Appendix J

Noise Technical Report

HELIX Environmental Planning

Kearny Mesa Community Plan Update

Noise Technical Report

December 2019

Prepared for:

City of San Diego Planning Department
9485 Aero Drive
San Diego, CA 92123

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
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ACRONYMS AND ABBREVIATIONS

ALUCP	Airport Land Use Compatibility Plan
ANSI	American National Standards Institute
CALGreen	California Green Buildings Standards Code
Caltrans	California Department of Transportation
CBSC	California Building Standards Commission
CEQA	California Environmental Quality Act
City	City of San Diego
CNEL	Community Noise Equivalent Level
CPU	Community Plan Update
dB	decibel
dBA	A-weighted decibel
FTA	Federal Transit Administration
Hz	Hertz
I-	Interstate
in./sec.	inches per second
kHz	kilohertz
L_{DN}	Day-Night Level
L_{EQ}	Equivalent Sound Level
MCAS	Marine Corps Air Station
mph	miles per hour
mPa	micro-Pascals
MTS	Metropolitan Transit Service
NSLU	noise sensitive land use
PPV	peak particle velocity
RMS	root mean square
SANDAG	San Diego Association of Governments
SPL	Sound Pressure Level
SR	State Route
STC	Sound Transmission Class
USDOT	U.S. Department of Transportation
VdB	vibration decibel

EXECUTIVE SUMMARY

The Kearny Mesa Community Plan Update (CPU) area encompasses the community of Kearny Mesa, located in the central portion of the City of San Diego. The Kearny Mesa CPU is a comprehensive update to the Kearny Mesa Community Plan, which was adopted in 1992 and most recently amended in January 2018. The purpose of the CPU is to continue to guide the growth and development of Kearny Mesa. This report presents a programmatic assessment of the potential construction and operational noise and vibration impacts associated with implementation of the proposed CPU.

Mitigation Measure NOI-1 would reduce construction-related noise impacts; however, even with implementation of mitigation measure NOI-1, significant construction noise impacts may still occur because it is not feasible to ensure and enforce implementation for all projects developed per the proposed CPU Construction-related noise impacts are therefore conservatively assessed as significant and unavoidable.

New development in the CPU area is proposed within the vibration screening distances of the future Metropolitan Transit Service (MTS) Trolley Purple Line corridor and future construction activities that would use vibratory construction equipment could expose future sensitive receptors to substantial vibration levels. Studies conducted by the San Diego Association of Governments (SANDAG) for the MTS Trolley Purple Line would address potential vibration impacts associated with the future trolley corridor and may identify measures to reduce trolley-related vibration; however, at this time, it cannot be determined whether the vibration reduction measures would adequately minimize trolley vibration levels to below a level of significance. Similarly, implementation of Mitigation Measure NOI-2 would reduce potential construction vibration-related impacts; however, however, even with implementation of mitigation measure NOI-2, significant construction vibration-related impacts may still occur because it is not feasible to ensure and enforce implementation for all projects developed per the proposed CPU. Vibration-related impacts are therefore conservatively assessed as significant and unavoidable.

Traffic noise levels would increase from buildout under the CPU. Noise levels would increase by more than 3 A-weighted decibels (dBA) along three roadway segments of Ruffin Road: between Kearny Villa Road and Chesapeake Drive; between Clairemont Mesa Boulevard and Lightwave Avenue; and between Balboa Avenue and Ridgehaven Court. Exterior noise levels along the segments of Ruffin Road between Kearny Villa Road and Chesapeake Drive and between Balboa Avenue and Ridgehaven Court would remain below the City's 75 CNEL compatibility limit for industrial uses and would not result in a significant impact. However, noise levels along the segment of Ruffin Road between Clairemont Mesa Boulevard and Lightwave Avenue would exceed the City's 65 CNEL conditionally compatible limit for hospital uses (associated with the existing Kaiser Permanente Medical Center). While existing structures may be retrofitted with acoustically rated windows and walls featuring higher Sound Transmission Class ratings, (which is a measure of exterior noise reduction performance), there is no City procedure to ensure that exterior noise affecting existing NSLUs is adequately attenuated to City standards. Therefore, impacts to existing NSLUs would be significant and unavoidable.

New development projects under the CPU could be located in areas where the exterior noise levels exceed the Land Use – Noise Compatibility Guidelines as a result of transportation-related noise sources, including vehicular roadway traffic, trolley, and aircraft. There are no feasible mitigation measures available to reduce exterior noise levels, and impacts would be significant and unavoidable.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report analyzes the potential noise and vibration impacts associated with the implementation of the Kearny Mesa Community Plan Update (CPU). The report analyzes the potential noise impacts associated with future development within the CPU area, and, as appropriate, identifies measures which can be taken to avoid adverse noise and vibration impacts. The analysis follows the guidelines within the City of San Diego's (City) *California Environmental Quality Act* (CEQA) *Significance Determination Thresholds* (City 2016).

1.2 PROJECT LOCATION

Kearny Mesa is located in the central portion of the City in San Diego County (Figure 1, *Regional Location*). The Kearny Mesa CPU area is bounded by State Route (SR) 52 on the north and Interstate (I-) 805 and I-15 on the west and east, respectively, and encompasses approximately 4,423 acres (Figure 2, *Project Vicinity*). Marine Corps Air Station (MCAS) Miramar is situated to the north of the CPU area, the community of Tierrasanta to the east, the communities of Serra Mesa and Mission Valley to the south, and the communities of Clairemont Mesa and Linda Vista to the west.

1.3 PROJECT DESCRIPTION

The Kearny Mesa CPU is a comprehensive update to the Kearny Mesa Community Plan, which was adopted in 1992 and most recently amended in January 2018 (City of San Diego 2018). The purpose of the CPU is to continue to guide the growth and development of Kearny Mesa. The proposed CPU provides community-specific policies that further implement the General Plan with respect to the distribution and arrangement of land uses, and the local street and transit network; urban design guidelines; recommendations to preserve and enhance natural open space and historic and cultural resources; and prioritization and provision of public facilities within the Kearny Mesa community.

Within the boundaries of the CPU area are three locally approved planning documents: the Stonecrest Specific Plan, the New Century Center Master Plan, and the Montgomery-Gibbs Executive Airport Master Plan (refer to Figure 2). The Stonecrest Specific Plan was adopted by City Council in February 1988 with amendments approved in 1996 (City of San Diego 1996). The New Century Center Master Plan was approved by City Council in November 2002 (City of San Diego 2002). The Stonecrest Specific Plan is proposed to be rescinded as part of the proposed CPU. An update to the Montgomery-Gibbs Executive Airport Master Plan is currently being prepared by the City's Real Estate Assets Department - Airports Division.

1.3.1 CPU Policies Related to Noise

The Kearny Mesa CPU includes policies that provide guidance for new development related to noise. These policies include the following:

- 1.21 – Any residential development built within 500 feet of a freeway needs to be designed to minimize the exposure to freeways, including siting buildings and balconies perpendicular to the

freeway, and using open areas with landscaping, parks, and parking structures to shield units from noise and air pollution; and

- 7.14 – Encourage site planning, design and construction, operational measures, and on-site noise level limit practices that minimize noise, especially for and within mixed-use sites.

1.4 NOISE AND SOUND LEVEL DESCRIPTORS AND TERMINOLOGY

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) used to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours, but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver contribute to the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

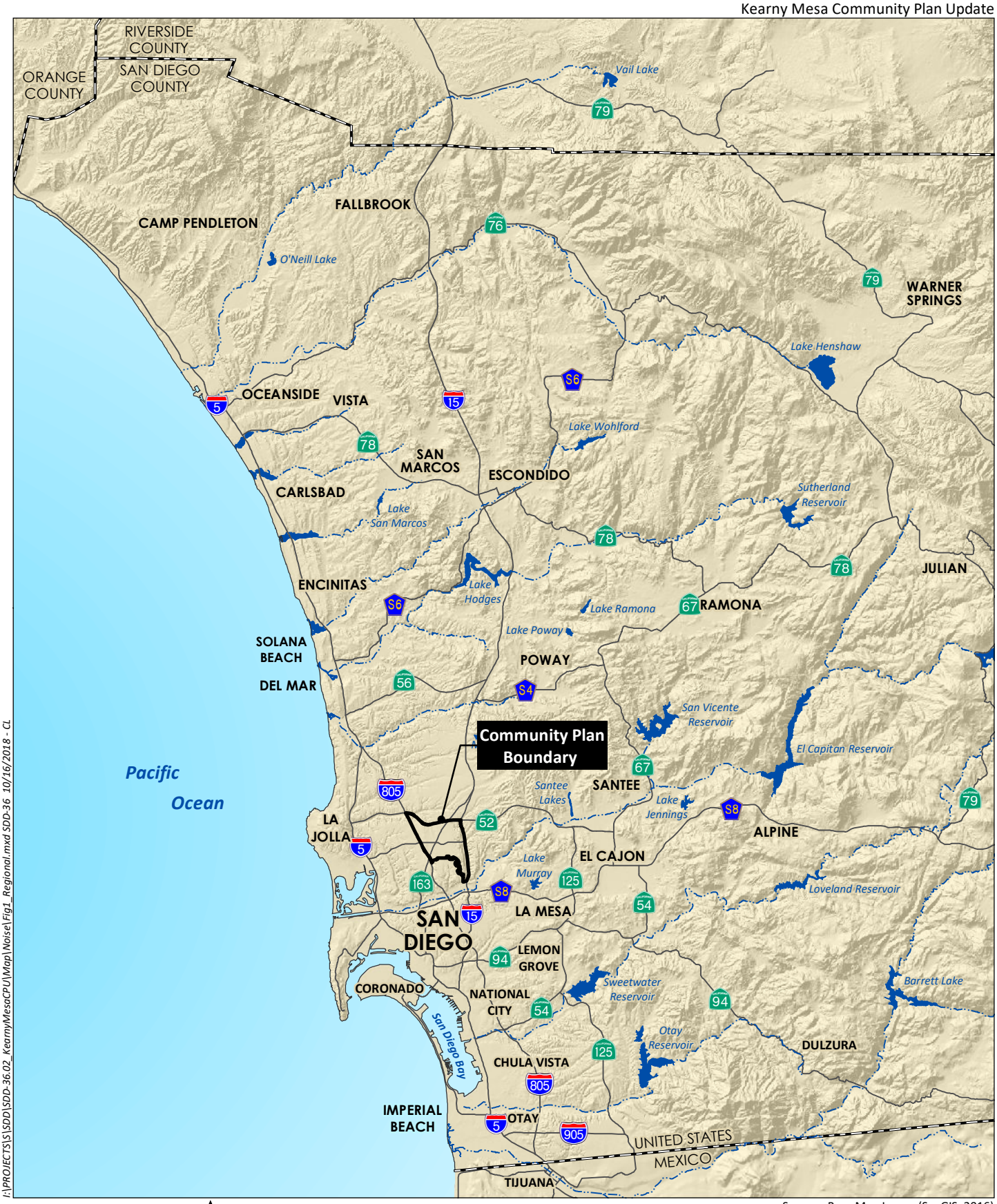
Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA units. The threshold of hearing for the human ear is approximately 0 dBA, which corresponds to 20 micro Pascals (mPa).

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.

1.5 VIBRATION DESCRIPTORS AND TERMINOLOGY

Vibration is defined as any oscillatory motion induced in a structure or mechanical device as a direct result of some type of input excitation. Sources of ground-borne vibrations include natural phenomena



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Source: Base Map Layers (SanGIS, 2016)

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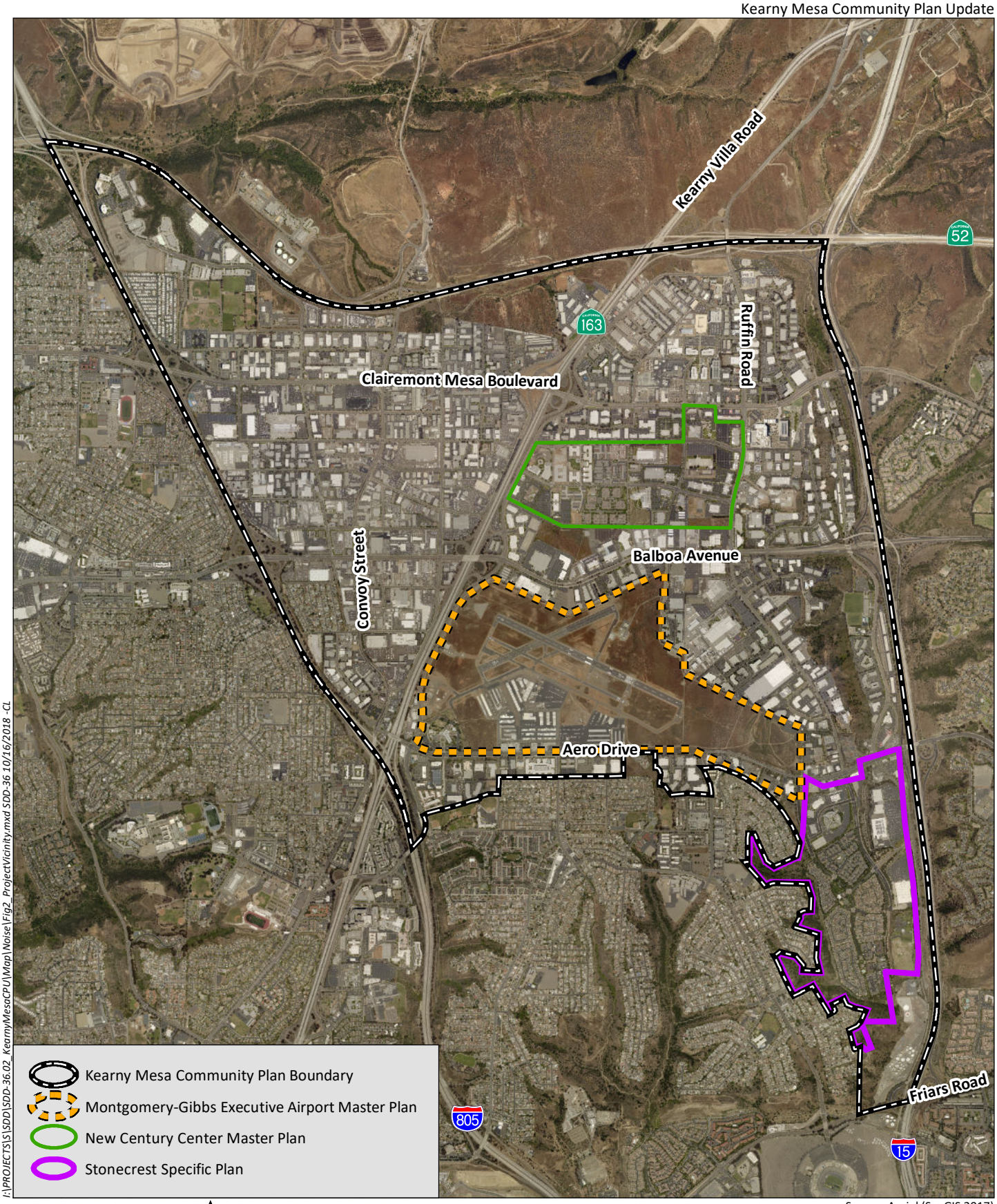
Regional Location

Figure 1



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Source: Aerial (SanGIS 2017)

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Project Vicinity

Figure 2

(earthquakes, volcanic eruptions, sea waves, landslides, etc.) or manufactured (explosions, trains, machinery, traffic, construction equipment, etc.). Vibration sources may be transient, steady-state (continuous), or pseudo steady-state. Examples of transient construction vibrations are those that occur from blasting with explosives, impact pile driving, demolition, and wrecking balls.

Ambient and source vibration information are expressed in terms of the peak particle velocity (PPV) in inches per second (in./sec). The root mean square (RMS) of a signal is the average of the squared amplitude of the signal in decibels (relative to 1 micro-inch per second). Because the net average of a vibration signal is zero, the RMS amplitude is used to describe the "smoothed" vibration amplitude. The RMS amplitude is always less than the PPV and is always positive. The RMS average is typically calculated over a one-second period.

The background vibration velocity level in residential areas is usually 50 vibration decibels (VdB) or lower; this is well below the level perceptible by humans, which is approximately 65 VdB. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

2.0 REGULATORY FRAMEWORK

2.1 STATE REGULATIONS

2.1.1 California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973 (Act), 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 also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by 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.

2.1.2 California Environmental Quality Act

Under CEQA, lead agencies are directed to assess conformance to local or other agency noise standards; measure and identify the potentially significant exposure of people to (or generation of) excessive ground-borne vibration or noise levels; and measure and identify potentially significant permanent or temporary increases in ambient noise levels. Implementation of CEQA ensures that during the decision-making stage of development, decision-makers and the public will be informed of any potentially excessive noise levels and available mitigation measures to reduce them to acceptable levels.

2.1.3 California Noise Insulation Standards (California Code of Regulations Title 24, Section 1207 Sound Transmission)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multi-family residential buildings (California Building Standards Commission [CBSC] 2016a). Title 24 requires that residential structures be designed to prevent the intrusion of exterior noise so that the interior noise levels, with windows closed, attributable to exterior sources shall not exceed 45 CNEL in any habitable room. The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure may be exposed to exterior noise levels of 60 CNEL or greater. The acoustical analysis must demonstrate that the residences have been designed to limit intruding noise to a maximum interior noise level of 45 CNEL.

2.1.4 California Green Buildings Standards Code

Section 5.507 of the 2016 California Green Buildings Standards Code ([CALGreen] CBSC 2016b) establishes requirements for acoustical control in non-residential buildings. The standards require that wall and roof-ceiling assemblies making up the building envelope shall have a Sound Transmission Class (STC) value of at least 50, and exterior windows shall have a minimum STC of 40 or Outdoor-Indoor STC of 30 for buildings within: (1) the 65 CNEL noise contour of an airport; or (2) the 65 CNEL or L_{DN} noise contour of a freeway or expressway, railroad, industrial source, or fixed-guideway source. Wall and floor-ceiling assemblies separating tenant spaces and public places shall have an STC of at least 40. Additionally, Section A5.507.5 requires that classrooms have a maximum interior background noise level of no more than 45 dBA L_{EQ}.

2.2 LOCAL REGULATIONS

2.2.1 City of San Diego General Plan Noise Element

The Noise Element of the City of San Diego General Plan includes the following policies intended to minimize noise through standards, site planning, and noise mitigation.

1. Policy NE-A.1: Separate excessive noise-generating uses from residential and other noise-sensitive land uses with a sufficient spatial buffer of less sensitive uses.

2. Policy NE-A.2: Assure the appropriateness of proposed developments relative to existing and future noise levels by consulting the guidelines for noise-compatible land use (shown on Table NE-3) to minimize the effects on noise-sensitive land uses.

3. Policy NE-A.3: Limit future residential and other noise-sensitive land uses in areas exposed to high levels of noise.

4. Policy NE-A.4: Require an acoustical study consistent with Acoustical Study Guidelines (Table NE-4) for proposed developments in areas where the existing or future noise level exceeds or would exceed the “compatible” noise level thresholds as indicated on the Land Use - Noise Compatibility Guidelines (Table NE-3), so that noise mitigation measures can be included in the proposed project design to meet the noise guidelines.

5. Policy NE-A.5: Prepare noise studies to address existing and future noise levels from noise sources that are specific to a community when updating community plans.

6. Policy NE-D.2: Limit future residential uses within airport influence areas to the 65 CNEL airport noise contour, except for multiple-use, mixed-use, and live work residential uses within the San Diego International Airport influence area in areas with existing residential uses and where a community plan and the Airport Land Use Compatibility Plan allow for future residential uses.

7. Policy NE-D.3: Ensure that future multiple-unit, mixed-use, and live work residential uses within the San Diego International Airport influence area that are located greater than the 65 CNEL airport noise contour are located in areas with existing residential uses and where a community plan and Airport Land Use Compatibility Plan allow for future residential uses.

    a. Limit the amount of outdoor areas subject to exposure above the 65 CNEL; and

    b. Provide noise attenuation to ensure an interior noise level that does not exceed 45 CNEL.

In addition, the Noise Element includes the City's Land Use - Noise Compatibility Guidelines which identify the limits for acceptable noise levels for different land use categories, as illustrated in Table 1 *City of San Diego Land Use - Noise Compatibility Guidelines.* Although not considered compatible, the City conditionally allows some uses to be exposed to an exterior noise level of up to 75 CNEL in areas affected primarily by motor vehicle noise.

Table 1
CITY OF SAN DIEGO LAND USE - NOISE COMPATIBILITY GUIDELINES[1]

Land Use Category	Exterior Noise Exposure (CNEL)				
	<60	60-65	65-70	70-75	75+
Parks and Recreational					
Parks, Active and Passive Recreation					
Outdoor Spectator Sports, Golf Courses; Water Recreational Facilities; Indoor Recreation Facilities					
Agricultural					
Crop Raising & Farming; Community Gardens, Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables					
Residential					
Single Dwelling Units; Mobile Homes		45			
Multiple Dwelling Units		45	45		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; K-12 Educational Facilities; Libraries; Museums; Child Care Facilities		45			
Other Educational Facilities including Vocational/Trade Schools and Colleges, and Universities)		45	45		
Cemeteries					

Table 1 (cont.)
CITY OF SAN DIEGO LAND USE NOISE COMPATIBILITY GUIDELINES[1]

Land Use Category	Exterior Noise Exposure (CNEL)				
	<60	60-65	65-70	70-75	75+
Retail Sales					
Building Supplies/Equipment; Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Apparel & Accessories			50	50	
Commercial Services					
Building Services; Business Support; Eating & Drinking; Financial Institutions; Maintenance & Repair; Personal Services; Assembly & Entertainment (includes public and religious assembly); Radio & Television Studios; Golf Course Support			50	50	
Visitor Accommodations		45	45	45	
Offices					
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters			50	50	
Vehicle and Vehicular Equipment Sales and Services Use					
Vehicle Repair & Maintenance; Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking					
Wholesale, Distribution, Storage Use Category					
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution					
Industrial					
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking & Transportation Terminals; Mining & Extractive Industries					
Research & Development				50	

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.
		Outdoor Uses	Activities associated with the land use may be carried out.
45, 50	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number (45 or 50) for occupied areas.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

Source: City 2008 (as amended in 2015)

[1] Compatible noise levels and land use definitions reflect amendments to the City's General Plan Noise Element approved in 2015.

2.2.2 City of San Diego Municipal Code

The City of San Diego's Municipal Code Chapter 5, Article 9.5, Noise Abatement and Control, declares that the making, creation, or continuance of excessive noises are detrimental to the public health, comfort, convenience, safety, welfare, and prosperity of the residents of the City. Municipal Code Section 59.5.0401 establishes sound level limits. The exterior noise limits for each land use classification

are summarized in Table 2, *City of San Diego Table of Applicable Limits*. One-hour average sound levels are not to exceed the applicable limit. The noise subject to these limits is defined as that part of the total noise at the specified location that is due solely to the action of said person.

Per the Municipal Code Section 59.5.0404, construction noise levels measured at or beyond the property lines of any property zoned residential shall not exceed an average sound level greater than 75 dBA during the 12-hour period from 7:00 a.m. to 7:00 p.m. Further, construction activity is prohibited between the hours of 7:00 p.m. of any day to 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays. Exceptions are allowed and subject to a permit granted by the Noise Abatement and Control Administrator.

Table 2
CITY OF SAN DIEGO TABLE OF APPLICABLE NOISE LIMITS

Land Use Zone	Time of Day	One-hour Average Sound Level (dBA)
Single Family Residential	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	40
Multi-Family Residential (up to a maximum density of 1/2000)	7:00 a.m. to 7:00 p.m.	55
	7:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
All other Residential	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial	7:00 a.m. to 7:00 p.m.	65
	7:00 p.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	60
Industrial or Agricultural	Anytime	75

Source: City of San Diego Municipal Code, Chapter 5, Article 9.5, Division 4, §59.5.0401, Sound Level Limits

2.2.3 Montgomery Field Airport Land Use Compatibility Plan

The Montgomery Field Airport Land Use Compatibility Plan (ALUCP; San Diego County Regional Airport Authority 2010) defines airport-related noise contours for Montgomery-Gibbs Executive Airport. The noise contours determine land use compatibility. Recreational and public uses, as well as outdoor-use areas, may be conditionally compatible within the noise contours. Residential land uses are considered incompatible within the 65 to 70 CNEL and the 70 to 75 CNEL contours. Proposed residential uses within the 60 to 65 CNEL contour are required to attenuate indoor noise to 45 CNEL or less. The area of the CPU area within the 65 to 70 CNEL contour extends north of Dagget Street, south of Othello Avenue, west to I-805 and east to SR 163. Uses such as hotels and lodgings are allowed in areas exposed to noise levels up to 75 CNEL.

3.0 EXISTING NOISE ENVIRONMENT

3.1 PRIMARY NOISE GENERATORS

The primary existing noise generators within the CPU area include the four nearby freeways (I-805, I-15, SR 163, and SR 52), major roadways, Montgomery-Gibbs Executive Airport, and MCAS Miramar.

3.2 NOISE SENSITIVE LAND USES

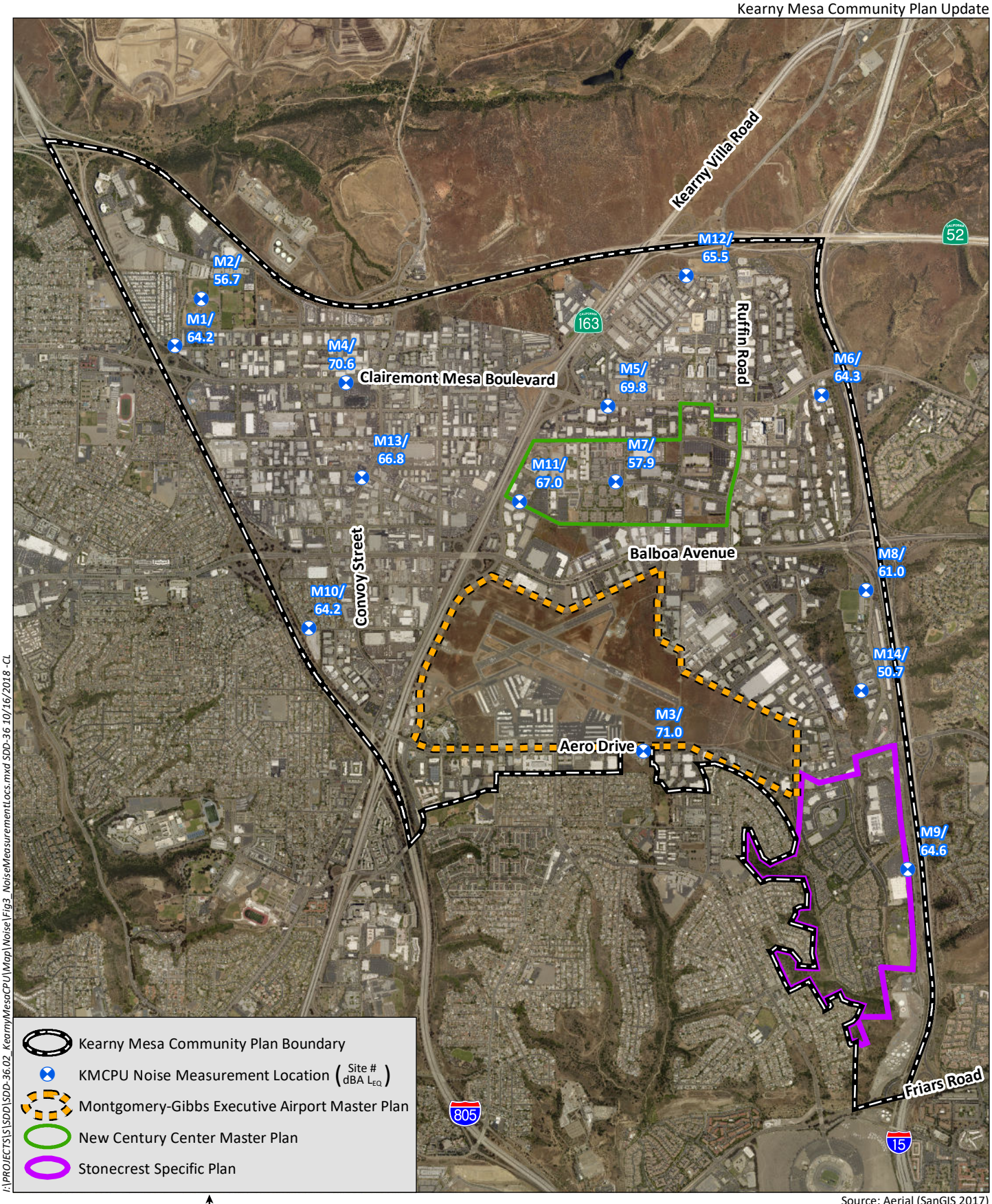
Noise sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise. Existing NSLUs in the CPU area include the Kaiser Permanente Medical Center; the Serra Mesa – Kearny Mesa Branch Library; various hotels, private schools, and daycares; as well as residences located in the northwestern, central, and southeastern portions of the CPU area. Industrial and commercial land uses are generally not considered to be sensitive to noise.

3.3 AMBIENT NOISE LEVELS

A community noise survey was conducted to document noise levels throughout the CPU area. The short-term measurements taken at fourteen locations represent the average sound level over roughly 10- to 15-minute periods on a weekday in June 2018. The locations were chosen based on proposed changes to land use designations and proximity to roadways and freeways. Noise measurement locations are shown on Figure 3, *Baseline Noise Measurement Locations*.

The community noise survey represents a range of the existing noise conditions and provides a representation of baseline noise conditions in the CPU area. The sources of noise varied between sites, but the primary noise generator in most locations was vehicular traffic.

The measured average noise levels ranged from 50 to 71 dBA L_{EQ}. The loudest average noise level was 71.0 dBA L_{EQ}. This measurement (Site M3) was located along Aero Drive by the Serra Mesa – Kearny Mesa Library. The elevated noise level at this location is due to traffic along Aero Drive traveling at a relatively high speed (45 miles per hour [mph]) unimpeded by intersections or stop signs. Another site measuring 70.6 dBA L_{EQ} (Site M4) was located along Clairemont Mesa Boulevard by Zion Market (approximately 700 feet west of Convoy Street). The high level of traffic along Clairemont Mesa Boulevard results in elevated noise levels. Though these measurements provide a snapshot observation of the noise environment, noise can fluctuate widely throughout the day. A summary of the community ambient noise survey results is provided in Table 3, *Noise Monitoring Results*. Individual site survey sheets can be found in Appendix A, *Site Survey Measurement Sheets*, of this report.



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Source: Aerial (SanGIS 2017)

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Baseline Noise Measurement Locations

Figure 3

Table 3
NOISE MONITORING RESULTS

Site	Location	Time	Measured Noise Level (dBA L_{EQ})
M1	Northwest corner of intersection of Hickman Field Dr. and Convoy Ct.	12:12 p.m. – 12:22 p.m.	64.2
M2	Dirt parking lot/road at Hickman Field Park	12:31 p.m. – 12:41 p.m.	56.7
M3	Serra Mesa – Kearny Mesa Library along Aero Dr.	10:52 a.m. – 11:02 a.m.	71.0
M4	Clairemont Mesa Blvd. approx. 700 feet west of Convoy Street	10:21 a.m. – 10:36 a.m.	70.6
M5	Clairemont Mesa Blvd. approx. 550 feet west of Complex Dr.	10:55 a.m. – 11:11 a.m.	69.8
M6	Murphy Canyon Rd. approx. 300 feet south of Clairemont Mesa Blvd.	12:59 p.m. – 1:09 p.m.	64.3
M7	Spectrum Center Blvd. approx. 175 feet west of Paramount Dr.	2:20 p.m. – 2: 30 p.m.	57.9
M8	Murphy Canyon Rd. approx. 1,200 feet south of Balboa Ave.	11:51 a.m. – 12:01 p.m.	61.0
M9	In parking lot along Murphy Canyon Road, approx. 600 feet south of Stonecrest Blvd.	11:12 a.m. – 11:22 a.m.	64.6
M10	Intersection of Othello Ave. and Kirkcaldy Dr.	1:29 p.m. – 1:39 p.m.	64.2
M11	Tech Way approx. 315 feet southeast of Kearny Villa Rd.	1:51 p.m. – 2:01 p.m.	67.0
M12	Kearny Villa Rd. approx. 375 feet east of Chesapeake Dr.	11:43 a.m. – 11:53 a.m.	65.5
M13	Southwestern corner of Convoy St. and Engineer Rd.	1:06 p.m. – 1:16 p.m.	66.8
M14	Back of parking lot along Murphy Canyon Rd., approx. 1,500 feet north of Aero Dr.	11:34 a.m. – 11:44 a.m.	50.7

Note: Site measurements taken on June 6 and June 8, 2018.

4.0 ANALYSIS METHODOLOGY AND ASSUMPTIONS

4.1 METHODOLOGY AND EQUIPMENT

4.1.1 Ambient Noise Survey

The following equipment was used to measure existing noise levels in the CPU area:

- Larson Davis System LxT Integrating Sound Level Meters
- Larson Davis Model CAL150 Calibrator
- Windscreen and tripod for the sound level meter
- Digital camera

The sound level meter was field-calibrated immediately prior to the noise measurements to ensure accuracy. All sound level measurements conducted and presented in this report were made with a sound level meter that conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

4.1.2 Noise Modeling Software

Modeling of the outdoor noise environment for this report used the TNM 2.5 software. The TNM was released in February 2004, by the U.S. Department of Transportation (USDOT), and calculates the daytime average Hourly L_{EQ} from three-dimensional model inputs and traffic data (California Department of Transportation [Caltrans] 2004).

The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic; peak-hour traffic volumes can be estimated based on the assumption that 10 percent of the average daily traffic would occur during a peak hour. The model-calculated one-hour L_{EQ} noise output is the equivalent to the CNEL (Caltrans 2013a).

4.2 ASSUMPTIONS

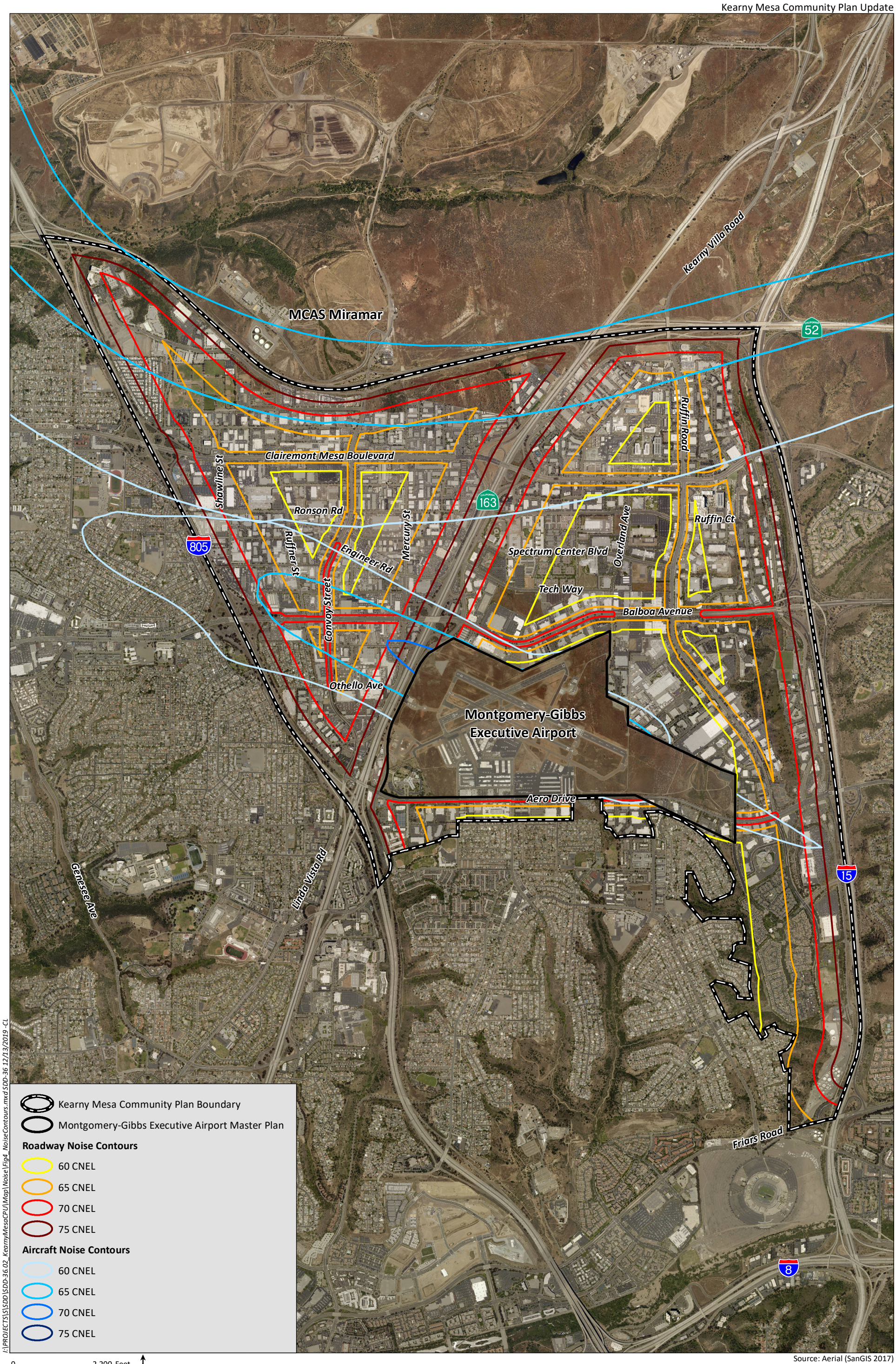
4.2.1 Vehicular Traffic Noise

Vehicles traveling along major local roadways and freeways generate noise levels which affect adjacent land uses. Traffic noise generated on a roadway is dependent on vehicle speed, volume, flow, percentage of vehicle types, properly functioning muffler systems, and pavement type and conditions. Traffic noise is also dependent on the presence of barriers and the distance between the noise source and receptor. In general, as traffic volumes increase, noise levels increase. This condition exists until there is so much traffic that flow degrades, and speeds decrease which reduces noise levels. Roads with the same amount of traffic can have higher or lower sound levels depending on the mixture of vehicles.

A noise contour map displays linear bands of similar noise levels emanating from a noise source. Noise is at the highest level near the source and decreases with distance from the source. Existing traffic volumes for freeways and CPU area streets were derived from the Mobility Existing Conditions Report prepared for the CPU, which is Appendix A of the Mobility Technical Report (City 2020). Future roadway traffic volumes were derived from the Mobility Technical Report (City 2020). Future (2050) freeway volumes were obtained from the San Diego Association of Governments' (SANDAG) Transportation Forecast Information Center (SANDAG 2019).

Existing transportation source (automobile and airplane) noise level contours in the CPU area are depicted in Figure 4, *Existing Transportation Noise Contours*, and are expressed in terms of CNEL. All noise contours depict the predicted noise level based on existing traffic volumes, and do not reflect attenuating effects of existing features such as noise barriers, buildings, topography, and dense vegetation. Modeling data used to develop the traffic noise contour maps is included in Appendix B, *Existing and Future Traffic Levels*, of this report.

Major traffic noise generators in the CPU include I-805, I-15, SR 163, Clairemont Mesa Boulevard, Balboa Avenue, Aero Drive, Convoy Street, and Ruffin Road. The portions of the CPU area currently affected by



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Source: Aerial (SanGIS 2017)

HELIX Environmental Planning

Existing Transportation Noise Contours

Figure 4

noise levels exceeding 65 CNEL are generally located adjacent to freeways and major roadways. In many areas along freeways, noise levels exceed 75 CNEL.

4.2.2 Aircraft Noise

Montgomery-Gibbs Executive Airport is located in the southern portion of the CPU area, and is a general aviation airport that serves private, corporate, charter, air ambulance, law enforcement, fire rescue, flight training, and cargo aircrafts. These aircrafts generate high, relatively brief, intermittent noise events. The noise contours associated with Montgomery-Gibbs Executive Airport are provided in the Montgomery Field ALUCP (San Diego County Regional Airport Authority 2010) and are depicted on Figure 4.

Although MCAS Miramar is located north of the CPU area, military aircraft noise associated with MCAS Miramar extends into the northern portion of the CPU area. The noise contours associated with MCAS Miramar are provided in the MCAS Miramar ALUCP (San Diego County Regional Airport Authority 2008) and are depicted on Figure 4.

San Diego International Airport is located approximately 6 miles southwest of the CPU area and the CPU area is not within the airport influence area, or associated noise contours, of San Diego International Airport.

4.2.3 Trolley Noise

The proposed Metropolitan Transit Service (MTS) Trolley Purple Line would provide a north-south connection between San Ysidro and Kearny Mesa. Although the precise alignment has not been determined, the preliminary alignment would enter the CPU area in its southeast corner, run along Daley Center Drive and Ruffin Road, then along Clairemont Mesa Boulevard to the Overland Transit Station. Light rail transit system vehicles generate high, relatively brief, intermittent noise events. Vehicles are generally equipped with horns, whistles, and/or bells for use in emergency situations and as a general audible warning to alert people in the vicinity of the track. Noise levels generated by future trolley operations were assumed to be similar to noise levels from other regional trolley corridors (e.g., MTS Trolley Green Line).

4.2.4 Stationary Noise Sources

Stationary sources of noise include activities associated with a given land use. The CPU area includes various stationary noise sources related to industrial and commercial land uses, including mechanical equipment such as heating, ventilation, and air conditioning (HVAC) units and emergency electrical generators; parking lot activities; public gathering spaces; and loading dock operations. Noise levels from stationary sources are highly localized and may vary during the day based on the specific activity being performed, atmospheric conditions, and other factors. Stationary noise is considered a “point source” and attenuates over distance at a rate of six dBA for each doubling of distance.

4.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds are based on the City’s CEQA Significance Determination Thresholds, General Plan Noise Element, and Noise Ordinance, as applicable to the CPU.

A potentially significant noise impact could occur if the CPU would:

1. Result in the exposure of people to significant temporary construction noise;

2. Result in the generation of and/or exposure of vibration-sensitive uses to excessive groundborne vibration or groundborne noise levels;

3. Result in a substantial permanent increase in existing ambient noise levels; or

4. Expose people to current or future transportation noise levels which exceeds guidelines established in the Noise Element of the General Plan.

4.3.1 Guidelines for the Determination of Significance

4.3.1.1 Temporary Increase in Ambient Noise Levels

A significant noise impact could occur if construction activities result in temporary construction noise that exceeds 75 dBA L_{EQ} (12 hour) at the property line of a residentially-zoned property from 7:00 a.m. to 7:00 p.m. (as identified in Section 59.5.0404 of the City's Municipal Code) or if non-emergency construction occurs during the 12-hour period from 7:00 p.m. to 7:00 a.m.

4.3.1.2 Excessive Ground-borne Vibration

A significant railway-related vibration impact could occur if land uses proposed under the CPU are located with screening distances provided by the Federal Transit Administration (FTA). For Category 1 uses such as vibration-sensitive equipment, the screening distance from the public right-of-way is 600 feet. For Category 2 land uses such as residences and buildings, where people would normally sleep, the screening distance is 200 feet. The screening distance for Category 3 land uses, such as institutional land uses, is 120 feet.

A significant vibration impact could also occur if vibration-sensitive land uses are subjected to construction-related ground-borne vibration that exceeds the "strongly perceptible" vibration annoyance potential criteria for human receptors, as specified by Caltrans (2013b), of 0.1 in./sec. PPV, and 0.5 in./sec. PPV for damage to older structures for continuous/frequent intermittent construction sources (such as impact pile drivers, vibratory pile drivers, and vibratory compaction equipment).

4.3.1.3 Permanent Increase in Ambient Noise Levels

A significant noise impact could occur if ambient noise levels exceed the exterior noise limits specified by the City's Noise Ordinance as shown in Table 2, or if future development per the CPU results in transportation-related noise levels that exceed the conditionally compatible limits specified by the Noise Element as shown in Table 1. If existing conditions are already above those limits, a significant increase would occur if the project generates a perceptible change (3 dBA) over existing conditions.

4.3.1.4 Transportation Noise

A significant noise impact could occur if new development is exposed to noise levels at exterior use areas or interior areas in excess of the Land Use - Noise Compatibility Guidelines established in the City's General Plan Noise Element. The conditionally compatible noise levels are 65 CNEL for single-family

residential, 70 CNEL for multi-family residential, and 75 CNEL for commercial-retail and for active and passive recreation. For outdoor uses at a conditionally compatible land use, feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable. For indoor uses at a conditionally compatible land use, exterior noise must be attenuated to 45 CNEL for single- and multi-family residential and 50 CNEL for commercial-retail.

A significant noise impact could also occur if projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or private airstrip, expose people residing or working in the project area to excessive noise levels.

5.0 IMPACTS

5.1 ISSUE 1: TEMPORARY INCREASE IN AMBIENT NOISE LEVELS

5.1.1 Impacts

Although typically short-term, construction can be a substantial source of noise. The primary noise source is the operation of heavy off-road diesel-powered construction equipment used for site preparation and grading; demolition of existing structures and pavements; loading, unloading, and placing materials; and paving. On-road diesel-powered haul trucks generate noise when delivering material to, and removing material from, construction sites. Impact noise associated with blasting and pile driving activities can also be a substantial source of noise. As shown in Table 4, *Typical Construction Equipment Noise Levels*, operation of construction equipment would have the potential to generate high noise levels for construction activities, depending on the type, duration, and location of the activity.

Table 4
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Typical Noise Level (dBA at 50 feet from source)
Air Compressor	74
Backhoe	74
Ground Compactor	76
Concrete Mixer Truck	75
Crane	73
Dozer	78
Grader	81
Jack Hammer	82
Front End Loader	75
Paver	74
Impact Pile Driver	94
Pumps	78
Roller	73
Scraper	80
Dump Truck	73

Source: U.S. Department of Transportation Roadway Construction Noise Model, 2008.

Construction activities related to implementation of the proposed CPU would not take place all at once; however, future development per the proposed CPU would have the potential to temporarily generate construction noise resulting in short-term elevated noise levels to nearby NSLUs.

The City regulates noise associated with construction equipment and activities through enforcement of Municipal Code Section 59.5.0404 which details standards related to permitted hours and days of construction activity. The Noise Ordinance prohibits noise levels greater than 75 dBA L_{EQ} (12-hour) at any residential property line during the 12-hour period from 7:00 a.m. to 7:00 p.m. Furthermore, the City imposes conditions for approval of building or grading permits.

5.1.2 Significance of Impacts

Because construction noise attributed to future projects in the CPU area would be regulated by the City's Municipal Code, construction noise impacts due to the implementation of the proposed CPU would be determined by a specific project's compliance with the limits specified in the Noise Ordinance. Future infill projects, such as those allowed under the CPU, may be located in close proximity to existing and future NSLUs. Construction activities related to implementation of the CPU could potentially generate short-term noise levels in excess of 75 dBA L_{EQ} (12 hour) at adjacent properties. The ability for future projects to conform to the Noise Ordinance cannot be determined at a programmatic level of analysis. Noise impacts from construction activities are therefore considered potentially significant.

5.1.3 Mitigation Measures

Implementation of Mitigation Measure NOI-1 would reduce potential construction-related noise impacts.

NOI-1 **Construction Noise Reduction Measures.** Construction contractors shall implement the following measures to minimize short-term noise levels caused by construction activities. Measures to reduce construction noise shall be included in contractor specifications and shall include, but not be limited to, the following:

- Properly outfit and maintain construction equipment with manufacturer-recommended noise reduction devices to minimize construction-generated noise;
- Operate all diesel equipment with closed engine doors and equip with factory recommended mufflers;
- Use electrical power to operate air compressors and similar power tools;
- Employ additional noise attenuation techniques as needed to reduce excessive noise levels such as, but not limited to, the construction of temporary sound barriers or sound blankets between construction sites and nearby noise-sensitive receptors;
- Notify adjacent noise-sensitive receptors in writing no later than two weeks prior to the start of construction of any construction activity such as jackhammering, concrete sawing, asphalt removal, pile driving, and largescale grading operations that would occur within 100 feet of the property line of the nearest noise-sensitive receptor. The extent and duration of the construction activity shall be included in the notification; and

- Designate a "disturbance coordinator" who shall be responsible for receiving and responding to any complaints about construction noise or vibration. The disturbance coordinator shall determine the cause of the noise complaint and, if identified as a sound generated by construction area activities, shall require that reasonable measures be implemented to correct the problem. Potential measures to address the problem include providing sound barriers or sound blankets between construction sites and the receiver location, locating noisy equipment as far from the receiver as possible, and reducing the duration of the noise-generating construction activity.

5.1.4 Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would reduce construction-related noise impacts; however, even with implementation of mitigation measure NOI-1, significant construction noise impacts may still occur because it is not feasible to ensure and enforce implementation for all projects developed per the proposed CPU. Construction-related noise impacts would therefore be significant and unavoidable.

5.2 ISSUE 2: EXCESSIVE GROUND-BORNE VIBRATION

5.2.1 Impacts

The main concerns related to ground-borne vibration are annoyance and damage; however, vibration sensitive instruments and operations can be disrupted at much lower vibration levels. Vibration sensitive land uses may include machinery in manufacturing and processing uses or medical laboratory equipment. The primary sources of vibration from implementation of the CPU would be associated with construction and the operation of the proposed MTS Trolley Purple Line. Planned land uses are not anticipated to generate substantial vibration.

5.2.1.1 Trolley Vibration

Operation of the proposed MTS Trolley Purple Line may generate ground-borne vibration in the CPU area. The FTA provides screening distances for land uses that may be subject to vibration impacts from commuter rail (FTA 2018). For Category 1 uses such as vibration-sensitive equipment, the screening distance from the public right-of-way is 600 feet. For Category 2 land uses such as residences and buildings, where people would normally sleep, the screening distance is 200 feet. The screening distance for Category 3 land uses, such as institutional land uses, is 120 feet.

The exact alignment of the MTS Trolley Purple Line is unknown at this time, though it is preliminarily anticipated that it would run along Daley Center Drive, Ruffin Road, and Clairemont Mesa Boulevard. The CPU proposes land uses designations that may accommodate the FTA's Category 1, Category 2, and Category 3 land uses within the applicable screening distances of the railway. Specifically, the proposed Industrial and Technology Park land use designation proposed under the CPU along Ruffin Road would be located within 600 feet of the future planned railway and could accommodate Category 1 uses such as vibration-sensitive equipment. The proposed Residential, Community Commercial, and Urban Employment Village land use designations along Daley Center Drive and Clairemont Mesa Boulevard would be located within 200 feet of the future planned railway and could accommodate Category 2 residential uses. The proposed Institutional land use designation at the intersection of Ruffin Road and Clairemont Mesa Boulevard would be located within 120 feet of the future planned railway and could

accommodate Category 3 land uses. Therefore, proposed land uses under the CPU could be exposed to substantial vibration from operation of the future MTS Trolley Purple Line.

No freight trains or larger commuter trains that generate substantial vibration would utilize this railway. In addition, it is likely that the railway would be on elevated structures, which would minimize vibration at adjacent development. It is anticipated that areas where vibration-sensitive uses are located the closest to the railway would be at the trolley stations. Because trolleys stop at each station, trolley speeds approaching and departing from the statins would be very and would not generate substantial vibration.

5.2.1.2 Construction Vibration

Come construction activities are known to generate excessive ground-borne vibration. Construction activities related to implementation of the proposed CPU would not take place all at once; however, future construction activities would have the potential to temporarily generate vibration resulting in a short-term effect on nearby vibration-sensitive land uses. Sources of vibration during the construction activities include the potential use of pile driving equipment and smaller equipment such as a vibratory roller. According to the Caltrans Transportation and Construction Vibration Guidance Manual, "strongly perceptible" ground-borne vibration is defined as equal to or exceeding 0.1 in./sec. PPV. Construction activities within 200 feet and pile-driving within 600 feet of a vibration-sensitive use, such as those that include machinery in manufacturing and processing or medical laboratory equipment, could be potentially disruptive to vibration-sensitive operations (Caltrans 2013b). Proposed land use designations under the CPU could accommodate vibration-sensitive uses, which could be exposed to substantial vibration generated by vibratory construction equipment operations.

5.2.2 Significance of Impacts

New development in the CPU area is proposed within the screening distances of the future trolley corridor and future construction activities that would use vibratory construction equipment could expose future sensitive receptors to substantial vibration levels. Impacts due to ground-borne vibration could be potentially significant. Potential vibration impacts associated with the future trolley corridor would be further analyzed in the studies conducted by SANDAG for the MTS Trolley Purple line.

5.2.3 Mitigation Framework

Implementation of Mitigation Measure NOI-2 would reduce potential vibration-related impacts.

NOI-2 **Construction Vibration Limits.** Future construction activities under the CPU that are located near vibration-sensitive land uses and require the use of vibratory construction equipment shall implement to following vibration reduction measures to minimize construction-related vibration impacts:

- Limit the use of vibration-intensive equipment in proximity to sensitive receptors;
- Install low soil displacement piles (e.g., H-piles) instead of high soil displacement piles (e.g., concrete piles) for pile-driving; and
- Pre-drill for pile-driving.

The construction contractors of proposed developments shall implement these measures to ensure that construction activities reduce construction-related vibration impacts to below 0.1 in./sec. PPV at vibration-sensitive uses.

5.2.4 Significance After Mitigation

Studies conducted by SANDAG for the MTS Trolley Purple Line would address potential vibration impacts associated with the future trolley corridor and may identify measures to reduce trolley-related vibration; however, at this time, it cannot be determined whether the vibration reduction measures would adequately minimize trolley vibration levels to below a level of significance. Similarly, implementation of Mitigation Measure NOI-2 would reduce potential construction vibration-related impacts; however, however, even with implementation of mitigation measure NOI-2, significant construction vibration-related impacts may still occur because it is not feasible to ensure and enforce implementation for all projects developed per the proposed CPU. Vibration impacts would therefore be significant and unavoidable.

5.3 ISSUE 3: PERMANENT INCREASE IN AMBIENT NOISE LEVELS

5.3.1 Impacts

As discussed in Section 3.3, the primary noise generator in the CPU area is vehicular traffic. Therefore, issues related to a permanent increase in ambient noise levels would be primarily associated with roadway traffic noise levels. Increases related to stationary or operational noise sources are also discussed in this section.

5.3.1.1 Vehicular Traffic Noise

Future development implemented under the proposed CPU would increase traffic along local roadways due to increased density and intensity of uses, including residences. As noted in the assumptions, future roadway traffic noise levels presented in this analysis are based on traffic volumes provided by the Mobility Technical Report (City 2020) for the proposed CPU. TNM software was used to calculate the noise contour distances for existing and future conditions. The roadway modeling represents a conservative analysis that does not consider topography or attenuation provided by existing structures. The results of this analysis for the CNEL at 100 feet from the roadway centerline are shown below in Table 5*, Traffic Noise Levels.*

As noted in Section 4.3.1.3, a significant noise impact could occur if buildout of the CPU would result in ambient noise levels that exceed the City's significance threshold for traffic noise. If the existing noise conditions exceed the City's significance threshold for traffic noise, a significant noise impact could occur if development per the CPU more than doubles (increases by more than 3 CNEL) the existing noise level. Vehicular traffic and associated traffic noise in the CPU area would generally increase with buildout under the proposed CPU. Roadway noise increases associated with future development pursuant to the proposed CPU are shown in Table 5.

Table 5
TRAFFIC NOISE LEVELS[1]

Roadway Segment	CNEL at 100 feet		Change in CNEL	Significant Impact?
	Existing Conditions	Future (2050) Conditions		
Clairemont Mesa Boulevard				
I-805 SB Ramps to I-805 NB Ramps	68.3	70.2	1.9	No
I-805 NB Ramps to Shawline Street	69.0	69.8	0.8	No
Shawline Street to Ruffner Street	66.6	68.0	1.4	No
Ruffner Street to Convoy Street	66.1	66.9	0.8	No
Convoy Street to Mercury Street	66.7	67.3	0.6	No
Mercury Street to Industrial Park Drive	66.4	67.8	1.4	No
Industrial Park Drive to Kearny Mesa Road	67.1	68.1	1.0	No
Kearny Mesa Road to SR 163 SB Ramps	67.9	69.0	1.1	No
SR 163 SB Ramps to SR 163 NB Ramps	67.7	69.1	1.4	No
SR 163 NB Ramps to Kearny Villa Road	67.4	68.2	0.8	No
Kearny Villa Road to Complex Drive	67.2	68.1	0.9	No
Complex Drive to Overland Avenue	67.0	68.0	1.0	No
Overland Avenue to Ruffin Road	66.9	67.9	1.0	No
Ruffin Road to Murphy Canyon Road	67.6	70.1	2.5	No
Murphy Canyon Road to I-15 SB Ramps	68.1	71.0	2.9	No
I-15 SB Ramps to I-15 NB Ramps	67.3	69.8	2.5	No
Balboa Avenue				
I-805 SB Ramps to I-805 NB Ramps	72.1	72.7	0.6	No
I-805 NB Ramps to Ruffner Street	68.9	68.9	0.0	No
Ruffner Road to Convoy Street	68.0	67.3	-0.7	No
Convoy Street to Mercury Street	70.0	69.0	-1.0	No
Mercury Street to SR 163 SB Ramps	69.8	70.1	0.3	No
SR 163 SB Ramps to SR 163 NB Ramps	70.9	72.3	1.4	No
SR 163 NB Ramps to Kearny Villa Road	70.4	72.0	1.6	No
Between Kearny Villa Road and Pennisi Driveway	67.4	69.4	2.0	No
Pennisi Driveway to Ponderosa Avenue	67.9	69.5	1.6	No
Ponderosa Avenue to Ruffin Road	67.0	68.9	1.9	No
Ruffin Road to Viewridge Avenue	67.6	69.5	1.9	No
Viewridge Avenue to I-15 SB Ramps	69.2	71.1	1.9	No
Aero Drive				
Linda Vista Road to Kearny Villa Road	66.7	68.1	1.4	No
Kearny Villa Road to Aero Court	68.4	70.0	1.6	No
Aero Court to Afton Road	68.1	69.8	1.7	No
Afton Road to Broadstone Driveway	67.3	69.2	1.9	No
Broadstone Driveway to Sandrock Road	68.0	69.1	1.1	No
Sandrock Road to Ruffin Road	68.2	70.4	2.2	No
Ruffin Road to West Canyon Avenue	68.9	70.6	1.7	No
West Canyon Avenue to Ruffin Road/ Daley Center Drive	68.9	70.9	2.0	No
Ruffin Road/Daley Center Drive to Murphy Canyon Road	70.1	70.7	0.6	No

Table 5 (cont.)
TRAFFIC NOISE LEVELS[1]

Roadway Segment	CNEL at 100 feet		Change in CNEL	Significant Impact?
	Existing Conditions	Future (2050) Conditions		
Aero Drive (cont.)				
Murphy Canyon Road to I-15 SB Ramps	70.8	73.2	2.4	No
I-15 SB Ramps to I-15 NB Ramps	69.8	70.7	0.9	No
Convoy Street				
SR 52 WB Ramps to SR 52 EB Ramps	64.0	66.6	2.6	No
SR 52 EB Ramps to Copley Park Place	66.9	68.0	1.1	No
Copley Park Place to Convoy Court	65.7	67.9	2.2	No
Convoy Court to Clairemont Mesa Boulevard	64.7	66.5	1.8	No
Clairemont Mesa Boulevard to Ronson Road	64.5	66.3	1.8	No
Ronson Road to Engineer Road	66.7	68.5	1.8	No
Engineer Road to Balboa Avenue	67.7	68.9	1.2	No
Balboa Avenue to Armour Street	67.9	70.0	2.1	No
Armour Street to Othello Avenue	67.5	69.8	2.3	No
Othello Avenue to Kearny Mesa Road	66.8	68.3	1.5	No
Kearny Mesa Road to Aero Drive	68.4	69.7	1.3	No
Ruffin Road				
Kearny Villa Road to Chesapeake Drive	66.8	70.1	3.3[2]	No
Chesapeake Drive to Hazard Way	66.8	69.0	2.2	No
Hazard Way to Farnham Street	66.4	69.0	2.6	No
Farnham Street to Clairemont Mesa Boulevard	65.9	67.4	1.5	No
Clairemont Mesa Boulevard to Lightwave Avenue	65.2	68.3	3.1	Yes
Lightwave Avenue to Spectrum Center Boulevard	65.6	68.2	2.6	No
Spectrum Center Boulevard to Balboa Avenue	67.4	68.7	1.3	No
Balboa Avenue to Ridgehaven Court	64.9	70.0	5.1[2]	No
Ridgehaven Court to Sky Park Court	66.2	67.8	1.6	No
Sky Park Court to Aero Drive	66.6	68.3	1.7	No

1 Noise levels are for the individual streets only and exclude freeway noise.
2 Although noise levels along this roadway would increase by more than 3 CNEL, exterior noise levels would remain below the applicable 75 CNEL limit for industrial land uses.
SB = Southbound; NB = Northbound

5.3.1.2 Stationary Noise

Implementation of the proposed project would result in pedestrian-oriented mixed-use development where residential uses would be located in proximity to commercial, office, and technology related uses that could expose sensitive receptors to elevated noise levels. Noise associated with these types of land uses is generally produced by pedestrian traffic, mechanical equipment such as HVAC units and emergency electrical generators, parking lot activities, public gathering spaces, and loading dock operations. Noise generated by residential and commercial uses is generally short-lived and intermittent, while noise generated by auto-oriented commercial and industrial uses is generally sporadic, highly variable, and spatially distributed.

The land uses proposed by the CPU would be similar to the land uses that currently exist in the CPU area, with a greater amount of residential uses and at higher densities. Residential uses typically do not generate substantial noise from stationary sources. Because noise levels in the CPU area are dominated by vehicle traffic on freeways and heavily traveled roadways, noise levels from stationary sources throughout the CPU area would not be expected to substantially increase the hourly or daily average sound level with respect to current conditions. While noise-sensitive residential uses would be exposed to noise associated with the operation of commercial, office, and industrial related land uses, future development under the project would be required to demonstrate compliance with the Noise Abatement and Control Ordinance to ensure noise compatibility between various land uses. The City regulates specific noise level limits allowable between land uses including the requirement for noise studies (General Plan Noise Element Policy NE-A.4), limits on hours of operation for various noise-generating activities (SDMC Section 59.5.0401), and standards for the compatibility of various land uses with the existing and future noise environment (General Plan Noise Element Table NE-3).

5.3.2 Significance of Impacts

In comparison with existing conditions, future traffic noise levels would increase by more than 3 CNEL along three roadway segments of Ruffin Road: between Kearny Villa Road and Chesapeake Drive; between Clairemont Mesa Boulevard and Lightwave Avenue; and between Balboa Avenue and Ridgehaven Court. Because the proposed land uses adjacent to the segments of Ruffin Road between Kearny Villa Road and Chesapeake Drive and between Balboa Avenue and Ridgehaven Court would be industrial, and because exterior noise levels would remain below the land use – noise compatibility level of 75 CNEL (exclusive of freeway noise), implementation of the proposed CPU would not result in a significant increase in noise levels on these two roadway segments. While noise levels along the segment of Ruffin Road between Clairemont Mesa Boulevard and Lightwave Avenue would remain below the land use – noise compatibility level of 70 CNEL for multi-family residential land uses (which would be associated with the proposed urban employment village land uses to the west of this segment), noise levels would exceed the land use – noise compatibility level of 65 CNEL for the hospital use (which is associated with the existing Kaiser Permanente Medical Center to the east of this segment). Therefore, implementation of the proposed CPU would result in a significant increase in noise levels on this segment. While existing structures may be retrofitted with acoustically rated windows and walls featuring higher Sound Transmission Class ratings, (which is a measure of exterior noise reduction performance), there is no City procedure to ensure that exterior noise affecting existing NSLUs is adequately attenuated to City standards. Therefore, impacts to existing NSLUs would be significant and unavoidable. Noise levels along all other modeled roadways would not increase by 3 CNEL as a result of future development under the proposed CPU. Impacts related to stationary noise sources would be less than significant based on compliance with the City's Noise Ordinance.

5.3.3 Mitigation Framework

While existing structures may be retrofitted with acoustically rated windows and walls featuring higher Sound Transmission Class ratings, there is no City procedure to ensure that exterior noise affecting existing NSLUs is adequately attenuated to City standards. Therefore, there are no feasible mitigation measures available at the program level to reduce ambient exterior noise impacts to a less than significant level.

5.3.4 Significance After Mitigation

Impacts related to a permanent increase in ambient noise levels from future roadway traffic would be significant and unavoidable.

5.4 ISSUE 4: TRANSPORTATION NOISE

5.4.1 Impacts

5.4.1.1 Vehicular Traffic Noise

Noise levels in the CPU area would generally increase or decrease along roadways consistent with corresponding changes in traffic levels. The distance from the roadway centerline to the 60, 65, 70, and 75 CNEL noise contours under future traffic conditions under the proposed CPU are shown below in Table 6, *Future Traffic Noise Contour Distances from Roadway Centerline.* Following implementation of the proposed CPU, traffic levels on roadway segments along Clairemont Mesa Boulevard, Balboa Avenue, Aero Drive, Convoy Street, and Ruffin Road would increase. The segment of Balboa Avenue from the I-805 northbound ramp to Mercury Street would see a decrease in traffic levels. Noise levels from the I-15, SR 52, I-805, and SR 163 corridors would increase. Future transportation noise contours, including vehicular traffic and aircraft noise, are shown on Figure 5, *Future Transportation Noise Contours*.

Table 6
FUTURE TRAFFIC NOISE CONTOUR DISTANCES FROM ROADWAY CENTERLINE

Roadway Segment	Distance to Noise Contour (feet)			
	75 CNEL	70 CNEL	65 CNEL	60 CNEL
Clairemont Mesa Boulevard				
I-805 SB Ramps to I-805 NB Ramps	35[1]	105	280	630
I-805 NB Ramps to Shawline Street	30[1]	95	270	600
Shawline Street to Ruffner Street	20[1]	60[1]	190	460
Ruffner Street to Convoy Street	15[1]	50[1]	150	380
Convoy Street to Mercury Street	15[1]	55[1]	165	410
Mercury Street to Industrial Park Drive	20[1]	60[1]	180	440
Industrial Park Drive to Kearny Mesa Road	20[1]	65[1]	195	460
Kearny Mesa Road to SR 163 SB Ramps	25[1]	80	230	530
SR 163 SB Ramps to SR 163 NB Ramps	25[1]	80	230	540
SR 163 NB Ramps to Kearny Villa Road	20[1]	65[1]	200	470
Kearny Villa Road to Complex Drive	20[1]	65[1]	195	460
Complex Drive to Overland Avenue	20[1]	60[1]	190	450
Overland Avenue to Ruffin Road	20[1]	60[1]	185	450
Ruffin Road to Murphy Canyon Road	35[1]	100	280	620
Murphy Canyon Road to I-15 SB Ramps	40[1]	125	330	700
I-15 SB Ramps to I-15 NB Ramps	30[1]	95	260	590

Table 6 (cont.)
FUTURE TRAFFIC NOISE CONTOUR DISTANCES FROM ROADWAY CENTERLINE

Roadway Segment	Distance to Noise Contour (feet)			
	75 CNEL	70 CNEL	65 CNEL	60 CNEL
Balboa Avenue				
I-805 SB Ramps to I-805 NB Ramps	60[1]	180	430	870
I-805 NB Ramps to Ruffner Street	25[1]	75	220	520
Ruffner Road to Convoy Street	15[1]	55[1]	165	410
Convoy Street to Mercury Street	25[1]	80	230	530
Mercury Street to SR 163 SB Ramps	35[1]	105	280	620
SR 163 SB Ramps to SR 163 NB Ramps	50[1]	160	400	820
SR 163 NB Ramps to Kearny Villa Road	50[1]	155	390	790
Between Kearny Villa Road and Pennisi Driveway	30[1]	85	240	560
Pennisi Driveway to Ponderosa Avenue	30[1]	90	250	560
Ponderosa Avenue to Ruffin Road	25[1]	75	220	520
Ruffin Road to Viewridge Avenue	30[1]	90	250	570
Viewridge Avenue to I-15 SB Ramps	40[1]	130	330	710
Aero Drive				
Linda Vista Road to Kearny Villa Road	20[1]	65	195	460
Kearny Villa Road to Aero Court	33[1]	100	280	610
Aero Court to Afton Road	30[1]	95	260	590
Afton Road to Broadstone Driveway	28[1]	85	240	540
Broadstone Driveway to Sandrock Road	27[1]	80	230	540
Sandrock Road to Ruffin Road	35[1]	110	290	640
Ruffin Road to West Canyon Avenue	33[1]	115	310	660
West Canyon Avenue to Ruffin Road/Daley Center Drive	40[1]	120	320	690
Ruffin Road/Daley Center Drive to Murphy Canyon Road	37[1]	115	310	670
Murphy Canyon Road to I-15 SB Ramps	65	195	470	920
I-15 SB Ramps to I-15 NB Ramps	38[1]	115	310	670
Convoy Street				
SR 52 WB Ramps to SR 52 EB Ramps	13[1]	45[1]	140	360
SR 52 EB Ramps to Copley Park Place	20[1]	60	190	450
Copley Park Place to Convoy Court	20[1]	60	185	450
Convoy Court to Clairemont Mesa Boulevard	12[1]	45[1]	135	360
Clairemont Mesa Boulevard to Ronson Road	12[1]	40[1]	130	340
Ronson Road to Engineer Road	23[1]	70	210	490
Engineer Road to Balboa Avenue	25[1]	75	220	520
Balboa Avenue to Armour Street	32[1]	100	280	610
Armour Street to Othello Avenue	30[1]	95	260	590
Othello Avenue to Kearny Mesa Road	22[1]	65	200	470
Kearny Mesa Road to Aero Drive	30[1]	90	260	580

Kearny Mesa Community Plan Boundary
Montgomery-Gibbs Executive Airport Master Plan
Aircraft Noise Contours
60 CNEL
65 CNEL
70 CNEL
75 CNEL
Future Roadway Noise Contours
60 CNEL
65 CNEL
70 CNEL
75 CNEL

MCAS MIRAMAR
MCAS Miramar
Montgomery-Gibbs Executive Airport
CLAIREMONT MESA
SERRA MESA
LINDA VISTA
MISSION VALLEY
TIERRASANTA
UNIVERSITY
CLAIREMONT MESA BL
CLAIREMONT MESA BLVD
COPLEY DR
COPLEY PARK PL
CONVOY CT
KEARNY VILLA RD
TIERRASANTA BLV
BALBOA AV
BALBOA AVE
ARMOUR ST
OTHELLO AVE
MOUNT ALIFAN DR
MOUNT ALBERTINE AVE
MOUNT BERNATH AVE
DOLIVA DR
CANNINGTON DR
OPPORTUNITY RD
ENGINEER RD
DAGGETT ST
VICKERS ST
RUFFIN ST
RAYTHEON RD
ROUSE RD
LIGHTWAVE AVE
SPECTRUM CENTER BLVD
TECH WAY
RUFFIN CT
VIEWRIDGE AVE
PARAMOUNT DR
OVERLAND AVE
COMPLEX DR
HAZARD WAY
CHESAPEAKE DR
BARNETT AVE
PACIFIC HEIGHTS BLVD
EDGEHAVEN CT
PONDEROSA AVE
SKY PARK CT
MURPHY CANYON RD
AERO DR
AERO CT
DUBONNET ST
SANDROCK RD
AFTON RD
RUFFIN RD
VILLAGE GLEN DR
GRAMERCY DR
GRANITE RIDGE DR
DALEY CENTER DR
STONECREST BLVD
WEST CANYON AVE
MISSION VILLAGE DR
SAN DIEGO MISSION RD
MESA COLLEGE DR
MESA COLLEGE CIR
STALMER ST
ASHFORD ST
AUBURNDALE ST
ARMSTRONG ST
GENESEE AVE
HEALTH CENTER DR
LINDA VISTA RD
ULRIC ST
MURRAY RIDGE RD
GREYLING DR
MERCURY ST
CARDIN ST
SHAWLINE ST
RONSON CT
MACMATH BLVD
KEARNY MESA RD
KEARNY VILLA RD
PACIFIC HEIGHTS BLVD
INTERSTATE 805
INTERSTATE 15
CALIFORNIA 52
CALIFORNIA 163

LEGEND
Residential - Low (10-14 du/ac)
Residential - Medium (15-44 du/ac)
Residential - High (45-74 du/ac)
Residential - Very High (75-109 du/ac)
Community Commercial
Community Commercial (0-29 du/ac)
Community Commercial (0-44 du/ac)
Community Commercial (0-74 du/ac)
Community Commercial (0-109 du/ac)
Urban Employment Village - Medium (0-74 du/ac)
Urban Employment Village - High (0-109 du/ac)
Industrial and Technology Park
Urban Industrial
Institutional
Military
Population-Based Park
Open Space (Conservation)

Community Plan Boundary
N
0 500 1,000 2,000 Feet
Document Path: L:\GIS\PGIS\Community Planning\Kearny Mesa\Plan_Update\MXDs\Draft Plan Maps\Draft Proposed Land Use - Preferred 1B Refined.mxd

I:\PROJECTS\S\SDD\SDD-36.02_KearnyMesaCPU\Map\Noise\Fig5_FutureNoiseContours.mxd SDD-36 3/11/2020 - RK

0 2,300 Feet

Future Transportation Noise Contours

Figure 5

Table 6 (cont.)
FUTURE TRAFFIC NOISE CONTOUR DISTANCES FROM ROADWAY CENTERLINE

Roadway Segment	Distance to Noise Contour (feet)			
	75 CNEL	70 CNEL	65 CNEL	60 CNEL
Ruffin Road				
Kearny Villa Road to Chesapeake Drive	34[1]	105	280	620
Chesapeake Drive to Hazard Way	26[1]	80	230	530
Hazard Way to Farnham Street	26[1]	80	230	530
Farnham Street to Clairemont Mesa Boulevard	17[1]	55	165	410
Clairemont Mesa Boulevard to Lightwave Avenue	21[1]	65	200	470
Lightwave Avenue to Spectrum Center Boulevard	21[1]	65	195	470
Spectrum Center Boulevard to Balboa Avenue	25[1]	75	220	500
Balboa Avenue to Ridgehaven Court	33[1]	100	270	610
Ridgehaven Court to Sky Park Court	19[1]	60	180	440
Sky Park Court to Aero Drive	23[1]	70	200	480
I-15				
Southern end to Aero Drive	500	970	1,650	2,600
Aero Drive to Balboa Avenue/Tierrasanta Boulevard	480	930	1,600	2,530
Balboa Avenue/Tierrasanta Boulevard to Clairemont Mesa Boulevard	450	890	1,540	2,460
Clairemont Mesa Boulevard to SR 52	380	780	1,380	2,240
SR 52				
I-15 to SR 163	240	540	1,020	1,720
SR 163 to Convoy Street	370	750	1,340	2,170
Convoy Street to I-805	350	730	1,300	2,120
I-805				
SR 52 to Clairemont Mesa Boulevard	480	930	1,600	2,540
Clairemont Mesa Boulevard to Balboa Avenue	480	940	1,600	2,540
Balboa Avenue to SR 163	480	940	1,610	2,550
SR 163 to Mesa College Drive	390	800	1,410	2,270
SR 163				
I-805 to Balboa Avenue	390	790	1,390	2,240
Balboa Avenue to Clairemont Mesa Boulevard	390	800	1,400	2,260
Clairemont Mesa Boulevard to SR 52	380	770	1,360	2,210

[1] Distance is within the roadway right-of-way.
SB = Southbound; NB = Northbound; EB = Eastbound; WB = Westbound; SR = State Route; I- = Interstate

As discussed in Section 4.2.1, modeling of the future traffic noise contours does not account for attenuating effects of existing or proposed features such as noise barriers, buildings, topography, and dense vegetation. Therefore, actual traffic noise levels at specific receptors would likely be lower than what is presented in Figure 5.

The CPU proposes new mixed-use and non-mixed-use residential NSLU designations. Mixed-use multi-family residential NSLU designations include urban employment village land uses and some community

commercial land uses. Non-mixed-use residential NSLU designations include single-family and multi-family residential land uses of various densities. These residential land uses would be located in areas where roadway and freeway traffic noise would exceed the General Plan Noise Element exterior noise compatibility level of 60 CNEL.

New urban employment village and community commercial land use designations that allow for multi-family residential uses are predominantly proposed within the CPU area along Clairemont Mesa Boulevard, Convoy Street, and Aero Drive, as well as in the central portion of the CPU area east of SR 163. Most of these areas would be subject to noise levels between 60 and 70 CNEL from traffic noise along roadways within the CPU area. Portions of the urban employment village areas would be exposed to noise levels above 70 CNEL from traffic along I-805 and SR 163. Two areas of urban employment village (both located along the western edge of the CPU area) and two areas of community commercial that allow residential (located just east of SR 163 and in the southeastern portion of the CPU) would be exposed to noise levels above 75 CNEL from freeway traffic.

Other residential NSLU designations under the proposed CPU are located in pockets in the northwestern, western, central, southern (along Aero Drive), and southeastern portions of the CPU area. Sites in the northwestern portion and along Aero Drive include existing residential land uses and would include increased multi-family residential intensities under the CPU. The new multi-family residential uses in the northwestern portion would be exposed to noise levels of 75 CNEL and above within approximately 500 feet of I-805 and noise levels between 70 and 75 CNEL within approximately 1,000 feet of I-805. Noise levels at the new multi-family residential uses along Aero Drive would range from 60 to 75 CNEL from traffic along I-805, SR 163, and Aero Drive. No new or additional residential development is anticipated to occur in the existing residential areas in the western portion of the CPU area, where noise levels exceed 75 CNEL from traffic along I-805, in the central portion of the CPU area between Spectrum Center Boulevard and Tech Way, where noise levels are below 65 CNEL, or in the southeastern portion of the CPU area, where noise levels range from 60 to 70 CNEL from traffic along I-15.

While the General Plan Noise Element has an exterior noise compatibility level of 60 CNEL or less for residential uses, noise levels up to 65 CNEL for single-family residential and up to 70 CNEL for multi-family residential are considered conditionally compatible, since interior noise levels are required to be reduced to 45 CNEL through building attenuation measures pursuant to Title 24. Proposed NSLUs under the CPU would be primarily multi-family or mixed-use in nature. No new single-family residences are anticipated. In addition, as outlined in Section 1.3.1, the CPU includes policies that would require site design strategies and noise reduction measures for new residential development within 500 feet of freeways.

New community commercial land use designations that do not allow for residential uses are proposed along the western side of SR 163 and along the northern and eastern boundaries of the CPU area. These community commercial uses would be exposed to noise levels between 70 and above 75 CNEL.

5.4.1.2 Airport Noise

New residential, urban employment village, and community commercial land use designations that allow for multi-family residential uses are proposed within the 60 CNEL contours associated with both Montgomery-Gibbs Executive Airport and MCAS Miramar. Small portions of community commercial land use designations along Convoy Street that allow for multi-family residential uses are also located within

the 65 CNEL contour associated with Montgomery-Gibbs Executive Airport. Similarly, small portions of proposed residential and urban employment village land use designations are located within the 65 CNEL contour associated with MCAS Miramar. As discussed in Section 5.4.1.1, while the General Plan Noise Element has an exterior noise compatibility level of 60 CNEL or less for residential uses, noise levels up to 70 CNEL for multi-family residential are considered conditionally compatible, as long as interior noise levels can be attenuated to 45 CNEL or less.

5.4.1.3 Trolley Noise

As discussed in Section 4.2.3, the future MTS Trolley Purple Line is planned to run through the CPU area. Although the precise alignment has not been determined, a preliminary alignment is shown along Daley Center Drive, Ruffin Road, and Clairemont Mesa Boulevard. It is anticipated that noise levels due to the future Trolley Purple Line operation would be similar to noise levels from the Trolley Green Line operation, which have been modeled to range from 58 to 67 CNEL at 50 feet (RECON Environmental, Inc. 2019). Noise levels along Daley Center Drive, Ruffin Road, and Clairemont Mesa Boulevard would range from 65 to over 75 CNEL, and vehicle traffic noise would exceed the contribution of noise from trolley operations. However, the exact alignment of the MTS Trolley Purple Line is not known at this time, and it could be located in close proximity to NSLUs. Although vehicular traffic would be the dominant noise source, trolley noise levels in close proximity to the railway would contribute to the overall exterior noise level, and the combined vehicle traffic and trolley exterior noise levels could exceed the City's Land Use – Noise Compatibility Guidelines resulting in a potentially significant impact.

5.4.2 Significance of Impacts

Implementation of the proposed CPU would potentially expose new development to noise levels that exceed the City's Land Use – Noise Compatibility Guidelines. Traffic associated with the proposed CPU would increase noise levels along a number of roadway segments throughout the CPU area. Furthermore, the proposed CPU would allow new residential development in areas where noise levels exceed 60 CNEL, and additional noise attenuation could be required for new structures to achieve or maintain interior noise levels which would not exceed 45 CNEL for residences, and 50 CNEL for new commercial uses.

Policy LU-3.12 of the proposed CPU includes site design strategies and noise reduction measures for new development within 500 feet of freeways. Additionally, policies in the General Plan Noise Element, such as policies NE-A.2, NE-A.3, and NE-B.1, require the reduction of traffic noise exposure because they set standards for the siting of sensitive land uses, while Title 24 requires that multi-family development projects must demonstrate that interior noise levels would be reduced to acceptable levels (45 CNEL or less) through submission and approval of a Title 24 Compliance Report. General Plan Noise Element policy NE-A.4 requires an acoustical study consistent with the Acoustical Study Guidelines (Table NE-4) for proposed developments in areas where the existing or future noise level exceeds or would exceed the "compatible" noise level thresholds as indicated on the City's Land Use – Noise Compatibility Guidelines. However, as new development projects could place sensitive receptors in locations where the exterior noise levels exceed the Land Use – Noise Compatibility Guidelines, exterior noise impacts would remain significant and unavoidable and there are no feasible mitigation measures available.

5.4.3 Mitigation Framework

There are no feasible mitigation measures available to reduce exterior noise impacts to a less than significant level.

5.4.4 Significance After Mitigation

While some new development projects may be able to adequately attenuate exterior noise, there could still be new NSLU that would experience ambient noise levels that exceed the applicable Land Use – Noise Compatibility Guidelines. Therefore, even with implementation of policies discussed above, impacts would be significant and unavoidable.

6.0 LIST OF PREPARERS

Hunter Stapp	Acoustic Analyst
Joanne M. Dramko, AICP	Principal Technical Specialist, Quality Assurance Reviewer
Tim Belzman	Project Manager

7.0 REFERENCES

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Appendix A

Site Survey Measurement Sheets

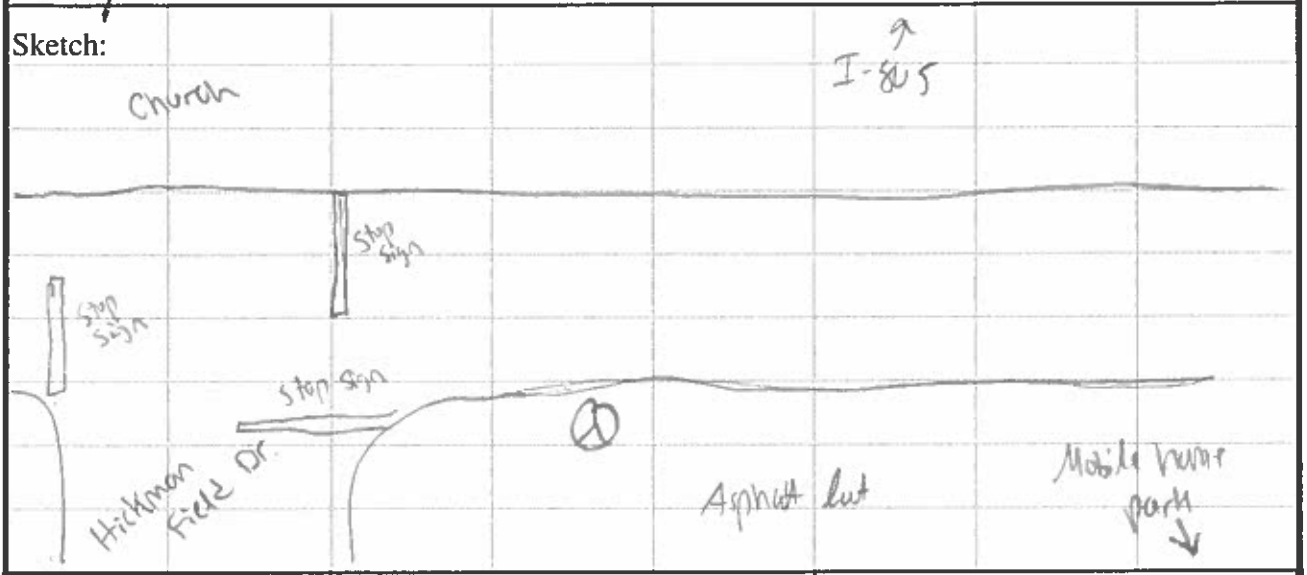
Site Survey

Job # SDD-36.03	Project Name: HMCPU		
Date: 6/6/18	Site #: M1	Engineer: Hunter Stapp	
Address: Northwest corner of intersection of Hickman Field Drive and Lenoir St			
73 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4871

Notes: Traffic along I-505 dominant noise source

Sunny

Sketch:



Temp: 71	Wind Spd: 9 mph	Humidity: 54 %
Start of Measurement: 12:12 pm	End of Measurement: 12:22 pm	64.2 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

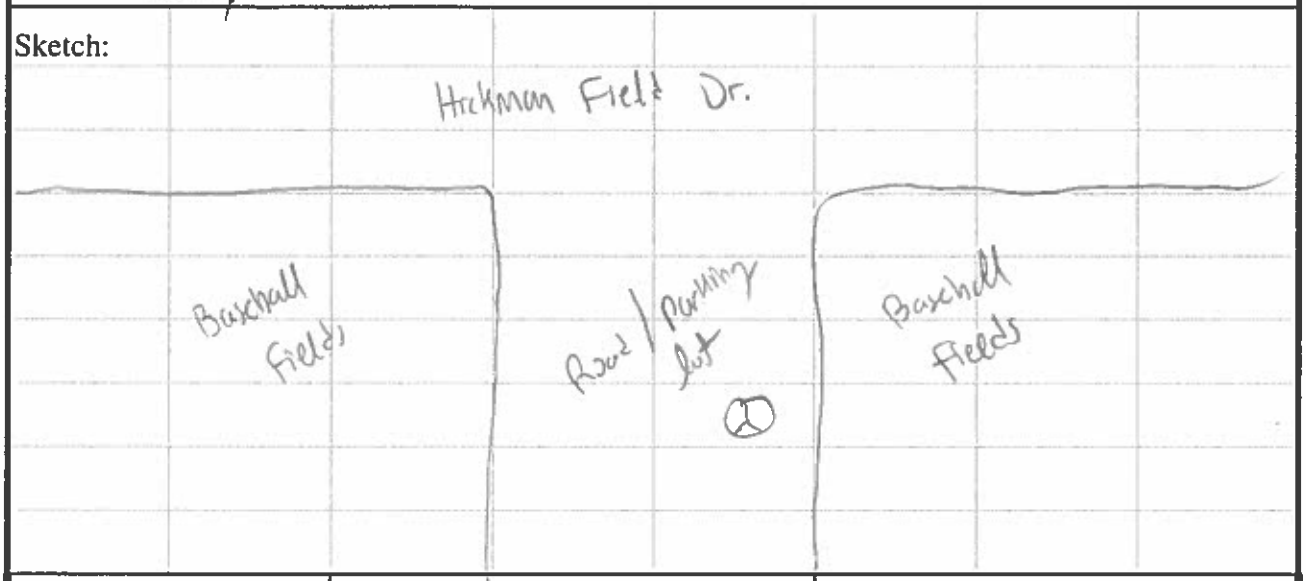
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: HMCPU		
Date: 6/6/18	Site #: M2	Engineer: Hunter Stapp	
Address: In parking lot/road @ Hickman Field park			
74 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Freeway traffic dominant noise source; leaves rustling in wind; sprinklers watering fields
Sunny

Sketch:



Temp: 73°F	Wind Spd: 8 mph	Humidity: 53 %
Start of Measurement: 12:31 pm	End of Measurement: 12:41 pm	56.7 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

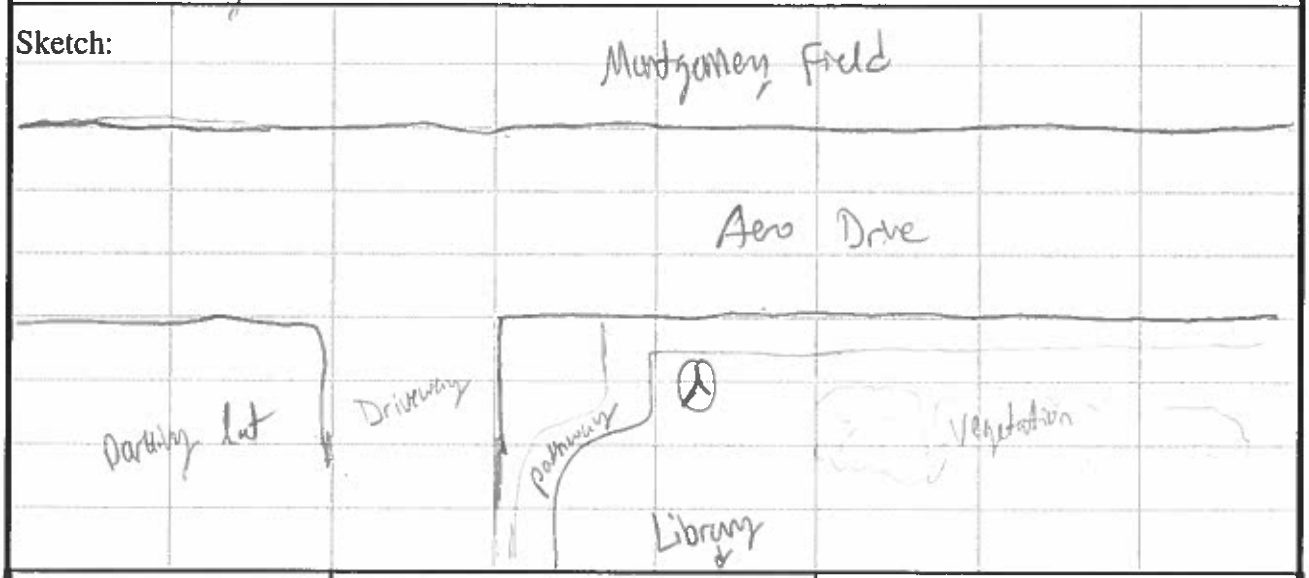
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: MMCP1		
Date: 6/8/18	Site #: M3	Engineer: Hunter Stapp	
Address: Serra Mesa – Kearny Mesa Library			
83 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Dominant noise source traffic along Aero Dr.; helicopter fly-over; planes
Sunny

Sketch:



Temp: 74°F	Wind Spd: 2 mph	Humidity: 51 %
Start of Measurement: 10:52 am	End of Measurement: 11:02 am	71.0 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: KMCP11	
Date: 6/6/18	Site #: M4	Engineer: Hunter Stapp
Address: Clairemont Mesa Blvd @ Zion Market		
70 Meter: LD LXT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Traffic on Clairemont Mesa dominant noise source. Some slowing for intersections @ Ruffner and Convoy. Some slowing for cars turning into driveway to market (most cars NOT).

Sketch:

Temp: 68°F	Wind Spd: 6 mph	Humidity: 61 %
Start of Measurement: 10:21 am	End of Measurement: 10:36 am	70.6 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 I (355)	卌 卌 III (13)	II (2)

Noise Measurement for Information Only

No Through Roadways

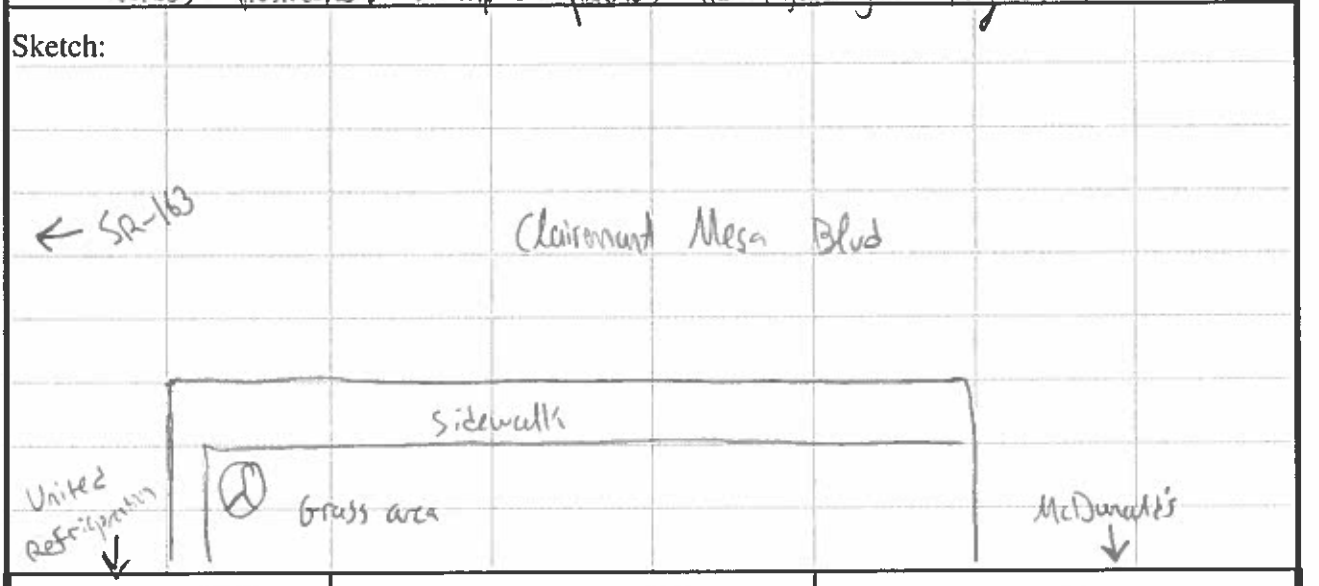
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: KMCPII		
Date: 6/6/18	Site #: M5	Engineer: Hunter Stapp	
Address: Clairemont Mesa Blvd @ McDonald's			
71 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: speed limit 40 mph but cars generally traveling slower due to intersections @ Nearby Villa and Complex St. Slowing also due to various businesses. Multiple passes for fighter jet fly-overs

Sketch:



Temp: 71 °F	Wind Spd: 7 mph	Humidity: 55 %
Start of Measurement: 10:55 am	End of Measurement: 11:11 am	69.8 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
425	12	3

Noise Measurement for Information Only

No Through Roadways

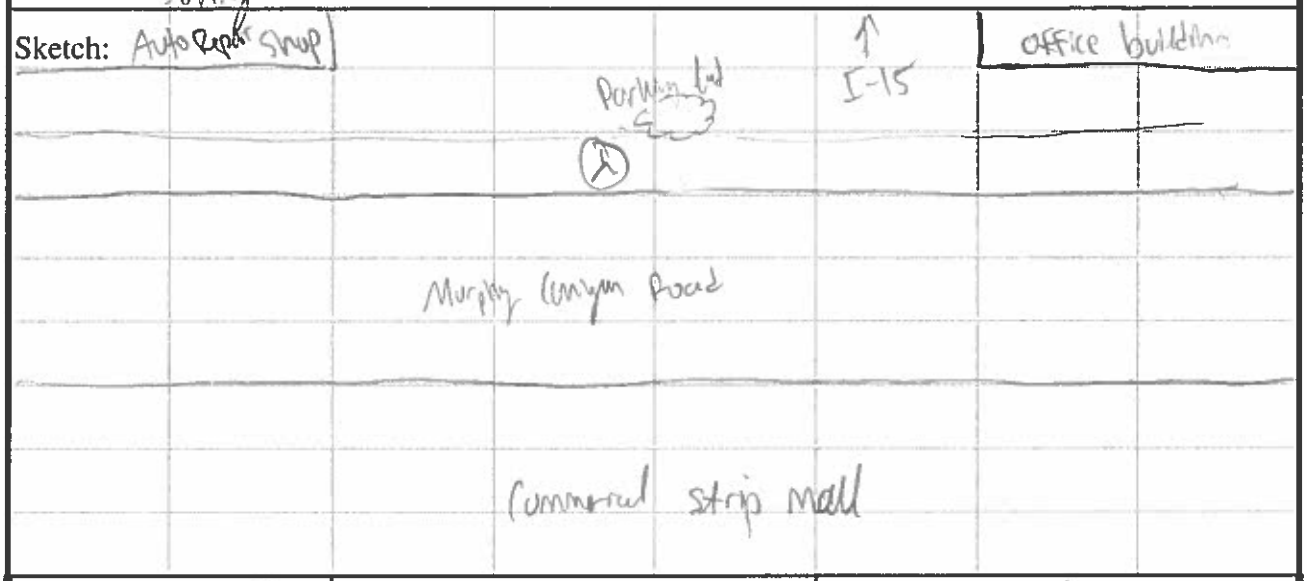
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: KMCPU		
Date: 6/8/18	Site #: M6	Engineer: Hunter Stapp	
Address: Murphy Canyon Road south of Clairemont Mesa Blvd			
87 Meter: LD 824	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Noise from traffic along I-15, Murphy Canyon Road, and Clairemont Mesa Blvd.
Sunny

Sketch:



Temp: 78°F	Wind Spd: 9 mph	Humidity: 46 %
Start of Measurement: 12:59 pm	End of Measurement: 1:09 pm	64.3 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

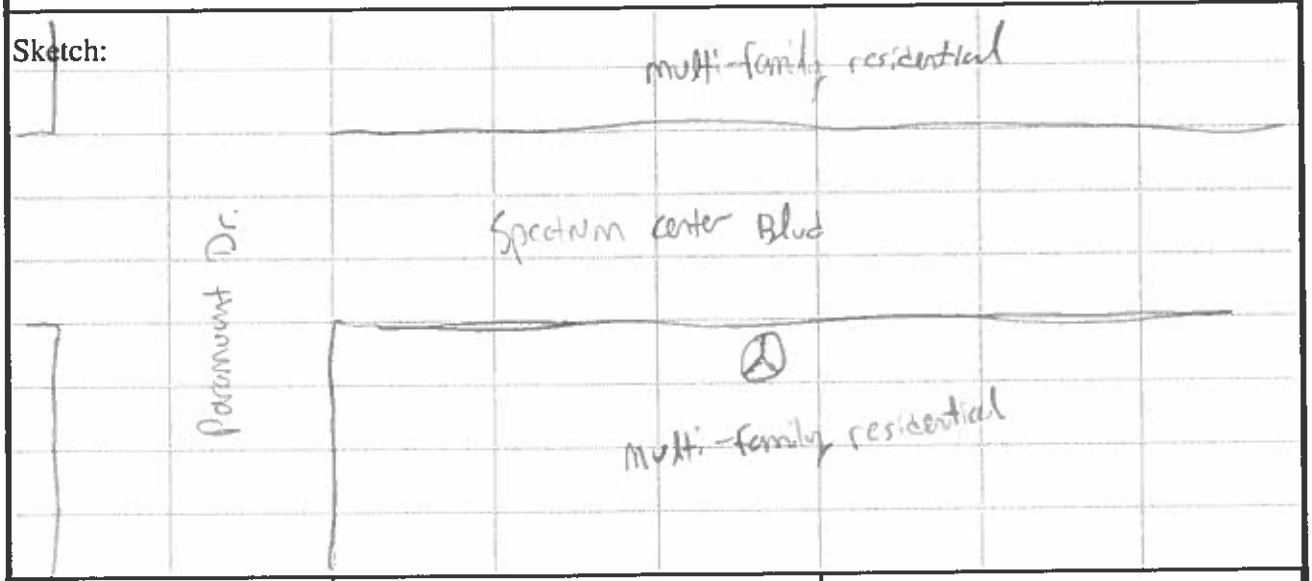
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: HMCPU		
Date: 6/6/18	Site #: M7	Engineer: Hunter Stepp	
Address: Along Spectrum Center Blvd west of Paramount Dr.			
78 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL200	Serial #: 4371

Notes: Sunny; light traffic, leaves rustling in wind; birds chirping; distant helicopter / planes; distant talking

Sketch:



Temp: 72°F	Wind Spd: 10 mph	Humidity: 57 %
Start of Measurement: 2:20 pm	End of Measurement: 2:30 pm	57.9 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

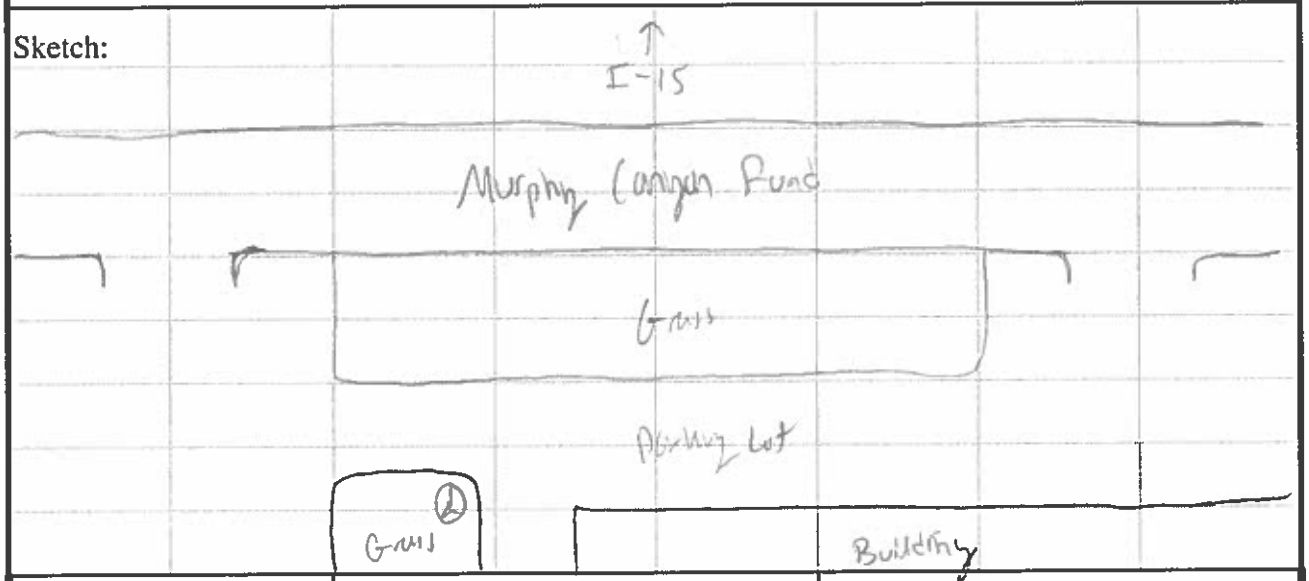
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: MMCPU		
Date: 6/8/18	Site #: M8	Engineer: Hunter Stapp	
Address: Former Chargers practice facility @ Murphy Canyon Rd.			
86 Meter: LD LOT	Serial #: 1741	Calibrator: Larson Davis CAL200	Serial #: 4371

Notes: Dominant noise source traffic on I-15, light traffic on Murphy Canyon Rd.; occasional plane; distant landscaping equipment

Sketch:



Temp: 78°F	Wind Spd: 7 mph	Humidity: 44 %			
Start of Measurement: 11:51 am	End of Measurement: 12:01 pm	61.0 dBA L_{EQ}			

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

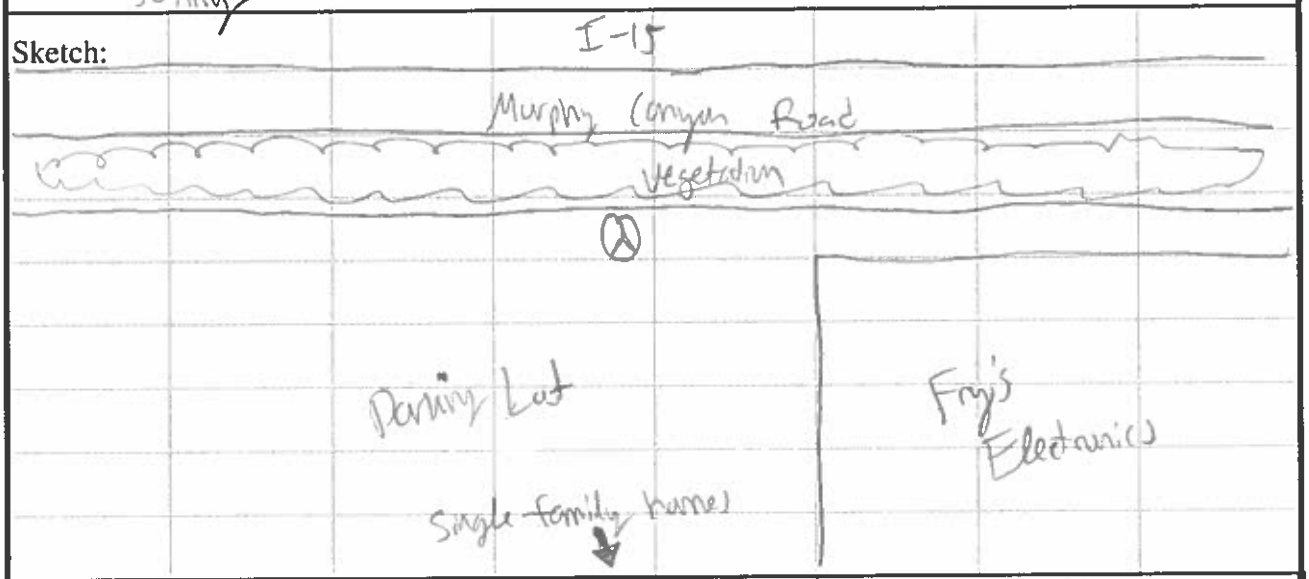
Site Survey

Job # SPD-36.03	Project Name: HMCP4		
Date: 6/8/18	Site #: M9	Engineer: Hunter Stapp	
Address: Fry's Electronics			
Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Dominant noise source traffic from I-15.

Sunny

Sketch:



Temp: 77°F	Wind Spd: 6 mph	Humidity: 47 %
Start of Measurement: 11:12 am	End of Measurement: 11:22 am	64.6 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

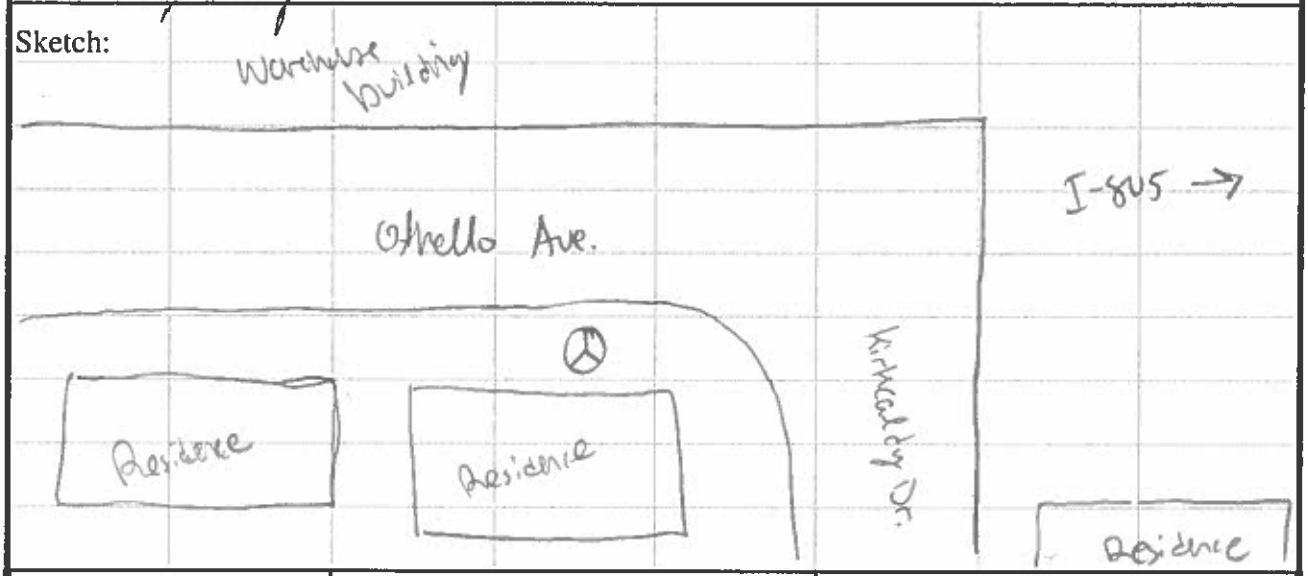
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: MMCPU		
Date: 6/6/18	Site #: M10	Engineer: Hunter Stapp	
Address: Intersection of Othello Ave. and Kirkcaldy Dr.			
76 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4871

Notes: Traffic along I-805 dominant noise source; rare car passing; a few small propeller plane fly-overs
Mostly sunny

Sketch:



Temp: 72° F	Wind Spd: 14 mph	Humidity: 59 %
Start of Measurement: 1:29 pm	End of Measurement: 1:39 pm	64.2 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

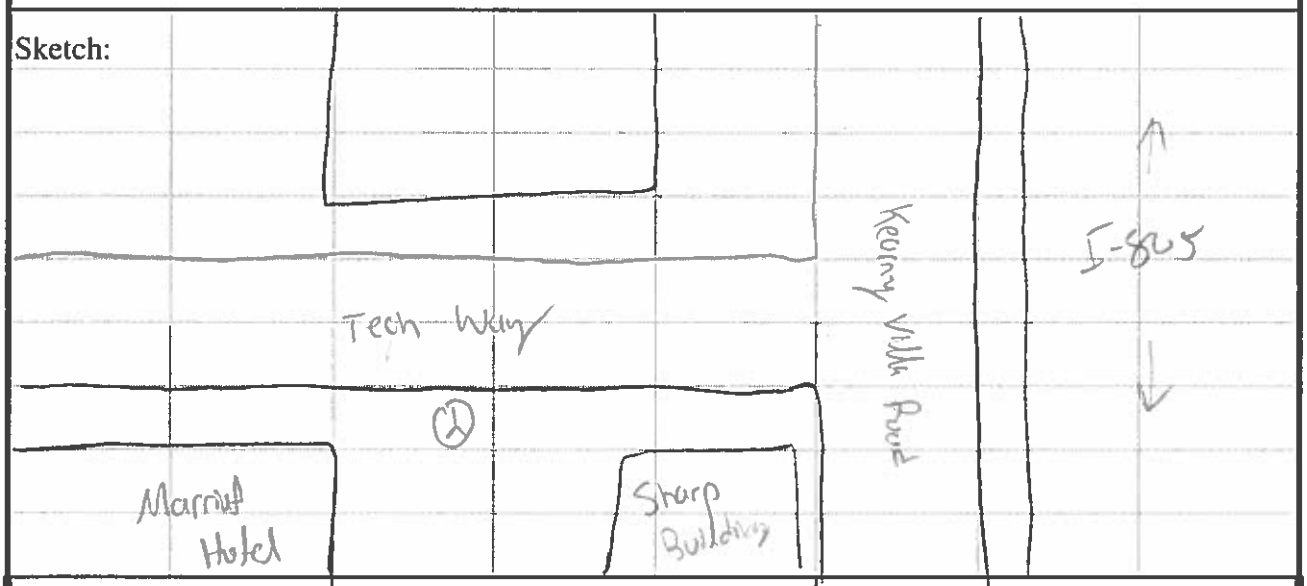
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: KMCP V		
Date: 6/6/18	Site #: M11	Engineer: Hunter Stapp	
Address: Along Tech Way, adjacent to Courtyard by Marriott Hotel			
77 Meter: LD LXT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Traffic along I-805 dominant noise source; light traffic on Tech Way; occasional small plane fly-over

Sketch:



Temp: 72°	Wind Spd: 13 mph	Humidity: 57 %			
Start of Measurement: 1:51 pm	End of Measurement: 2:01 pm	67.0 dBA L_{EQ}			

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

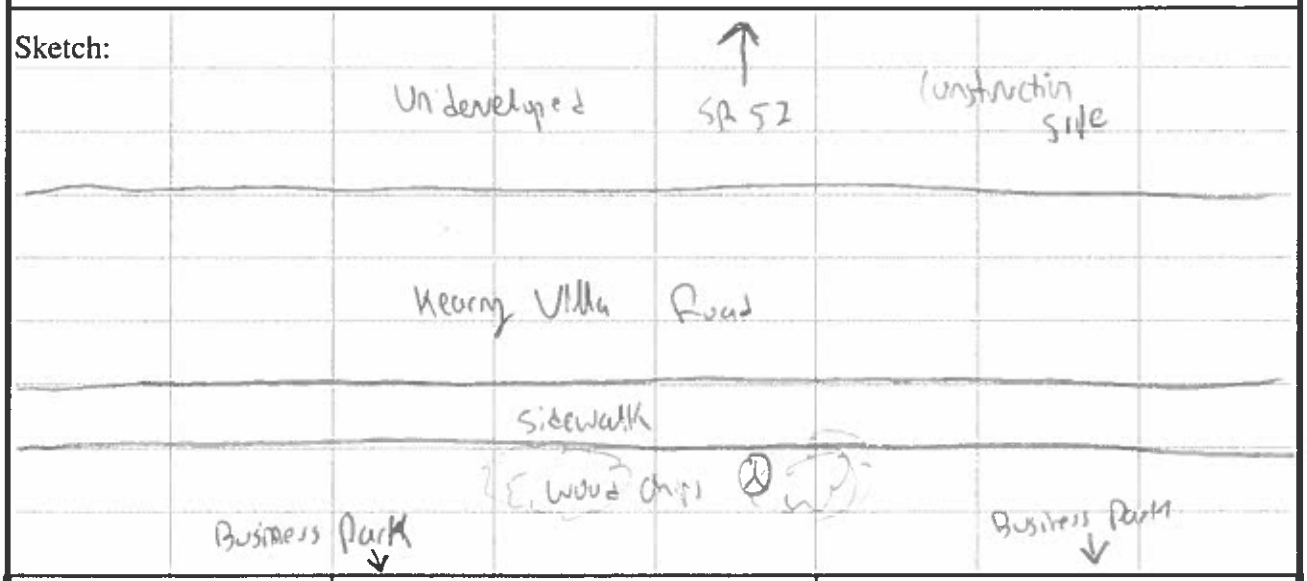
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: HMKPIJ		
Date: 6/6/18	Site #: M12	Engineer: Hunter Stapp	
Address: Kearny Villa Road east of Chesapeake Drive			
72 Meter: LD 1.5f	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Light vehicle traffic; birds chirping; distant traffic noise from SR-52

Sketch:



Temp: 71	Wind Spd: 7 mph	Humidity: 54 %
Start of Measurement: 11:43 am	End of Measurement: 11:53 am	65.5 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

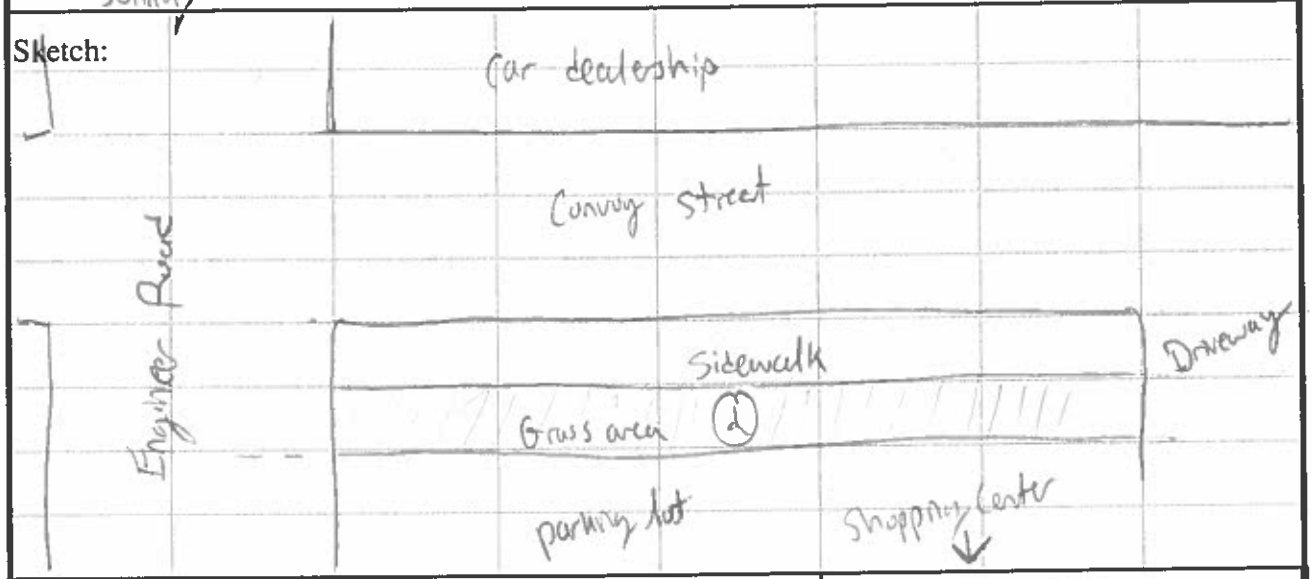
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: MMCPU		
Date: 6/6/18	Site #: M13	Engineer: Hunter Stepp	
Address: Near southwestern corner of Convoy St and Engineer Rd.			
75 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4871

Notes: Traffic along Convoy dominant noise source; dust speckles use @ car dealership across Convoy
Sunny

Sketch:



Temp: 72°	Wind Spd: 8 mph	Humidity: 55 %
Start of Measurement: 1:06 pm	End of Measurement: 1:16 pm	66.8 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

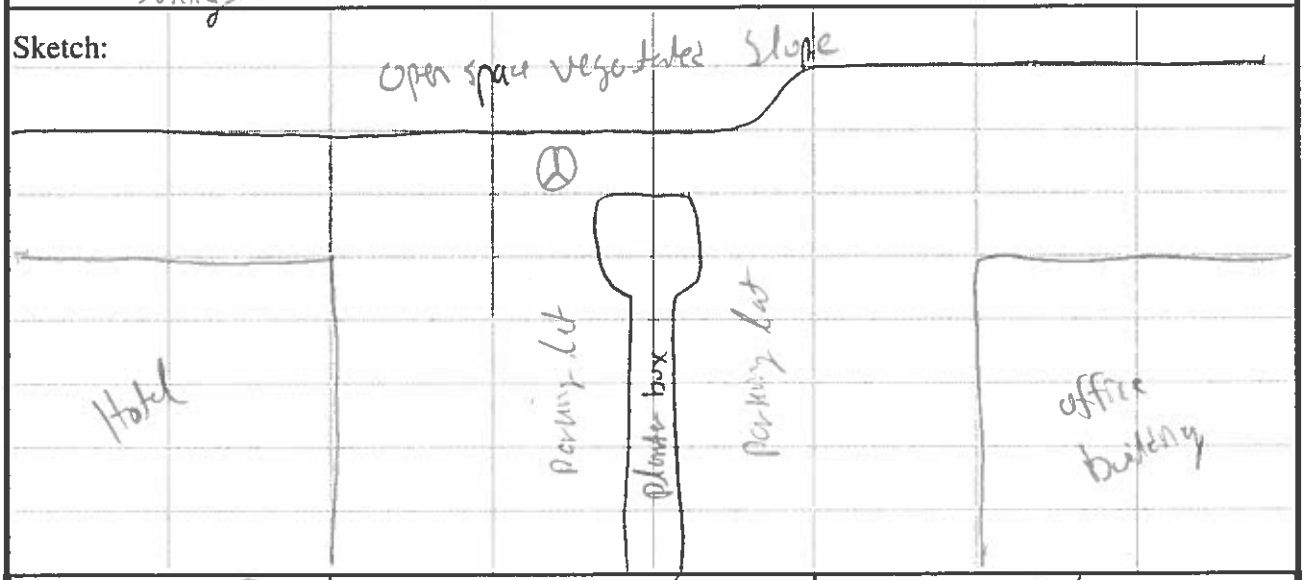
No Calibration Analysis Will Be Provided

Site Survey

Job # SDD-36.03	Project Name: MMCPU		
Date: 6/8/18	Site #: M14	Engineer: Hunter Stapp	
Address: Back of parking lot at Extended Stay America hotel @ Murphy Canyon Rd			
85 Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 4371

Notes: Generally quiet; distant traffic noise from I-15; occasional plane; occasional car in parking lot; birds chirping. Sunny

Sketch:



Temp: 78°F	Wind Spd: 6 mph	Humidity: 46 %			
Start of Measurement: 11:34 am	End of Measurement: 11:44 am	50.7 dBA L_{EQ}			

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Appendix B

Existing and Future Traffic Levels

Existing						
Roadway /Segment	Existing					Posted Speed (mph)
	ADT	Peak Hour Traffic	Traffic Breakdown			
			Cars 97.0%	MT 2.0%	HT 1.0%	
Clairemont Mesa Boulevard						
I-805 SB Ramps to I-805 NB Ramps	44,130	4413	4281	88	44	35
I-805 NB Ramps to Shawline Street	51,050	5105	4952	102	51	35
Shawline Street to Ruffner Street	29,480	2948	2860	59	29	35
Ruffner Street to Convoy Street	26,570	2657	2577	53	27	35
Convoy Street to Mercury Street	30,400	3040	2949	61	30	35
Mercury Street to Industrial Park Drive	28,150	2815	2731	56	28	35
Industrial Park Drive to Kearny Mesa Road	33,350	3335	3235	67	33	35
Kearny Mesa Road to SR-163 SB Ramps	40,300	4030	3909	81	40	35
SR-163 SB Ramps to SR-163 NB Ramps	38,360	3836	3721	77	38	35
SR-163 NB Ramps to Kearny Villa Road	35,160	3516	3411	70	35	35
Kearny Villa Road to Complex Drive	24,100	2410	2338	48	24	40
Complex Drive to Overland Avenue	22,870	2287	2218	46	23	40
Overland Avenue to Ruffin Road	22,190	2219	2152	44	22	40
Ruffin Road to Murphy Canyon Road	25,970	2597	2519	52	26	40
Murphy Canyon Road to I-15 SB Ramps	29,510	2951	2862	59	30	40
I-15 SB Ramps to I-15 NB Ramps	24,470	2447	2374	49	24	40
Balboa Avenue						
I-805 SB Ramps to I-805 NB Ramps	52,700	5270	5112	105	53	45
I-805 NB Ramps to Ruffner Street	50,240	5024	4873	100	50	35
Ruffner Road to Convoy Street	40,540	4054	3932	81	41	35
Convoy Street to Mercury Street	32,650	3265	3167	65	33	45
Mercury Street to SR-163 SB On-Ramp	31,270	3127	3033	63	31	45
SR-163 SB On-Ramp to SR-163 NB On-Ramp	39,830	3983	3864	80	40	45
SR-163 NB On-Ramp to Kearny Villa Road	36,120	3612	3504	72	36	45
Between Kearny Villa Road and Pennisi Driveway	24,920	2492	2417	50	25	40
Pennisi Driveway to Ponderosa Avenue	28230	2823	2738	56	28	40

Ponderosa Avenue to Ruffin Road	22,500	2250	2183	45	23	40
Ruffin Road to Viewridge Avenue	25800	2580	2503	52	26	40
Viewridge Avenue to I-15 SB Ramps	37,810	3781	3668	76	38	40
Aero Drive						
Linda Vista Road to Kearny Villa Road	21,430	2143	2079	43	21	40
Kearny Villa Road to Aero Court	31,310	3131	3037	63	31	40
Aero Court to Afton Road	28,970	2897	2810	58	29	40
Afton Road to Broadstone Driveway	24,390	2439	2366	49	24	40
Broadstone Driveway to Sandrock Road	28,620	2862	2776	57	29	40
Sandrock Road to Ruffin Road	21,420	2142	2078	43	21	45
Ruffin Road to West Canyon Avenue	25,120	2512	2437	50	25	45
West Canyon Avenue to Ruffin Road/Daley Center Drive	25,220	2522	2446	50	25	45
Ruffin Road/Daley Center Drive to Murphy Canyon Road	33,070	3307	3208	66	33	45
Murphy Canyon Road to I-15 SB Ramps	39,300	3930	3812	79	39	45
I-15 SB Ramps to I-15 NB Ramps	31,020	3102	3009	62	31	45
Convoy Street						
SR-52 WB Ramps to SR-52 EB Ramps	15,940	1594	1546	32	16	35
SR-52 EB Ramps tp Copley Park Place	31,390	3139	3045	63	31	35
Copley Park Place to Convoy Court	23,760	2376	2305	48	24	35
Convoy Court to Clairemont Mesa Boulevard	19,190	1919	1861	38	19	35
Clairemont Mesa Boulevard to Ronson Road	18,800	1880	1824	38	19	35
Ronson Road to Engineer Road	20,970	2097	2034	42	21	40
Engineer Road to Balboa Avenue	26,720	2672	2592	53	27	40
Balboa Avenue to Armour Street	28,040	2804	2720	56	28	40
Armour Street to Othello Street	25,310	2531	2455	51	25	40
Othello Avenue to Kearny Mesa Road	21,600	2160	2095	43	22	40
Kearny Mesa Road to Aero Drive	31,210	3121	3027	62	31	40
Ruffin Road						
Kearny Villa Road to Chesapeake Drive	15,580	1558	1511	31	16	45

Chesapeake Drive to Hazard Way	15,590	1559	1512	31	16	45
Hazard Way to Farnham Street	14,400	1440	1397	29	14	45
Farnham Street to Clairemont Mesa Boulevard	12,780	1278	1240	26	13	45
Clairemont Mesa Boulevard to Lightwave Avenue	10,730	1073	1041	21	11	45
Lightwave Avenue to Spectrum Center Boulevard	11,930	1193	1157	24	12	45
Spectrum Center Boulevard to Balboa Avenue	18,020	1802	1748	36	18	45
Balboa Avenue to Ridgehaven Court	9,990	999	969	20	10	45
Ridgehaven Court to Sky Park Court	13,670	1367	1326	27	14	45
Sky Park Court to Aero Drive	14,760	1476	1432	30	15	45
Interstate 15						
Southern end to Aero Drive	212,000	21200	20564	424	212	65
Aero Drive to Balboa Avenue/Tierrasanta Blvd.	187,000	18700	18139	374	187	65
Balboa Avenue/Tierrasanta Blvd to Clairemont Mesa Blvd	174,000	17400	16878	348	174	65
Clairemont Mesa Blvd to SR-52	157,000	15700	15229	314	157	65
State Route 52						
I-15 to SR-163	98,000	9800	9506	196	98	65
SR-163 to Convoy Street	113,000	11300	10961	226	113	65
Convoy Street to I-805	108,000	10800	10476	216	108	65
Interstate 805						
SR-52 to Clairemont Mesa Blvd	183,000	18300	17751	366	183	65
Clairemont Mesa Blvd to Balboa Avenue	193,000	19300	18721	386	193	65
Balboa Avenue to SR-163	195,000	19500	18915	390	195	65
SR-163 to Mesa College Drive	174,000	17400	16878	348	174	65
State Route 163						
I-805 to Balboa Avenue	136,000	13600	13192	272	136	65
Balboa Avenue to Clairemont Mesa Blvd	141,000	14100	13677	282	141	65
Clairemont Mesa Blvd to SR-52	142,000	14200	13774	284	142	65

Future						
Roadway /Segment	Future					Posted Speed (mph)
	ADT	Peak Hour Traffic	Traffic Breakdown			
			Cars 97.0%	MT 2.0%	HT 1.0%	
Clairemont Mesa Boulevard						
I-805 SB Ramps to I-805 NB Ramps	67,400	6,740	6538	135	67	35
I-805 NB Ramps to Shawline Street	61,900	6,190	6004	124	62	35
Shawline Street to Ruffner Street	40,800	4,080	3958	82	41	35
Ruffner Street to Convoy Street	31,900	3,190	3094	64	32	35
Convoy Street to Mercury Street	34,900	3,490	3385	70	35	35
Mercury Street to Industrial Park Drive	38,800	3,880	3764	78	39	35
Industrial Park Drive to Kearny Mesa Road	41,500	4,150	4026	83	42	35
Kearny Mesa Road to SR-163 SB Ramps	51,400	5,140	4986	103	51	35
SR-163 SB Ramps to SR-163 NB Ramps	52,900	5,290	5131	106	53	35
SR-163 NB Ramps to Kearny Villa Road	43,100	4,310	4181	86	43	35
Kearny Villa Road to Complex Drive	29,400	2,940	2852	59	29	40
Complex Drive to Overland Avenue	28,500	2,850	2765	57	29	40
Overland Avenue to Ruffin Road	27,800	2,780	2697	56	28	40
Ruffin Road to Murphy Canyon Road	46,700	4,670	4530	93	47	40
Murphy Canyon Road to I-15 SB Ramps	56,700	5,670	5500	113	57	40
I-15 SB Ramps to I-15 NB Ramps	43,000	4,300	4171	86	43	40
Balboa Avenue						
I-805 SB Ramps to I-805 NB Ramps	61,300	6,130	5946	123	61	45
I-805 NB Ramps to Ruffner Street	49,800	4,980	4831	100	50	35
Ruffner Road to Convoy Street	35,000	3,500	3395	70	35	35
Convoy Street to Mercury Street	26,200	2,620	2541	52	26	45
Mercury Street to SR-163 SB On-Ramp	33,700	3,370	3269	67	34	45
SR-163 SB On-Ramp to SR-163 NB On-Ramp	54,800	5,480	5316	110	55	45
SR-163 NB On-Ramp to Kearny Villa Road	51,700	5,170	5015	103	52	45
Between Kearny Villa Road and Pennisi Driveway	39,100	3,910	3793	78	39	40

Pennisi Driveway to Ponderosa Avenue	40,100	4,010	3890	80	40	40
Ponderosa Avenue to Ruffin Road	35,300	3,530	3424	71	35	40
Ruffin Road to Viewridge Avenue	40,800	4,080	3958	82	41	40
Viewridge Avenue to I-15 SB Ramps	58,800	5,880	5704	118	59	40
Aero Drive						
Linda Vista Road and Kearny Villa Road to between Linda Vista Road and Kearny Villa Road	29,500	2,950	2862	59	30	40
Kearny Villa Road to Aero Court	45,800	4,580	4443	92	46	40
Aero Court to Afton Road	42,800	4,280	4152	86	43	40
Afton Road to Broadstone Driveway	37,700	3,770	3657	75	38	40
Broadstone Driveway to Sandrock Road	37,000	3,700	3589	74	37	40
Sandrock Road to Ruffin Road	35,900	3,590	3482	72	36	45
Ruffin Road to West Canyon Avenue	37,600	3,760	3647	75	38	45
West Canyon Avenue to Ruffin Road/Daley Center Drive	40,100	4,010	3890	80	40	45
Ruffin Road/Daley Center Drive to Murphy Canyon Road	38,300	3,830	3715	77	38	45
Murphy Canyon Road to I-15 SB Ramps	68,100	6,810	6606	136	68	45
I-15 SB Ramps to I-15 NB Ramps	38,500	3,850	3735	77	39	45
Convoy Street						
SR-52 WB Ramps to SR-52 EB Ramps	29,500	2,950	2862	59	30	35
SR-52 EB Ramps tp Copley Park Place	40,400	4,040	3919	81	40	35
Copley Park Place to Convoy Court	39,600	3,960	3841	79	40	35
Convoy Court to Clairemont Mesa Boulevard	28,600	2,860	2774	57	29	35
Clairemont Mesa Boulevard to Ronson Road	27,300	2,730	2648	55	27	35
Ronson Road to Engineer Road	32,000	3,200	3104	64	32	40
Engineer Road to Balboa Avenue	34,900	3,490	3385	70	35	40
Balboa Avenue to Armour Street	45,600	4,560	4423	91	46	40
Armour Street to Othello Street	43,400	4,340	4210	87	43	40
Othello Avenue to Kearny Mesa Road	30,500	3,050	2959	61	31	40
Kearny Mesa Road to Aero Drive	42,300	4,230	4103	85	42	40

Ruffin Road						
Kearny Villa Road to Chesapeake Drive	33,700	3,370	3269	67	34	45
Chesapeake Drive to Hazard Way	26,000	2,600	2522	52	26	45
Hazard Way to Farnham Street	26,000	2,600	2522	52	26	45
Farnham Street to Clairemont Mesa Boulevard	17,800	1,780	1727	36	18	45
Clairemont Mesa Boulevard to Lightwave Avenue	21,800	2,180	2115	44	22	45
Lightwave Avenue to Spectrum Center Boulevard	21,600	2,160	2095	43	22	45
Spectrum Center Boulevard to Balboa Avenue	24,200	2,420	2347	48	24	45
Balboa Avenue to Ridgehaven Court	32,500	3,250	3153	65	33	45
Ridgehaven Court to Sky Park Court	19,500	1,950	1892	39	20	45
Sky Park Court to Aero Drive	22,300	2,230	2163	45	22	45
Interstate 15						
Southern end to Aero Drive	255,100	25,510	24745	510	255	65
Aero Drive to Balboa Avenue/Tierrasanta Blvd.	238,000	23,800	23086	476	238	65
Balboa Avenue/Tierrasanta Blvd to Clairemont Mesa Blvd	219,500	21,950	21292	439	220	65
Clairemont Mesa Blvd to SR-52	171,800	17,180	16665	344	172	65
State Route 52						
I-15 to SR-163	90,400	9,040	8769	181	90	65
SR-163 to Convoy Street	160,200	16,020	15539	320	160	65
Convoy Street to I-805	149,900	14,990	14540	300	150	65
Interstate 805						
SR-52 to Clairemont Mesa Blvd	240,100	24,010	23290	480	240	65
Clairemont Mesa Blvd to Balboa Avenue	241,400	24,140	23416	483	241	65
Balboa Avenue to SR-163	242,300	24,230	23503	485	242	65
SR-163 to Mesa College Drive	178,500	17,850	17315	357	179	65
State Route 163						
I-805 to Balboa Avenue	174,000	17,400	16878	348	174	65
Balboa Avenue to Clairemont Mesa Blvd	176,700	17,670	17140	353	177	65
Clairemont Mesa Blvd to SR-52	166,600	16,660	16160	333	167	65