7:00 p.m. and 10:00 p.m. The City uses Ldn to measure noise in the City; therefore, Ldn is used in this analysis (City of Santee 2003). Ldn and CNEL are typically within 1 dBA of each other and, for most intents and purposes, are interchangeable.

The dB 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 from roadways in environments with major ground effects may yield attenuation rates as high as 4.5 dBA for each doubling of distance due to vegetation and loose soils that would reduce noise levels by either absorbing or scattering the sound (WSDOT 2019).

2.1.2 Noise Effects

Reaction to a given sound varies depending on acoustical characteristics of the source and the environment of the receptor. The A-scale de-emphasizes 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, 1–2 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).

2.2 Environmental Vibration Basics

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 (FTA 2018). 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 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 root mean square 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 root mean square amplitude is also given in dB notation, referenced as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration relative to human response (FTA 2018). The general human response to different groundborne vibration velocity levels is described in Table 3, Human Response to Different Levels of Groundborne Vibration.

Table 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

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 25–40 dBA lower than the vibration velocity level in VdB, as shown in Table 3. Due to its low-frequency components, groundborne noise sounds louder than broadband noise with the same noise level (FTA 2018). Typical human response to groundborne noise levels is shown in Table 3. 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.

2.3 Regulatory Framework

2.3.1 Federal

2.3.1.1 Federal Aviation Administration Standards

Enforced by the Federal Aviation Administration, 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. Title 14 also identifies those land uses that are normally compatible with various levels of exposure by individuals to noise. The Federal Aviation Administration considers commercial land uses to be compatible with exterior noise levels at or less than 70 dBA Ldn unless additional noise reducing features have been incorporated into affected buildings.

2.3.1.2 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 (FTA 2018) are routinely used for projects proposed by local jurisdictions. The manual includes criteria for assessing the impacts of groundborne vibration, which are presented in Table 4, Federal Transit Administration Groundborne Vibration Impact Criteria.

Table 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.

2.3.1.3 Noise Control Act

The Noise Control Act of 1972 identifies uncontrolled noise as a danger to health and welfare, particularly for people in urban areas. Responsibility for noise control remains primarily a state and local issue; however, the Noise Control Act establishes a means for effective coordination of federal research and noise control activities (USEPA 2021). The act includes a directive that the U.S. Environmental Protection Agency develop and publish information on noise levels to protect

public health and welfare with an adequate margin of safety. In 1974, the U.S. Environmental Protection Agency published the Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. The document identifies an interior noise level of 45 dBA Ldn in indoor residential areas to be adequate to protect indoor activity from interference and annoyance. An exterior noise level of 55 dBA Ldn is identified as the maximum noise level to avoid interference and annoyance in residential areas and other areas in which quiet is a basis for use. A maximum 24-hour average outdoor noise level of 70 dBA Leq is recommended to prevent hearing loss (USEPA 1974).

2.3.2 State

2.3.2.1 California Noise Control Act

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The California Noise Control 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 state's policy to provide an environment for all Californians free from noise that jeopardizes their health or welfare. Section 46050.1 of the act mandates development guidelines for the preparation and content of General Plan Noise Elements.

2.3.3 Local

2.3.3.1 Santee General Plan

The Noise Element of the Santee General Plan contains goals and policies to control and abate environmental noise and to protect the City's citizens from excessive exposure to noise. The Santee General Plan establishes an exterior ambient noise standard of 65 dBA Ldn for noise-sensitive land uses (NSLUs). This criterion is applied at rear yard areas of single-family residences and ground floor common areas and private patio areas for multi-family residences. For other NSLUs, such as libraries, schools, or hospitals, noise-sensitive areas are those areas that serve a significant function for the use that could be adversely affected by noise. For example, for schools, it is applied to outdoor teaching or discussion areas (and does not include playgrounds or other active outdoor areas).

Table 5, Santee General Plan Land Use Compatibility Guidelines (dBA Ldn), presents the Santee General Plan Noise Element guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories. Normally acceptable noise levels are defined as satisfactory based on the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements. Conditionally acceptable noise levels indicate that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Conventional construction with closed windows and fresh air supply

systems or air conditioning will normally suffice. The Santee General Plan states that these compatibility guidelines are not prohibitive but should be used as a guide and a resource.[1] Additionally, the Santee General Plan Noise Element contains the following objectives and policies that are applicable to new development in the City (City of Santee 2003):

- **Objective 1.0:** Control noise from sources adjacent to residential, institutional and other noise-sensitive receptors.
  - **Policy 1.1:** The City shall support a coordinated program to protect and improve the acoustical environment of the City including development review for new public and private development and code compliance for existing development.
  - **Policy 1.2:** The City shall utilize noise studies and noise contour maps when evaluating development proposals during the discretionary review process.
  - **Policy 1.4:** The City shall promote alternative sound attenuation measures rather than traditional wall barrier wherever feasible; these may include glass or polycarbonate walls, berms, landscaping, and the siting of noise-sensitive uses on a parcel away from the roadway or other noise source.
  - **Policy 1.5:** The City shall review future projects with particular scrutiny regarding the reduction of unnecessary noise near noise-sensitive areas such as hospitals, schools, parks, etc.
- **Objective 2.0:** Ensure that future developments will be constructed to minimize interior and exterior noise levels.
  - **Policy 2.1:** The City shall adhere to planning guidelines and building codes which include noise control for the exterior and interior living space of all new residential developments within noise impacted areas.
  - **Policy 2.2:** The City should require new development to mitigate noise impacts to existing uses resulting from new development when: (1) such development adds traffic to existing City streets that necessitates the widening of the street; and (2) the additional traffic generated by the new development causes the noise standard or significance thresholds to be exceeded.
  - **Policy 2.3:** The City should not require new development to mitigate noise impacts to existing uses when the new development only adds traffic already anticipated by the City's General Plan to an existing street, but does not necessitate widening of that street.

[1] See page 7-14 in Section 8.1, Local Regulations, of the Santee General Plan Noise Element.

Table 5. Santee General Plan Land Use Compatibility Guidelines (dBA Ldn)

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low-Density, Single-Family, Duplex, Mobile Homes	50–65	65–70	70–75	75–85
Residential – Multiple-Family	50–65	65–70	70–75	75–85
Transient Lodging – Motel, Hotels	50–65	65–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes[1]	50–65	65–70	70–80	80–85
Auditoriums, Concert Halls, Amphitheaters	50–60	60–70	NA	70–85
Sports Arenas, Outdoor Spectator Sports	50–65	65–75	NA	75–85
Playgrounds, Neighborhood Parks	50–70	NA	70–75	75–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	NA	75–80	80–85
Office Buildings, Business Commercial, Professional	50–70	70–75	75–85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–75	75–80	80–85	NA

Source: City of Santee 2003.

Notes: dBA = A-weighted decibel; Ldn = day-night noise level; NA = not applicable

[1] Applies to noise-sensitive areas that serve a significant function for the use that could be adversely affected by noise, such as outside areas used primarily for instruction, meditation areas, rest and relaxation areas, and other areas where general peace and quiet are important.

Normally Acceptable: Specified land use is satisfactory based on 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 have been 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 must be included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

The Santee General Plan Noise Element further states that, when new development may result in the exposure of existing or future NSLUs to noise levels in excess of 65 dBA Ldn, an acoustical study will be required. If the acoustical study shows that the noise levels at any noise-sensitive area will exceed 65 dBA Ldn, the development should not be approved unless the following findings are made (City of Santee 2003):

a. Modifications to the development have been, or will be made, which will reduce the exterior noise level in noise sensitive areas to 65 dB(A) Ldn or less, or
b. If, with current noise abatement technology, it is not feasible to reduce the exterior noise level to 65 dB(A) Ldn or less, then modifications to the development have been, or will be made which reduce the exterior noise level to the maximum extent feasible

and the interior noise level to 45 dB(A) Ldn or less. Particular attention shall be given to noise sensitive spaces such as bedrooms.

c. For rooms in noise sensitive areas which are occupied only for a part of the day (schools, libraries or similar), the interior one-hour average sound level during occupation, due to noise outside, should not exceed 45 dB(A) Leq (hour).

Further, noise impacts shall be considered significant if any of the following occur as a result of the proposed development (City of Santee 2003):

1. If, as a direct result of the proposed development, noise levels for any existing or planned development will exceed the noise levels considered compatible for that use as identified in [Table 5].
2. If, as a direct result of the proposed development, noise levels which already exceed the levels considered compatible for that use are increased by 3 or more decibels.

2.3.3.2 Santee Noise Ordinance

The City's Noise Ordinance is in Section 5.04 of the Santee Municipal Code (City of Santee 2022). Section 5.04.040, which establishes the City's noise regulation, generally prohibits nuisance noise and states that it is unlawful for any person to make, continue, or cause to be made or continued within City limits any disturbing, excessive, or offensive noise that causes discomfort or annoyance to reasonable people of normal sensitivity residing in the area. This section details several specific sources of nuisance noise and outlines how it may be determined that the noise is in violation of the code. Specific sources of nuisance noise include but are not limited to devices for producing or reproducing sound, drums and other musical instruments, yelling, and animals.

Section 5.04.160 limits noise between 10:00 p.m. and 7:00 a.m. from sources that are not specifically addressed in the City's Noise Ordinance or exempted from the ordinance to levels that do not exceed average conversational levels at a distance of 50 feet from the property line from which the noise is being generated or 50 feet from the source in a public area. The typical noise level for normal conversation is 65 dBA at 3 feet from the source (Caltrans 2013a).

Section 5.04.090, which specifically pertains to construction equipment, makes operation of any construction equipment outside the hours of 7:00 a.m. through 7:00 p.m., Monday through Saturday, except legal holidays, unlawful unless the operation is expressly approved by the City's Director of Development Services. Construction equipment with a manufacturer's noise rating of 85 dBA Lmax or greater may only operate at a specific location for 10 consecutive workdays. If work involving such equipment would involve more than 10 consecutive workdays, a notice must be provided to all property owners and residents within 300 feet of the site no later than 10 days before the start of construction. The notice must be approved by the City, describe the project and the expected duration of work, and provide a point of contact to resolve noise complaints.

2.3.3.3 Santee Zoning Ordinance

Section 13.30.030, Performance Standards, of the Zoning Ordinance applies to operation of land uses and states that no operation or activity is permitted that will create vibration noticeable without instruments at the perimeter of the subject property.

2.4 Existing Noise Environment

Existing noise sources that affect the project area are described below.

2.4.1 Existing Conditions

Traffic noise, especially along freeway corridors and major roadways, is the primary source of noise in the City, including potential cannabis facility locations (City of Santee 2003). Aircraft flyovers from Gillespie Field and Marine Corps Air Station (MCAS) Miramar are also a source of noise throughout the City. New cannabis facilities would be allowed primarily in the southern area of the City, generally on local streets along the SR-67 and SR-52 corridors, including Mission Gorge Road, Prospect Avenue, and Woodside Avenue. Land surrounding the project area is generally developed with existing commercial and industrial development. Typical commercial and industrial noise sources include parking lot noise, commercial truck deliveries at loading docks, and equipment noise, such as heating, ventilation, and air conditioning systems (HVAC). Some residential land uses are adjacent to existing commercial and industrial areas along Mission Gorge Road, Cuyamaca Street, SR-52, and Woodside Avenue in areas that may accommodate project uses.

2.4.2 Transportation Noise Sources

2.4.2.1 Aviation

MCAS Miramar is adjacent to the western/northwestern boundary of the City. The runways are approximately 6 miles west of the City boundary. Aircraft currently flown at MCAS Miramar include F-35, F/A-18, KC-130, and C-12 aircraft, as well as CH-46 and CH-53 helicopters (MCAS Miramar 2018). Currently, the maximum authorized mission of the airfield is 112,242 annual aircraft operations. MCAS Miramar also typically hosts an annual air show that includes additional aircraft and higher-than-normal levels of aircraft operation during the event. As noise abatement measures for normal operations, fixed-wing aircraft and helicopter flight routes have been designed to follow major rail lines and highways or remain over base property. The current Airport Land Use Compatibility Plan adopted by the San Diego County Airport Land Use Commission for MCAS Miramar indicates that the project area is outside the 60 dBA CNEL noise contour (SDCRAA 2011).

Gillespie Field airport operated by the County of San Diego is also identified as a noise source in the Santee General Plan. This airport is directly south of the City of Santee in the City of El Cajon,

west of SR-67. In 2018, annual operations from Gillespie Field totaled approximately 233,969 flights (County of San Diego 2022) and, by 2025, are projected to reach 294,050 (SDCRAA 2010). Portions of the project area, primarily between SR-125 and SR-67 and south of Mission Gorge Road, are within the 60–65 dBA Ldn, 65–70 dBA Ldn, and 70–75 dBA Ldn airport noise contours (SDCRAA 2010).

2.4.2.2 Roadways

Table 6, Existing Off-Site Roadway Noise Levels, shows calculated existing noise levels generated by representative roadway segments in the project area. Existing noise levels were calculated using the methods described in Section 3.1.1, Excessive Noise Levels. As shown in Table 6, existing noise levels from Mission Gorge Road, West Hills Parkway, and Cuyamaca Street currently exceed the normally acceptable noise compatibility standard of 65 dBA Ldn for residences, schools, and other NSLUs. Noise generated along Mission Gorge Road and Cuyamaca Street currently exceeds the normally acceptable noise compatibility standard of 70 dBA Ldn for parks and commercial uses.

Table 6. Existing Off-Site Roadway Noise Levels

Roadway	Segment	Existing Average Daily Trips	Noise Level at 50 Feet from Roadway Centerline (dBA Ldn)
Mission Gorge Road	Western City limits to West Hills Parkway	16,510	71
	SR-125 to Fanita Drive	45,440	77
	Town Center Parkway to Cuyamaca Street	28,630	78
West Hills Parkway	Mast Boulevard to Mission Gorge Road	11,610	68
Cuyamaca Street	Mission Gorge Road to SR-52 ramps	39,020	74
N. Woodside Avenue	Riverford Road to Woodside Avenue	3,390	60

Source: LLG 2022 (traffic data). See Appendix A for noise model assumptions and output.
Note: dBA = A-weighted decibel; Ldn = day-night noise level; SR- = State Route

2.4.2.3 Railroads

The Green Line route of the San Diego Trolley operated by the San Diego Metropolitan Transit System terminates in the Santee Town Center area at the northwestern corner of Mission Gorge Road and Cuyamaca Street. It is not a significant noise generator in the City due to its intermittent operation and its alignment, which passes through a primarily commercial corridor on Cuyamaca Street (City of Santee 2003). Noise from the Green Line route typically does not exceed 60 dBA at 100 feet or more from the centerline of the track (RECON 2017).

2.4.3 Noise-Sensitive Land Uses

NSLUs are land uses that may be subject to stress or interference from excessive noise. The Santee General Plan defines NSLUs as areas containing residences, schools, hospitals, rest homes, or

long-term medical facilities. Industrial and commercial land uses are generally not considered sensitive to noise. The potential project locations are generally in areas surrounded by commercial and industrial use. However, residential land uses are adjacent to existing commercial and industrial areas along Mission Gorge Road, Cuyamaca Street, SR-52, and Woodside Avenue in areas that may accommodate project uses.

2.4.4 Vibration-Sensitive Land Uses

Land uses in which groundborne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations, are considered vibration sensitive (FTA 2018). The degree of sensitivity depends on the specific equipment that would be affected by the groundborne vibration. Excessive levels of groundborne vibration of either a regular or an intermittent nature can result in annoyance to residential uses. The project area includes existing industrial and commercial areas that may include vibration-sensitive equipment, include manufacturing and medical equipment. For example, an urgent care facility is at the intersection of Mission Gorge Road and Woodside Avenue, which is across from a site that may accommodate project uses.

Section 3 Methods and Significance Criteria

3.1 Methods

3.1.1 Excessive Noise Levels

Impacts related to potential exposure to excessive noise levels from operation of the project have been assessed based on a comparison of noise levels anticipated to be generated by the project to the applicable City noise standard for existing off-site receptors. Estimated noise levels are based on a variety of sources, including noise technical reports for similar facilities. Noise levels at a particular receptor from a stationary noise source are based on an attenuation rate of 6 dBA for every doubling of distance (FTA 2018).

The potential for implementation of the project to permanently increase ambient noise levels as a result of increased traffic was assessed using standard noise modeling equations adapted from the Federal Highway Administration noise prediction model. The modeling calculations take into account the posted vehicle speed, average daily traffic volume, and estimated vehicle mix. The noise model assumes that roadways would experience a decrease of approximately 3 dBA for every doubling of distance from the roadway. Traffic data is provided in the project-specific Transportation Impact Analysis prepared by Linscott, Law & Greenspan, Engineers (LLG) (LLG 2022). Six representative roadway segments are modeled, including the three segments where the project would result in the greatest net increase in vehicle trips and the three segments where the project would result in the greatest percentage increase in trips compared to conditions without the project.

Impacts related to temporary increases in ambient noise levels from construction of the project were assessed using typical construction equipment reference noise levels provided by the FTA (FTA 2018), assuming an attenuation rate of 6 dBA per doubling of distance from the source.

3.1.2 Groundborne Vibration

Groundborne vibration impacts were assessed based on the FTA vibration impact criteria listed in Table 4 and typical vibration source levels provided by the FTA (FTA 2018).

3.1.3 Aircraft Noise

Impacts related to aircraft noise were assessed based on a review of published noise contours and planning documents for MCAS Miramar and Gillespie Field (SDCRAA 2010, 2011).

3.2 Significance Criteria

Based on Appendix G of the CEQA Guidelines and significance criteria outlined in the Santee General Plan, Santee Municipal Code, and FTA guidance, implementation of the project would result in a significant adverse impact if it would:

- **Threshold 1:** Generate 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.
  - New operational noise sources would be significant if these sources would expose off-site people to or generate noise levels at off-site uses in excess of standards established in the Noise Element of the Santee General Plan or the City's Noise Ordinance (Section 5.04 of the Santee Municipal Code), as applicable.
  - A substantial permanent increase in vehicle traffic noise would occur if implementation of the project would result in an ambient noise level that exceeds the normally acceptable land use compatibility limits (Table 5) established in the Santee General Plan. If the normally acceptable standard would be exceeded without project implementation, an increase of more than 3 dBA would be considered significant.
  - Temporary construction activity would be considered significant if it would violate the limits established in Section 5.04.090 of the Santee Municipal Code for receptors in the City. The City's Noise Ordinance prohibits operation of any construction equipment outside the hours of 7:00 a.m. through 7:00 p.m., Monday through Saturday. Construction equipment with a manufacturer's noise rating of 85 dBA Lmax or greater may only operate at a specific location for 10 consecutive workdays absent specific public notice.
- **Threshold 2:** Generate excessive groundborne vibration or groundborne noise levels. Groundborne vibration is defined as in excess of the FTA criteria listed in Table 4. Additionally, an impact would occur related to architectural and structural damage to buildings if existing buildings were affected by a PPV in excess of 0.2 in/sec.
- **Threshold 3:** 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, expose people residing or working in the project area to excessive noise levels.

Section 4 Impact Analysis and Mitigation Measures

4.1 Impact Analysis

Potential noise and vibration impacts from construction and operation of the project are discussed below.

4.1.1 Threshold 1: Exceedance of Noise Standards

Potential project-related noise impacts from operational sources, transportation sources, and construction activities are discussed below.

4.1.1.1 Impact Analysis

The project would have the potential to generate excessive noise levels as a result of increases in traffic volumes, development of new stationary sources of noise, and increases in human activity throughout the project area. The project would also have the potential to result in temporary increases in noise levels during construction.

Operational Noise Generated by the Proposed Ordinance

The project would accommodate a range of commercial and industrial activities that have the potential to generate noise that may affect existing noise-sensitive receptors. Typical noise produced from commercial and industrial development includes HVAC and other stationary equipment, truck deliveries, parking lots, and solid waste collection. These noise sources are addressed below. The proposed Ordinance includes the following standards to minimize exposure of NSLUs to noise from future cannabis facilities:

- **Section 7.04.290:** All cannabis business permittees must be no closer than 900 feet from any zoned parcel in the City designated by the City and state law as a sensitive use, including schools, daycare centers, churches, youth activity centers, and parks.
- **Section 7.04.340:** Cannabis shall not be consumed by any person on the premises of any cannabis facilities. No person shall cause or permit the sale, dispensing, or consumption of alcoholic beverages or tobacco on or about the premises of the cannabis facilities. Loitering is prohibited outside any facility and surrounding area.
- **Section 7.04.360:** Operating hours of the storefront retailer license shall be limited to the hours of 9:00 a.m. through 9:00 p.m., 7 days per week.
- **Section 7.04.370:** Operating hours of the non-storefront retailer license or out-of-town retail delivery services shall be limited to the hours of 9:00 a.m. through 9:00 p.m., 7 days per week.

The specifications and locations of HVAC systems that would be installed at new cannabis facilities are unknown at this time. For this analysis, it is assumed that the HVAC systems of a light industrial project would be typical of allowed uses. Major mechanical HVAC equipment on the ground or rooftops of new buildings is assumed to generate noise levels that average 69–73

dBA Ldn at a distance of 50 feet when running continuously (PBS&J 2009). As such, HVAC units could have the potential to generate noise that may exceed the noise compatibility standard of 65 dBA Ldn for sensitive receptors up to 125 feet from the unit. Cannabis cultivation facilities may additionally require enhanced ventilation systems to reduce odors at surrounding receptors and dehumidification systems. Similar to HVAC systems, the specifications of future systems are unknown. However, based on review of similar facilities, odor control systems would generate noise similar to typical HVAC systems and dehumidification equipment, and the noise associated with this equipment is expected to only generate a low hum from fans or blowers (County of Santa Barbara 2017; County of Sonoma 2021).

New businesses would not be licensed within 900 feet of most uses considered noise sensitive. New cannabis facilities may be within 900 feet of residences, such as along Prospect Street where residential areas are adjacent to existing light industrial developments. However, due to setbacks and because new businesses would be in areas currently developed with commercial and industrial land uses, it is unlikely that new stationary equipment systems would be within 125 feet of existing residences. Additionally, similar to existing requirements for allowable commercial and industrial development, new cannabis facilities would be required to demonstrate consistency with existing development standards, including the Santee General Plan and City's Noise Ordinance noise limits, for all new stationary equipment.

Similar to HVAC units, the types, specifications, and locations of new stationary equipment for manufacturing, testing, and cultivation uses are currently unknown. However, no outdoor cultivation would be allowed, and equipment would generally be in buildings that would provide noise attenuation to outside receptors. Buildings would be separated from most sensitive receptors by at least 900 feet. In addition to complying with the Santee General Plan and City's Noise Ordinance requirements, stationary equipment must meet the Occupational Safety and Health Administration requirements to protect workers from hearing loss, which would also reduce noise exposure at surrounding uses. Therefore, impacts from HVAC systems and stationary equipment would be less than significant.

In addition to HVAC systems, new cannabis facilities also have the potential to generate noise from truck deliveries, such as engines idling and beeping from backup warning signals. Medium- or heavy-duty truck trips may be required for new business operations, including supply and product deliveries. State law currently prohibits heavy-duty diesel delivery trucks from idling more than 5 minutes (13 CCR 2485). Therefore, noise from idling would be limited to 5 minutes during truck deliveries. Noise levels measured at a typical loading dock registered 78 dBA Leq at a distance of 5 feet outside an open loading dock (ABC Acoustics 2018). A loading dock that generates a noise level of 78 dBA at 5 feet would have the potential to generate noise that may exceed typical conversational noise levels of 65 dBA up to 25 feet from the unit. As previously stated, new business would not be adjacent to most sensitive receptors and would generally be surrounded by existing commercial and industrial land uses that would provide at least a 25-foot setback from nearby

residences. Additionally, the proposed Ordinance would limit deliveries to the hours of 9:00 a.m. through 9:00 p.m., and no late night deliveries would occur. Due to ordinance restrictions and distance, impacts on NSLUs related to truck deliveries and loading would be less than significant.

Noise sources from parking areas include car alarms, door slams, radios, and tire squeals. These sources typically range from approximately 51 to 66 dBA at a distance of 10 feet (Gordon Bricken & Associates 2012) and are generally short term and intermittent. Parking lots have the potential to generate noise levels that are audible above ambient levels depending on the location of the source; however, noise sources from a parking lot would be different from each other in kind, duration, and location so that the overall effects would be separate and, in most cases, would not affect noise-sensitive receptors at the same time. Additionally, parking lot noise from new cannabis facilities would be similar to parking lot noise from existing commercial and industrial uses in the project area. Impacts on NSLUs related to parking areas would be less than significant.

Noise from human activity at new cannabis facilities would be limited to normal conversation noise levels, which would generally be consistent with the City's Noise Ordinance and Santee General Plan Noise Element compatibility standards for surrounding land uses. Per the proposed Ordinance, no loitering that could result in gatherings would be allowed, and no nighttime or early morning (9:00 p.m. to 9:00 a.m.) retail and non-storefront retail (delivery) operations would be permitted. Therefore, noise levels would not exceed normal conversation levels at NSLU receptors, and impacts would be less than significant.

Commercial trash hauling would be provided by Waste Management, Inc., under a contractual franchise agreement with the City. New businesses would have on-site garbage and recycling dumpsters that may require multiple pickups per week. Waste Management, Inc., currently operates in the City, including the project area, and is subject to Section 5.04.130, Loading and Unloading Operations, of the City's Noise Ordinance, which prohibits waste collection vehicles from operating between the hours of 10:00 p.m. and 7:00 a.m. in such a manner as to cause a noise disturbance within or adjacent to a residential district. Additionally, individual pickup events would be short in duration and occur at most a few times per week in the vicinity of an individual receptor. Impacts would also be similar to existing commercial waste collection in the project area. Due to its intermittent nature, short duration, and compliance with the City's Noise Ordinance limitations, waste collection from cannabis facilities would not generate excessive noise levels at NSLUs. This impact would be less than significant.

Permanent Increase in Traffic Noise Levels

The following analysis is based on traffic data provided in the project-specific Transportation Impact Analysis prepared by LLG (LLG 2022). The analysis addresses the potential for the project to permanently increase traffic noise from construction of allowable cannabis uses under the

proposed Ordinance and cumulative development projects. Traffic levels for each roadway are provided in Appendix A.

A substantial permanent increase would occur if implementation of the project were to result in an ambient noise level at 50 feet from the roadway centerline that exceeds the land use compatibility limits (Table 5) established in the Santee General Plan, including 65 dBA Ldn at the property line for residential properties and schools and 70 dBA Ldn for commercial uses and parks. For conditions where the roadway exceeds the standard without project implementation, a significant impact would occur if the project would result in an increase of 3 dBA or greater at 50 feet from the roadway centerline. The following presents a conservative analysis because actual noise levels at nearby receptors would decrease based on their distance from the roadway and would vary based on each individual receptor's location.

Existing noise levels and future increases in traffic on representative segments with implementation of the project are provided in Table 7, Existing + Cumulative + Project Traffic Noise Levels. As shown in this table, five of the six roadway segments generate noise levels at 50 feet from the roadway centerline that exceed applicable thresholds without project implementation. However, implementation of the project would not result in an increase in noise levels on any roadway segment. A significant project-related traffic noise impact would not occur. This impact would be less than significant.

Table 7. Existing + Cumulative + Project Traffic Noise Levels

Roadway	Segment	Applicable Threshold (dBA Ldn)	Existing + Cumulative (dBA Ldn)	Exceeds Threshold without Project?	Existing + Cumulative + Project (dBA Ldn)	Increase in Noise Level from No Project Conditions	Significant Impact?
Mission Gorge Road	Western City limits to West Hills Parkway	65	72	Yes	72	0	No
	SR-125 to Fanita Drive	65	77	Yes	77	0	No
	Town Center Parkway to Cuyamaca Street	70	76	Yes	76	0	No
West Hills Parkway	Mast Boulevard to Mission Gorge Road	65	69	Yes	69	0	No
Cuyamaca Street	Mission Gorge Road to SR-52 ramps	70	75	Yes	75	0	No
N. Woodside Avenue	Riverford Road to Woodside Avenue	70	60	No	60	0	No

Notes: dBA = A-weighted decibel; Ldn = day-night average sound level; NA = not applicable; SR- = State Route

Unless otherwise noted, a substantial permanent increase in vehicle traffic noise would occur if implementation of the project would result in an ambient noise level that exceeds the applicable threshold established in the Santee General Plan. If the normally acceptable standard would be exceeded without project implementation, an increase of more than 3 dBA would be considered significant. Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based on traffic data provided by LLG (LLG 2022). Traffic levels for each roadway are included in Appendix A. dB levels are rounded to the nearest whole number. See Appendix A for datasheets.

Temporary Noise Increase

Construction of new buildings or redevelopment of existing structures to accommodate new cannabis facilities would generate noise that could expose nearby receptors to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Temporary construction activity noise would be considered significant if it violates the limits established in Section 5.04.090 of the City's Noise Ordinance. The City's Noise Ordinance prohibits operation of any construction equipment outside the hours of 7:00 a.m. through 7:00 p.m., Monday through Saturday, excluding legal holidays, without approval from the City's Director of Development Services. In addition, construction equipment with the potential to exceed 85 dBA at the construction site shall not be operated at the same location for more than 10 consecutive workdays without notification to properties within 300 feet of the site.

Sound levels from typical construction equipment are provided in Table 8, Typical Construction Equipment Noise Levels. As shown in Table 8, noise levels range from 76 dBA to 88 dBA Leq at 50 feet from the source (FTA 2018). Noise from construction equipment generally exhibits point source acoustical characteristics. Strictly speaking, a point source sound decays at a rate of 6 dBA per doubling of distance from the source. The rule applies to the propagation of sound waves with no ground interaction.

Table 8. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level 50 Feet from Source (dBA)
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Crane	83
Dozer	85
Generator	82
Grader	85
Jack Hammer	88
Loader	80
Paver	85
Roller	85

Table 8. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level 50 Feet from Source (dBA)
Saw	76
Truck	84

Source: FTA 2018.

The project does not propose any specific new development. It is currently unknown what new or improved buildings would be constructed to accommodate cannabis uses or the exact locations of these uses in the project area. Construction of cannabis facilities consistent with the proposed Ordinance is anticipated to occur over multiple years. During this time, construction impacts would be expected to occur temporarily throughout the project area. It is anticipated that standard equipment, such as dozers, loaders, graders, backhoes, scrapers, and miscellaneous trucks, would be required for most construction days. Construction would take place during the allowable City Noise Ordinance hours of 7:00 a.m. to 7:00 p.m. Standard construction operation would have the potential to exceed 85 dBA at the construction site for more than 10 consecutive workdays and would require notification to all property owners and residents within 300 feet of the site in accordance with the City's Noise Ordinance. Future construction would be required to comply with the City's Noise Ordinance construction noise limitations. Therefore, this impact would be less than significant.

4.1.1.2 Mitigation Measures

Impacts related to excessive noise would be less than significant; therefore, no mitigation measures would be required.

4.1.1.3 Significance after Mitigation

Impacts related to excessive noise would be less than significant without mitigation.

4.1.1.4 Cumulative Impacts

The cumulative analysis below addresses the potential cumulative impacts that would result from noise generated by proposed land uses, permanent increases in vehicle traffic noise, and temporary construction impacts from other planned projects in the City in combination with the project. This analysis incorporates the 55 cumulative projects assumed in the Transportation Impact Analysis for the project (see Figure 2, Cumulative Projects).

Operational Impacts

Approved or planned projects in the City are considered in the cumulative analysis for the project. As stated above, this analysis incorporates the cumulative projects assumed in the Transportation Impact Analysis for the project (LLG 2022). These approved or planned projects include multi- and single-family residential development, commercial uses, light industrial uses, medical uses, and a church. Residential land uses would generate occasional nuisance noise that would not be considered a significant impact. Similar to the project, some of the cumulative development

projects would potentially include HVAC systems or other stationary equipment, as well as nuisance noise from parking lots and increased human activity. The precise locations of future cannabis facilities are currently unknown. However, HVAC systems and stationary equipment installed as part of cumulative projects would also be subject to the City's Noise Ordinance noise level limits, and nuisance noise would be similar to existing conditions in the project area. Therefore, noise from operation of the project is unlikely to combine with noise from operation of cumulative projects. A cumulative impact related to operational noise would not occur.

Permanent Increase in Ambient Noise Levels

A cumulative permanent ambient noise impact would occur if cumulative projects would result in an increase in ambient noise that would exceed the City's noise standards. Cumulative projects would result in increases in traffic that would cumulatively increase traffic noise. An individual project would result in a cumulatively considerable contribution to a significant cumulative impact if the increase in noise attributable to the project would cause a roadway to exceed the applicable noise standards or would be 3 dBA or higher on a roadway that would exceed the threshold without the project.

Table 9, Cumulative Traffic Noise Impacts, compares cumulative traffic noise levels with the project to existing conditions. As shown in Table 9, the project, combined with cumulative projects, would not result in a cumulative impact on any modeled roadway segment because the project's contribution would be less than 3 dBA. Additionally, as shown in Table 7, the project would not result in a contribution to the future increases in noise level. Therefore, a significant cumulative impact would not occur.

Table 9. Cumulative Traffic Noise Impacts

Roadway	Segment	Applicable Threshold (dBA Ldn)	Existing (dBA Ldn)	Exceeds Threshold under Existing Conditions?	Existing + Cumulative + Project (dBA Ldn)	Increase in Noise Level	Significant Cumulative Impact?
Mission Gorge Road	Western City limits to West Hills Parkway	65	71	Yes	72	+1	No
	SR-125 to Fanita Drive	65	77	Yes	77	0	No
	Town Center Parkway to Cuyamaca Street	70	75	Yes	76	+1	No
West Hills Parkway	Mast Boulevard to Mission Gorge Road	65	68	Yes	69	+1	No
Cuyamaca Street	Mission Gorge Road	70	74	Yes	75	+1	No

Table 9. Cumulative Traffic Noise Impacts

Roadway	Segment	Applicable Threshold (dBA Ldn)	Existing (dBA Ldn)	Exceeds Threshold under Existing Conditions?	Existing + Cumulative + Project (dBA Ldn)	Increase in Noise Level	Significant Cumulative Impact?
	to SR-52 ramps						
N. Woodside Avenue	Riverford Road to Woodside Avenue	70	60	No	60	0	No

Note: dBA = A-weighted decibel; Ldn = day-night average sound level; SR- = State Route

Unless otherwise noted, a cumulative impact would occur if vehicle traffic noise would result in an ambient noise level that exceeds the applicable threshold established in the Santee General Plan. If the normally acceptable standard would be exceeded in the existing condition, an increase of more than 3 dBA would be considered a cumulative impact. A cumulatively considerable contribution to a cumulative impact would be a 3 dBA or more increase attributable to the project.

Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based on traffic data provided by LLG (LLG 2022). Traffic levels for each roadway are included in the Appendix A. dB levels are rounded to the nearest whole number. See Appendix A for datasheets.

Construction Impacts

Construction noise impacts are localized in nature because they are limited to the construction site where construction equipment is operating. The timing of construction that may be required for new cannabis facilities is currently unknown. The cumulative projects identified in the project's Transportation Impact Analysis are proposed throughout the City, including along Mission Gorge Road and Prospect Avenue, which also includes the project area (LLG 2022) (see Figure 2). Construction of cumulative projects and cannabis facilities would be temporary and limited to the receptors surrounding the construction area. Due to the temporary nature of construction impacts and distance between individual cumulative projects and potential new cannabis facility locations, it is unlikely that construction from proposed new cannabis facilities would combine with noise from construction of the proposed land uses. Additionally, cumulative projects and construction accommodated under the project would be subject to the construction limitations in the City's Noise Ordinance, which requires construction notification and prohibits noise generated by construction activities between the hours of 7:00 p.m. and 7:00 a.m. and on Sundays and legal holidays unless approved by the City's Director of Development Services. Due to the distance between cumulative projects and through compliance with the City's Noise Ordinance, cumulative impacts would be less than significant.

4.1.2 Threshold 2: Excessive Groundborne Vibration or Noise

4.1.2.1 Impact Analysis

The main concerns associated with groundborne vibration from cannabis facilities are annoyance and damage during construction; however, vibration-sensitive instruments and operations can be

disrupted at much lower levels than would typically affect other uses. In extreme cases, vibration can cause damage to buildings, particularly those that are old or otherwise fragile.

Groundborne vibration occurring as part of the project would result from construction equipment. Following construction, it is not anticipated that allowable cannabis facilities would require heavy equipment that would generate groundborne vibration. Therefore, only potential impacts from construction are addressed below. The City uses the FTA groundborne vibration impact criteria, provided in Table 4, to determine if construction vibration impacts would be significant.

No specific construction projects are proposed under the project; however, it is likely that construction of buildings and/or redevelopment of structures would occur. Typical vibration levels for construction equipment that may be required for new cannabis facilities are provided in Table 10, Vibration Source Levels for Construction Equipment. Construction vibration is subject to the infrequent event criteria because operation of vibration-generating equipment is anticipated to be intermittent throughout the day in the vicinity of an individual receptor. As required by the City's Noise Ordinance, construction would occur during the daytime and would not disturb sleep. Therefore, the daytime use threshold of 83 VdB is applicable to most surrounding land uses, including residences. However, new cannabis facilities would be in existing commercial and industrial use areas that may include vibration-sensitive uses, such as medical facilities and manufacturing equipment. Therefore, construction is also subject to the threshold of 65 VdB for vibration-sensitive uses.

Table 10. Vibration Source Levels for Construction Equipment

Construction Equipment	Approximate VdB at 25 Feet	Approximate VdB at 60 Feet[1]	Approximate VdB at 235 Feet[1]
Hoe ram	87	76	58
Large bulldozer	87	76	58
Loaded trucks	86	75	57
Jackhammer	79	68	50
Small bulldozer	58	47	29
Vibratory roller	94	83	65

Source: FTA 2018.

Notes: VdB = vibration decibel

[1] Based on formula provided by the FTA (FTA 2018).

As shown in Table 10, vibration levels from all construction equipment would be reduced to 83 VdB or below beyond 60 feet from construction and reduced to 65 VdB or below beyond 235 feet from construction. The exact locations of future new cannabis facilities are unknown. Because the Ordinance would limit cannabis facilities to commercial and industrial zones, construction would generally be separated from existing residential structures by 60 feet. However, construction in existing commercial and industrial zones may occur within 235 feet of vibration-sensitive operations, such as medical facilities or manufacturing equipment. Vibration levels would have

the potential to exceed the applicable FTA criteria; therefore, construction activities would result in a potentially significant temporary construction impact.

In addition to human annoyance, an impact related to architectural and structural damage to buildings would occur if existing buildings were affected by a PPV in excess of 0.2 in/sec, which is equal to approximately 94 VdB. As shown in Table 10, vibration levels from vibratory construction equipment would be reduced to below 94 VdB beyond 25 feet of construction equipment. Construction would be temporary and construction equipment would not be stationary at individual construction sites. It is not anticipated that individual pieces of construction equipment would generally operate within 25 feet of existing buildings or not generate vibration that exceeds 94 VdB at nearby sensitive receptors. Therefore, although construction would have the potential to result in significant nuisance impacts, as described previously, project construction equipment would not result in a significant impact related to structural damage.

4.1.2.2 Mitigation Measures

Implementation of Mitigation Measures NOI-1 and NOI-2 would minimize temporary groundborne vibration impacts from construction activities at the nearby receptors.

NOI-1: **Vibration Best Management Practices.** Construction activities within 60 feet of a residence or 235 feet of a facility that uses vibration-sensitive equipment shall implement vibration best management practices to reduce vibration levels at nearby sensitive receptors. These best management practices shall be included in project construction documents, including the grading plan and construction contract. Practices may include but not be limited to the following:

- Use only properly maintained equipment with vibratory isolators
- Operate equipment as far from sensitive receptors as possible
- Use rubber-tired vehicles as opposed to tracked vehicles

NOI-2: **Construction Vibration Notification.** The construction contractor shall provide written notification to residential receptors within 60 feet of construction activities and vibration-sensitive receptors within 235 feet of construction activities at least 3 weeks before the start of construction activities resulting in groundborne vibration. The notice shall inform receptors of the estimated start date and duration of daytime vibration-generating construction activities. The notification shall include information warning the receptors about potential impacts related to vibration-sensitive equipment and provide contact information to learn more about the vibration activities.

4.1.2.3 Significance after Mitigation

Implementation of Mitigation Measures NOI-1 and NOI-2 would reduce impacts from groundborne vibration to a less than significant level. In addition, vibration impacts would be temporary and would cease following construction. Therefore, impacts related to groundborne vibration during construction would be less than significant after mitigation.

4.1.2.4 Cumulative Impacts

Similar to noise effects, vibration is a localized phenomenon and is progressively reduced as the distance from the source increases. Therefore, the projects that would be considered for the vibration cumulative analysis would be only those projects in proximity to other active construction projects. As discussed previously, vibration levels from typical construction would attenuate to below 65 VdB approximately 235 feet from the active construction area. The timing of construction that may be required for new cannabis facilities is currently unknown. Cumulative projects are proposed throughout the City and could also occur in the project area, such as along Mission Gorge Road and Prospect Avenue. Although unlikely, construction of cumulative projects may occur simultaneously and adjacent to new facilities developed as a result of the project, and may result in the exposure of an individual receptor to significant vibration for a short period of time. Therefore, a potentially significant cumulative vibration impact would occur. However, Mitigation Measures NOI-1 and NOI-2 would reduce the project's contribution to less than cumulatively considerable.

4.1.3 Threshold 3: Aircraft Noise

4.1.3.1 Impact Analysis

MCAS Miramar and Gillespie Field are adjacent to the northern and southern City boundaries, respectively. The project would not include any components that would increase air traffic or require changes to existing air traffic patterns. The entire project area is outside all MCAS Miramar noise contours (SDCRAA 2011). Therefore, no impact would occur related to MCAS Miramar. However, portions of the project area, primarily between SR-125 and SR-67 and south of and along Mission Gorge Road, are within the 70–75 dBA Ldn airport noise contour for Gillespie Field (SDCRAA 2010). In accordance with Federal Aviation Administration standards, noise levels of 70 dBA Ldn would be incompatible with the proposed land uses unless additional noise-reducing features are incorporated into affected structures. Therefore, the project would have the potential to expose customers and workers to excessive aircraft noise levels within the 70–75 dBA Ldn noise contour for Gillespie Field. This impact would be potentially significant.

4.1.3.2 Mitigation Measures

Implementation of Mitigation Measure NOI-3 would reduce exposure to aircraft noise.

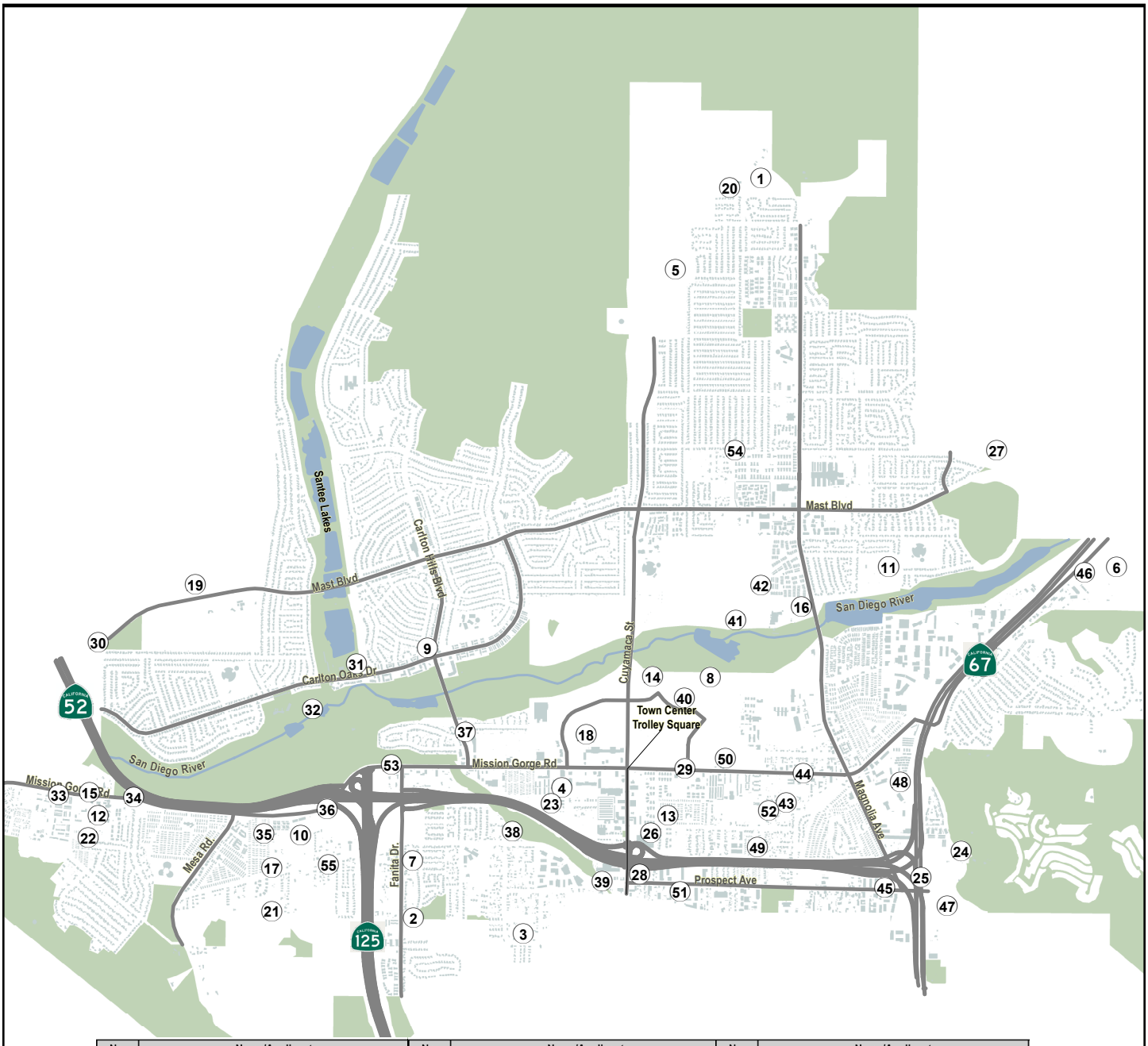
NOI-3: **Noise Level Reduction Features.** In accordance with Federal Aviation Administration standards, before issuance of a building permit for construction of cannabis facilities within the 70–75 A-weighted decibel day-night noise level noise contour of Gillespie Field, the applicant shall demonstrate to the City of Santee Director of Development Services that a 25-decibel noise level reduction (outdoor to indoor) has been achieved through the incorporation of noise attenuation features into the design of portions of buildings where noise levels are normally low, including areas where the public is received, office areas, noise-sensitive areas, and other areas that would not include industrial equipment operation. Potential noise reduction features may include but not be limited to enhanced ceiling and wall insulation and double- or triple-paned windows.

4.1.3.3 Significance after Mitigation

Implementation of Mitigation Measure NOI-3 would reduce impacts from aircraft noise to a less than significant level.

4.1.3.4 Cumulative Impacts

Impacts related to aircraft noise within noise contour areas are site specific and are not cumulative in nature. No additional aviation uses are planned to be introduced into the project area. In addition, the project does not propose any new or modified air traffic patterns. Therefore, a cumulative impact related to aircraft noise would not occur.



No.	Name/Applicant	No.	Name/Applicant	No.	Name/Applicant
1	GA Development, LLC	20	Calvary Chapel	39	Tower Glass
2	D'Lazio	21	Tyler Street Subdivision	40	Studio Movie Grill
3	East County Estates	22	Carribean Way	41	County Property 2
4	Las Olivitas	23	Talwar	42	County Property 1
5	Santee View Estates	24	Lantern Crest Ridge	43	KDS & Associates
6	Woodside Terrace	25	Graves/Prospect Commercial	44	Cameron Brothers
7	Tyree & Vidovich Investments, LLC	26	Sharp Medical Office Building	45	Jacor
8	Cornerstone	27	Parkside (formerly Hillside Meadows)[1]	46	Rayo Wholesale
9	Santee Townhomes	28	Cuyamaca Service Station	47	Lantern Crest Phase III
10	Prospect Fields	29	Panera Bread	48	Rockvill Residential
11	River Village	30	Sycamore Landfill[2]	49	All Right Storage
12	Infill Development Company	31	PDMWD/Santee Lakes Recreation Preserve Expansion	50	County ARCC
13	Village Run Homes, LLC	32	Carlton Oaks Country Club	51	Gondala Skate
14	Karl Strauss	33	Garmo Brothers	52	Lunar Lane
15	Hattie Davidson Properties	34	Toby Foster (8017 Mission Gorge Road)	53	Kalasho Gas Station
16	Walker Trails	35	Meng Subdivision	54	Conejo Subdivision
17	Prospect Estates II	36	WoodSpring Suites	55	Prospect Avenue Subdivision
18	Costco and Expanded Food Court	37	Handel's Ice Cream	1. Partially within County of San Diego	
19	Weston (formerly Castlerock)	38	Atlas View Condos	2. Within City of San Diego	

Path: C:\GIS\Projects\City of Santee\CannabisOrdinance\Map Docs\IS_MND

Source: LLG 2022.

Harris & Associates

N

0 0.25 0.5 Miles

Figure 2

Cumulative Projects

City of Santee Cannabis Business Ordinance

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Appendix A. Federal Highway Administration Noise Prediction Model Results

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TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number:
Project Name: Santee Cannabis Business Ordinance

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Linscott, Law, and Greenspan, April 2022
Community Noise Descriptor: L_{dn}: X CNEL:

"-" = contour is located within the roadway right-of-way.
Distance is from the centerline of the roadway segment to the receptor location.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	**Ldn at 50 Feet**	Distance to Contour: 70 Ldn	65 Ldn	60 Ldn	55 Ldn
Mission Gorge Road												
Western City Limits to West Hills Pkwy, existing	4	15	16,510	45	0.5	5.0%	3.0%	**71**	59	127	274	590
Western City Limits to West Hills Pkwy, existing + cumulative	4	15	18,270	45	0.5	5.0%	3.0%	**72**	63	136	293	631
Western City Limits to West Hills Pkwy existing + cumulative + p	4	15	19,510	45	0.5	5.0%	3.0%	**72**	66	142	306	659
Mission Gorge Road												
SR-125 to Fanita Drive, existing	6	15	45,440	45	0.5	5.0%	3.0%	**77**	151	325	699	1,507
SR-125 to Fanita Drive, existing + cumulative	6	15	48,030	45	0.5	5.0%	3.0%	**77**	156	337	726	1,564
SR-125 to Fanita Drive, existing + cumulative + project	6	15	49,980	40	0.5	5.0%	3.0%	**77**	139	299	644	1,388
Mission Gorge Road												
Town Center Pkwy to Cuyamaca St, existing	6	15	28,630	45	0.5	5.0%	3.0%	**75**	111	239	514	1,107
Town Center Pkwy to Cuyamaca St, existing + cumulative	6	15	31,420	45	0.5	5.0%	3.0%	**76**	118	254	547	1,178
Town Center Pkwy to Cuyamaca St, existing + cumulative + proj	6	15	33,520	45	0.5	5.0%	3.0%	**76**	123	265	571	1,230
West Hills Parkway												
Mast Blvd to Mission Gorge Rd, existing	4	15	11,610	45	0.5	3.0%	2.0%	**68**	-	83	179	386
Mast Blvd to Mission Gorge Rd, existing + cumulative	4	15	13,460	45	0.5	3.0%	2.0%	**69**	-	92	198	426
Mast Blvd to Mission Gorge Rd, existing + cumulative + project	4	15	14,330	45	0.5	3.0%	2.0%	**69**	-	96	206	444
Cuyamaca Street												
Mission Gorge Rd to SR-52 Ramps, existing	6	15	39,020	35	0.5	5.0%	3.0%	**74**	91	196	422	909
Mission Gorge Rd to SR-52 Ramps, existing + cumulative	6	15	42,640	35	0.5	5.0%	3.0%	**75**	107	230	496	1,068
Mission Gorge Rd to SR-52 Ramps, existing + cumulative + proj	6	15	44,200	35	0.5	5.0%	3.0%	**75**	109	236	508	1,094
N. Woodside Avenue												
Riverford Rd to Woodside Ave, existing	2	0	3,390	40	0.5	2.0%	1.0%	**60**	-	-	48	103
Riverford Rd to Woodside Ave, existing + cumulative	2	0	3,520	40	0.5	2.0%	1.0%	**60**	-	-	49	105
Riverford Rd to Woodside Ave, existing + cumulative + project	2	0	3,780	40	0.5	2.0%	1.0%	**60**	-	-	51	110

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