Appendix G
Noise Report

DRAFT

Noise Technical Report
Fenton Parkway Bridge Project

APRIL 2024

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ADT	average daily traffic
ANSI	American National Standards Institute
APE	area of potential effect
AUF	acoustical usage factor
Caltrans	California Department of Transportation
City	City of San Diego
CNEL	Community Noise Equivalent Level
County	County of San Diego
dB	decibel
dBA	A-weighted decibel
DOT	Department of Transportation
FTA	Federal Transit Administration
HVAC	heating, ventilating, and air-conditioning
Hz	Hertz (cycles per second)
ips	inches per second
ISO	International Organization of Standardization
L_{90}	90% statistical sound level
L_{eq}	equivalent noise level
$L_{eq(h)}$	hourly Leq sound level
L_{max}	maximum sound level
L_{min}	minimum sound level
MSCP	Multi-Species Conservation Plan
MHPA	Multi-Habitat Planning Area
OBCF	octave-band center frequency
proposed project	Fenton Parkway Bridge Project
PWL	sound power level
RCNM	Roadway Construction Noise Model
report	Noise Technical Report
RMS	root mean square
SLM	Sound level meter
SPL	Sound pressure level
ST	Short-term

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Summary of Findings

This report presents the results of Dudek's noise technical study for the Fenton Parkway Bridge (proposed project). The proposed project would span the San Diego River connecting Fenton Parkway with Camino Del Rio North in the Mission Valley community of the City of San Diego (City). The proposed project is referenced in the Mission Valley Community Plan (adopted by the City in 2019) and is a long-sought infrastructure enhancement in the Mission Valley community that would connect residents and businesses south of the San Diego River to land uses north of the river off Friars Road, including the San Diego State University (SDSU) Mission Valley site development, which was approved by the Board of Trustees of the California State University (CSU) in 2020 (City of San Diego 2019). The project would involve construction of a vehicular and pedestrian bridge spanning the San Diego River from north to south.

The following report analyzes noise emission levels from the 12.9-acre project site and the resulting temporary and durable environmental noise impacts that would occur during construction and following project implementation, respectively. Dudek performed an analysis of construction noise and vibration and traffic noise. This report also documents the results of Dudek's fieldwork to quantify and characterize the pre-project baseline outdoor ambient sound environment.

As discussed herein, the proposed project is expected to have significant, temporary, unmitigable noise impacts during construction. The concurrent construction noise level without temporary sound abatement is predicted to exceed 75 dBA L_{eq} over a 12-hour period at the façade of the nearest existing residence to the north during March 2025. With a temporary 8'-tall barrier installed along the proposed project northern boundary closest to the neighboring residences, the construction noise level for March 2025 is estimated to be less than both the FTA guidance-based limit of 80 dBA 8-hour L_{eq} for construction noise exposure at the exterior of a residential use and the City's 75 dBA 12-hour L_{eq} construction noise threshold for residentially zoned properties. A temporary construction noise barrier could be implemented in a variety of ways, but for purposes of this analysis was assumed to be an arrangement of 8-foot-tall plywood sheets (minimum ½-inch thick) on the project-side of the existing property fence, with adjoining vertical edges slightly overlapping to ensure acoustical solidity.

Anticipated stationary operations associated with the project are not expected to have any significant, unmitigable noise impacts as there is no stationary operation other than traffic on project roadways, which is analyzed and assessed for impacts separately in this report. Changes to vicinity roadway traffic flows are expected, but the magnitudes of these changes are predicted to result in a less than perceptible (i.e., lower than 3 dB) alteration to existing or future traffic noise levels as expressed as CNEL values and are thus considered less than significant impacts.

Anticipated groundborne vibration associated with the Project construction may be perceptible to occupants within the residential structure neighboring the proposed project to the north, but the PPV vibration magnitudes are expected to be less than Caltrans guidance-based thresholds for building damage risk and occupant annoyance.

With respect to potential noise-related effects to wildlife, and with detailed assessment under separate cover and external to this noise technical report, in summary potentially significant impacts are limited to direct and/or indirect impacts to sensitive natural communities, jurisdictional features, San Diego County viguiera (*Viguiera laciniata*), San Diego marsh-elder (*Iva hayesiana*), least Bell's vireo, southwestern willow flycatcher, coastal California gnatcatcher, habitat for special-status and Multiple Species Conservation Plan (MCSP) covered wildlife species, migratory wildlife corridors, native wildlife nursery sites, and nesting birds protected under the Migratory Bird Treaty Act.

Construction noise is predicted to be greater than the 60 dBA L_{eq} threshold for MSCP avian breeding sites. Therefore, construction noise represents significant and unavoidable temporary noise impacts on sensitive wildlife receptors even with the implementation of MM-BIO-15:

MM-BIO 15 Short Term Noise Pre-construction biological and noise surveys shall be conducted for any work between February 1 and September 15. Between 3 and 7 days prior to start of construction activities, a qualified biologist with experience in identifying least Bell's vireo (Vireo bellii pusillus), southwestern willow flycatcher (Empidonax traillii extimus), and coastal California gnatcatcher (Polioptila californica californica) shall conduct a pre-construction survey for the least Bell's vireo, coastal California gnatcatcher, and, if needed, southwestern willow flycatcher to document presence/absence and the extent of habitat being occupied by the species. The pre-construction survey area for these species shall encompass all suitable habitats within the impact area, as well as suitable habitat within a 500-foot buffer of the construction activities. If active nests for any of these species are detected, the project biologist shall flag and map the nest location and a 500-foot avoidance buffer on the construction plans and provide the information to the construction supervisor and any personnel working near the nest buffer. To the extent feasible, no construction activities shall occur within the 500-foot avoidance buffer. Should it be necessary for construction activities to occur within the 500-foot avoidance buffer, a qualified biologist will conduct sound monitoring near the observed nesting position(s) to sample the pre-construction outdoor ambient noise level and document any signs of disturbance prior to construction activities. Nest locations, their horizontal distances to planned construction activities, and the measured outdoor ambient noise levels shall be provided to a qualified acoustician, who shall recommend where implementation of practical noise reduction technique(s) would yield predicted construction noise exposure at the nest location not greater than the allowable threshold of 60 dBA Leq or ambient noise level, whichever is higher. To the extent feasible, on-site noise reduction techniques shall be implemented prior to construction activity to minimize construction noise levels and meet this Leq threshold at the nest location(s). During construction activity, a qualified biologist shall monitor the observed nest locations and document any signs of disturbance, which would trigger further implementation of noise reduction techniques or alternatives that may include utilization of quieter equipment, adherence to equipment maintenance schedules, shifting construction phase timelines so that they occur outside of the breeding season, installation of temporary sound barriers, or shifting construction work further from the nest.

1. **Timing:** Surveys will be completed within 72 prior to the start of construction activities during the breeding season (typically February 1 through September 15).
2. **Reporting:** The biologist shall submit a report to the City of San Diego documenting the methods and results of the surveys prior to clearing/grubbing activities. Additionally, a monitoring report will be prepared and submitted to the City of San Diego after the construction activities are completed.

1 Introduction

1.1 Regional and Local Setting

The project site is located in the northeast portion of the Mission Valley community, in the central portion of the City of San Diego metropolitan area (see Figure 1, Project Location). A portion of the project site is within the City's Stadium Wetland Mitigation Site (no credit area), which is a 57-acre advanced permittee-responsible compensatory mitigation site that generates wetland mitigation credits for use in connection with infrastructure projects for the City.

The project site is situated south of Fenton Parkway and the Fenton Marketplace and north of Camino Del Rio North and would connect these two roadways. The river bisects the project site from east to west. Surrounding uses include commercial and residential uses to the north, the SDSU Mission Valley development (including Snapdragon Stadium) to the northeast, office and healthcare uses to the south, and open space, including the San Diego River, to the east and west. The bridge would be located within the City's Multi-Habitat Planning Area and the City's Stadium Wetland Mitigation Site (no credit area).

The project site is surrounded by four major freeways—Interstate 15, Interstate 8, Interstate 805, and State Route 163—accessed via Friars Road. The existing Metropolitan Transit System (MTS) Trolley Green Line and MTS Fenton Parkway Trolley Station are located on the north bank of the river, northwest of the project site as shown in Figure 2-1 and Figure 2-2, Project Site.

1.2 Project Background and Description

The Fenton Parkway Bridge has been contemplated in the City's long-range planning documents for the Mission Valley community for more than 30 years as a local facility that would serve the needs of the Mission Valley community and benefit the public. The proposed project is referenced in the Mission Valley Community Plan (adopted by the City in 2019) and is a long-sought infrastructure enhancement in the Mission Valley community as a means of connecting residents and businesses south of the river to land uses north of the river off Friars Road, including the SDSU Mission Valley development, which was approved by the Trustees of the California State University (CSU) in 2020. SDSU Mission Valley includes Snapdragon Stadium and will include parks, open space, and new residential, commercial, and innovation district uses. The proposed project would facilitate an additional vehicular, bicycle, and pedestrian connection between the businesses and residential areas north and south of the river.

The City considers the proposed project an Essential Public Project (EPP) pursuant to the City's Land Development Code. Several key concepts behind identifying this proposed bridge project as an Essential Public Project from the City's January 4, 2024 letter are summarized below. The full extent of the City's rationale can be found in Appendix A which includes the January 4, 2024 letter in its entirety.

General transportation planning principals and the City's General Plan encourage a grid network of streets to provide accessibility, reduced travel distances, resiliency and to distribute traffic loads. In Mission Valley, steep slopes, the San Diego River, five freeways and the San Diego Trolley tracks have created barriers and limited the opportunities for connectivity within as well as to and from the community. This has resulted in a planned street network that consists of fewer and wider streets and intersections to accommodate the movement of people and goods, which in turn results in less distributed/more concentrated traffic flows, turning many of these streets and intersections into barriers in and of themselves, especially for transit users, cyclists and pedestrians. Given the limited planned north-south street connectivity in Mission Valley, completion of the Fenton Parkway connection is essential to meet the mobility, emergency, utility and equity needs of the community and the City (City of San Diego, January 4, 2024).

Supporting active transportation (walking, biking and transit) mode shifts is an important component of the City's Climate Action Plan (CAP) which aims to achieve net zero greenhouse gas emissions by Year 2035. The CAP targets include resident mode shares of 25% walking, 10% cycling and 15% transit by year 2035. The Fenton Parkway connection is critical to provide a safer and higher quality/lower stress environment for pedestrians and cyclists to help achieve the City's CAP targets, including providing access for Mid-City residents to the San Diego Trolley and the SDSU Mission Valley Campus via the I-15 bikeway (City of San Diego, January 4, 2024). The lack of a connection at Fenton Parkway also greatly increases the amount of out-of-direction vehicular travel within eastern Mission Valley. Out-of-direction travel from inefficient routing significantly contributes to increased greenhouse gas emissions. Reducing out-of-direction travel through improved local connectivity is a crucial step towards mitigating the detrimental effects of greenhouse gas emissions and meeting the City's Climate Action Planning Goals. (City of San Diego, January 4, 2024).

As stated in the City's January 4, 2024 letter, during recurring flooding events in Mission Valley, every street crossing the San Diego River and some roadways adjacent to the river become impassable. The only way to travel across the San Diego River on the east side of Mission Valley during these events is via I-15. Since pedestrians and cyclists cannot use the freeway, they are unable to cross the river during flooding events. The Fenton Parkway Bridge will remedy this issue providing a high-water crossing of the San Diego River that also provides access to the San Diego Trolley, SDSU Mission Valley Development and the Mid City communities via the I-15 Bike Path (City of San Diego, January 4, 2024).

As land uses within Mission Valley have continued to intensify, largely in part due to the presence of the San Diego Trolley and its central location, a growing strain on emergency services has continued. Based on planned growth in Mission Valley, which is expected to increase by 248% between 2012 and 2050 (MVCPU EIR Table 3.4-1, Buildout Summary), the City recommended the Fenton Parkway connection over the San Diego River. The proposed bridge would provide multiple approach route options for emergency response and alternate routes for diverting traffic during emergencies thereby avoiding road closures. This planned connection is particularly important because there are often multiple responders to an incident who need access from different directions to the area (City of San Diego, January 4, 2024). In addition, the project site is within the VHFHSZ as mapped by CAL FIRE and a new access point to protect city-owned land including environmentally sensitive habitats would be beneficial.

As part of the purchase and sale agreement between SDSU and the City for the SDSU Mission Valley site, which was executed in August 2020, SDSU agreed to help fund the planning, design, and construction of the Fenton Parkway Bridge. In furtherance thereof, and pursuant to a memorandum of understanding (MOU) between SDSU and the City and City Ordinance No. O-21564, SDSU has agreed to plan, design, and construct the bridge to City transportation department design standards on behalf of the City. As described in the MOU, SDSU and the City have agreed to work collaboratively on the bridge project; SDSU is responsible for planning, design, environmental review and permitting, and construction of the bridge, in conjunction with City review and input. Additionally, SDSU and the City would share the costs of the project. Once constructed, the City would assume ownership, operation and maintenance obligations for the bridge.

As outlined in the MOU, SDSU is preparing the environmental impact report (EIR) and the Trustees of the CSU will serve as the lead agency under the California Environmental Quality Act (CEQA). The City will serve as a responsible agency under CEQA (see Section 2.7.3, Responsible Agencies). SDSU is also responsible for securing all environmental permits required from state and federal agencies.

1.3 Project Elements

The project would involve construction of a vehicular and pedestrian bridge spanning the San Diego River from north to south (see Figure 2). The design and construction of the approach roadways and bridge would comply with applicable City, County of San Diego, and California Department of Transportation (Caltrans) design standards, as well as American Association of State Highway and Transportation Officials guidelines.

1.3.1 Bridge Design and Mobility Improvements

The proposed design for the bridge is a conventional prestressed concrete girder structure. This bridge design can be accomplished by way of two different construction methods: pre-cast, or cast-in-place. A pre-cast construction method uses bridge components that are manufactured off-site and assembled onsite. For a cast-in-place construction method, concrete is poured and cured in forms onsite to create a structural element in its final position. Both construction methods were analyzed as part of the proposed project and throughout this EIR.

The bridge would be approximately 450 feet long, 58 feet wide, and 7 feet, 6 inches deep, and would consist of up to four spans. The spans would be supported on concrete seat-type abutments in the river embankments at each end and two to three piers within the river channel, each consisting of two to three approximately 20-foot-tall, 6-foot-diameter circular concrete columns.

Each abutment would be supported on eight 4-foot-diameter, cast-in-drilled-hole concrete piles, and each of the columns would be supported on a single 8-foot-diameter cast-in-drilled-hole concrete pile. Piles are currently estimated to be drilled to depths of between 50 and 200 feet below existing grade. Each of the abutments will be protected with energy dissipating riprap that will be buried to allow for post-construction habitat restoration over the riprap. Allowing this habitat restoration will ensure that post construction replanting fosters wildlife use following completion of the bridge.

Standard cobra head light fixtures would be mounted on concrete pedestals behind the bridge barrier. Selected lighting would generally be consistent with local (i.e., Community Plan and San Diego River Park Master Plan) policies concerning installation of LED streetlights with adaptive controls, shielding of fixtures, provision of adequate lighting for pedestrian and cyclists, and protection of biological resources. During final design, the specific types of light poles, arms, and luminaires would be adjusted if necessary to suit aesthetics. Given the sensitive environmental nature of the river below and to ensure consistency with the City's Multi-Habitat Planning Area Land Use Adjacency Guidelines, lighting would be minimized and oriented away from sensitive biological resources as much as possible to reduce light spillover.

The bridge would connect the southern terminus of Fenton Parkway to the northern terminus of Camino Del Rio North/Mission City Parkway. The new bridge would include two 11-foot-wide through-traffic lanes and a 10-foot-wide center lane that would be used for southbound left-turn movements onto Camino Del Rio North. The 10-foot-wide center lane would provide an optional additional traffic lane for flexible use during stadium or emergency events.

Combined bicycle and pedestrian pathways would be installed and raised above the travel lanes on either side of the bridge. The 6.5-foot-wide bike lane would be separated from a 5.5-foot-wide pedestrian path by a 6-inch-wide strip of yellow truncated domes (see Figure 3, Project Site Plan).

1.3.2 Utilities

Existing utilities in the project area include a 96-inch reinforced concrete pipe storm drain on the north side of the proposed bridge and a 54-inch storm drain along the proposed southern terminus of the bridge at Camino Del Rio North, both of which discharge directly into the river. These existing storm drains would require relocation and/or extension during project construction to accommodate storm drain outfalls into the river without impacting the bridge's structural integrity.

The 96-inch reinforced concrete pipe storm drain located near the northern terminus of the bridge would be extended south to accommodate the Fenton Parkway extension and abutments of the proposed bridge. Extension of the existing storm drain would require removal of the existing headwall and construction of a new headwall at the end of the extended 96-inch reinforced concrete pipe storm drain.

The existing 54-inch storm drain located near the southern terminus of the bridge would conflict with the proposed bridge abutment location. As a result, the storm drain would be relocated west of the proposed south bridge abutment. The outlet of the storm drain would require construction of a new headwall with riprap at the outfall for erosion protection and energy dissipation.

The proposed bridge would include 24-inch cells that could accommodate potential future wet utilities. Wet utility extensions through the bridge cells are not part of the proposed project.

1.3.3 Public Right-of-Way Improvements

Implementation of the project would include the following public right-of-way improvements:

Fenton Parkway and River Park Road Intersection

The Fenton Parkway and River Park Road intersection, which is currently under construction, would be expanded to a three-legged configuration with the new bridge approach forming the south leg of the intersection. The intersection would be signalized and include pedestrian crossing features such as high-visibility crosswalks, pedestrian-initiated interval phasing, and crosswalk pedestrian countdown timers. The existing striped bike lanes on Fenton Parkway north of the trolley tracks would be extended to River Park Road; these lanes would lead to ramps connecting the elevated bike lanes on the new bridge.

A three-way signal would be installed at the Fenton Parkway and River Park Road intersection. Coordination with MTS will occur prior to signal installation to ensure safe queuing related to the trolley line.

Mission City Parkway and Camino Del Rio North Intersection

The Mission City Parkway and Camino Del Rio North intersection would be expanded from a three-way signal-controlled intersection under existing conditions to a four-way signal-controlled intersection, with the Fenton Parkway extension on the new bridge forming the new north leg. The existing traffic signal would be modified to include new signal heads for the Fenton Parkway approach, as well as pedestrian crossing features such as high-visibility crosswalks, pedestrian-initiated interval phasing, and crosswalk countdown timers. The center lane on the bridge would lead into a new southbound left-turn lane at Camino Del Rio North, and a new dedicated left-turn lane would be striped on eastbound Camino Del Rio North to allow left turns onto the bridge. The south leg of the intersection would be restriped to include a shared through/right-turn lane in addition to a separate northbound left-turn lane to Camino Del Rio North.

The west leg of the intersection would be re-striped to include a westbound bike lane for approximately 225 feet to connect to the existing bike lane further west. Appropriate connections for bicyclists on Mission City Parkway would be made based on the current facilities on that roadway.

1.3.4 Design Standards and Energy Efficiency

In May 2014, the Trustees broadened sustainable practices to all areas of the CSU. The state also strengthened energy efficiency requirements in the California Green Building Standards Code (Title 24 of the California Code of Regulations). All CSU new construction, remodeling, renovation, and repair projects will be designed with consideration of optimum energy utilization, low lifecycle operating costs, and compliance with all applicable energy codes and regulations. Progress submittals during design are monitored for individual envelope and mechanical system performances. The CSU Mechanical Review Board, established in February 2004, considers proposed building designs for conformance with code and energy efficiency practices (CSU 2018/2019).

As part of CSU's broadened commitment to sustainable practices, also in May 2014, the CSU Board of Trustees adopted the first systemwide Sustainability Policy. In May 2022, the CSU Sustainability Policy was updated to expand on existing sustainability goals (CSU 2022). The Sustainability Policy applies sustainable principles across all areas of university operations, expanding beyond facilities operations and utility management. This expansion was both a reaction to and a catalyst for a changing sustainability landscape within the CSU and higher education in general. The 2022 Sustainability Policy seeks to integrate sustainability into all facets of the CSU, including academics, facilities operations, the built environment, and student life (CSU 2022).

In 2022, the City's 2022 Climate Action Plan was approved and signed into law. The Climate Action Plan establishes a goal of net zero energy use by 2035, committing San Diego to an accelerated trajectory for greenhouse gas reductions (City of San Diego 2022). Strategy 3 of the Climate Action Plan, Mobility and Land Use, identifies City plans and programs intended to support mobility needs in the community. In particular, the City is looking to prioritize infrastructure projects that support sustainable mode choices, including walking, bicycling, ride-sharing, and public transit use. Additional City goals and policies intended to enhance sustainability and mobility initiatives are outlined in the Mobility Element of the City's General Plan. Specific measures include conducting Corridor Mobility Studies, which offer recommendations for multimodal street design and improvements for existing roadways (City of San Diego 2015).

The SDSU CAP was adopted in May 2017 to provide goals and strategies to achieve carbon neutrality and improve sustainability efforts campus wide. The CAP includes results of a baseline emissions inventory that summarizes GHG emissions from campus operations in 2015 and projected emissions to future years to inform development of appropriate reduction strategies. While the SDSU CAP does include goals and strategies that would result in a reduction of GHG emissions at the proposed project site, the SDSU CAP is not considered qualified per CEQA Guidelines Section 15183.5. Additionally, the CAP was prepared with focus on the SDSU main campus location in the College Area of the City of San Diego. Therefore, inclusion of this plan is for informational purposes only.

1.4 Project Construction and Phasing

The construction method used (pre-cast or cast-in-place) would occur in two phases, site preparation and bridge construction. Site preparation and bridge construction activities are generally the same for both construction methods except as described herein.

1.4.1 Phase 1 – Site Preparation

Prior to the commencement of construction activities, the project site would be surveyed and fenced, followed by clearing and grubbing of the construction disturbance area. Any necessary stormwater best management practices or temporary fencing or catchment dams to establish bridge pier work areas will be established during this initial site preparation phase. No vegetation clearing, removal, and/or disturbance would occur outside of the bridge impact boundaries shown in Figure 2. Phase 1 is estimated to occur over a period of 3 weeks for both the pre-cast and the cast-in-place construction methods. Construction equipment for Phase 1 would include a bulldozer, scraper, grader, excavator, loader, water truck, rock trucks, and dump trucks.

1.4.2 Phase 2 – Bridge Construction

Following the necessary underground soil improvement and construction of fill slopes involving approximately 15,000 cubic yards of imported fill, the bridge abutment footings would be excavated from the embankments to install deep cast-in-drilled-hole concrete piles. This excavation may require temporary shoring along Camino Del Rio North. Larger cast-in-drilled-hole piles would also be installed at each of the bridge column locations. Excavation of approximately 4,000 cubic yards of soil would be required for bridge abutment footings, piers, riprap, and utility relocations. Groundwater dewatering may also be necessary given the very high water table. Groundwater dewatering, if necessary, would be done in compliance with NPDES regulations and would require a groundwater discharge permit through the City of San Diego. The maximum depth of remedial grading excavation is anticipated to extend to approximately 5 feet above measured groundwater levels. Following the deep pile foundation installation, concrete bridge abutments and columns would be formed and poured, along with a large concrete retaining wall extending about 100 feet northward from the bridge along the west side of the roadway.

Bridge superstructure construction would follow and would involve either casting concrete pumped into forms supported on temporary falsework supports for the cast in- place construction method or lifting precast concrete girders into position atop the columns_for the pre-cast construction method. In either case, the bridge deck would then be cast in place and finished to the correct profile. Concrete sidewalks, barriers, lights, and metal railings would then be installed along the length of the bridge. Once access to the river channel is no longer required for construction activities, riprap would be installed around each abutment for erosion protection and energy dissipation. Once the riprap is buried, the riverbed would be recontoured to mirror existing conditions. Additionally, areas where native vegetation would be removed during Phase 1 of the project would be reseeded or replanted with appropriate native plant species in accordance with the Conceptual Restoration Plan. These restored areas would be monitored consistent with City's Stadium Wetland Mitigation Site and resource agency permit requirements to ensure success.

For both the pre-cast and cast-in-place construction method, Phase 2 is estimated to require a construction period of up to 57 weeks (and would require a total of approximately 300 construction personnel across the duration of construction activities.

1.4.3 Hours of Construction

In general, construction activities would be limited to between 7:00 a.m. and 7:00 p.m. Monday through Saturday, which would be consistent with the provisions of the City's noise ordinance. However, limited nighttime and Sunday work may be required.

1.4.4 Construction Laydown and Staging Areas

Project construction laydown and staging areas would be located either south of the proposed bridge, on the City-owned undeveloped property east of Mission City Parkway and west of Camino Del Rio North, and/or within the City-owned land west of the proposed bridge and the SDSU-operated park space south of River Park Road (see Figure 2).

1.4.5 Anticipated Road Closures and Traffic Control Measures

It is not anticipated that any road closures would be necessary for the construction of the bridge. Existing travel lanes on Camino Del Rio North may be shifted or narrowed to accommodate bridge construction and replacement/relocation of traffic signal poles, curbs, gutters, and sidewalks. The majority of construction activity would occur outside of existing roadways. However, targeted lane closures to complete the traffic signal and striping adjustments at Camino Del Rio North at Mission City Parkway are anticipated. Temporary traffic control measures (e.g., lane closures, signage) would be provided during such closures, as well as around identified construction laydown/staging areas.

1.5 Project Maintenance

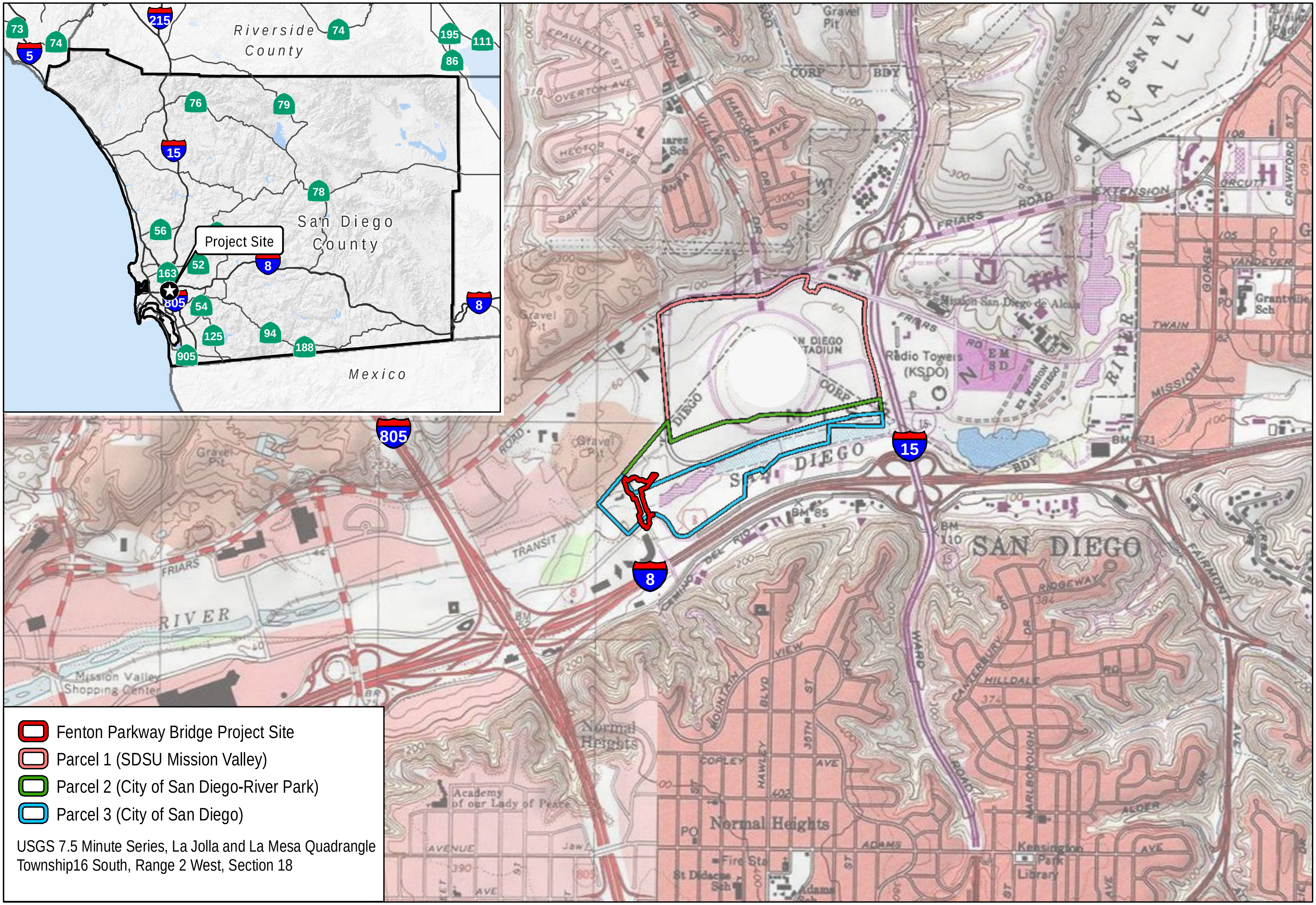
Once operational, the City would engage in routine street sweeping and debris removal. The City would also maintain streetlights and roadway striping and ensure that all signage is maintained. Like all bridges owned and maintained by the City of San Diego, once constructed, the bridge would be added to the City's operations and maintenance schedule which would include periodic inspection, potential improvements and long-term structural monitoring.

1.6 Project Goals and Objectives

The underlying purpose of the project is to meet the needs of the communities north and south of the river by improving local and regional connectivity. These objectives are informed by and reflect the City's vision for a Fenton Parkway crossing described in the Mission Valley Community Plan Update (adopted September 2019), with the exception that the proposed project involves a three-lane road compared to a four-lane road as envisioned in the MVCPU. It should also be noted that per the City of San Diego's Land Development Code (LDC) (Section 143.0150(d)(1)(B)(iii)) the project is considered to be an Essential Public Project (EPP). The objectives of the project are as follows:

- Construct a multi-modal bridge over the San Diego River to improve north–south mobility in eastern Mission Valley by connecting the existing street network between I-805 and I-15.
- Provide accessible pedestrian and bicycle infrastructure that connects the communities south of the river to public open space and local and regional trail networks north of the river.

- Improve direct connectivity between residential neighborhoods and commercial office centers south of the river and residential, commercial, institutional, and public park lands and recreational amenities north of the river.
- Provide a high-water crossing in eastern Mission Valley.
- Improve emergency access between the communities north and south of the river in the eastern portion of the Mission Valley community, in support of San Diego Fire Department Station 45.
- Support multimodal transit by providing infrastructure to facilitate increased rider access to the MTS Trolley Green Line and the Fenton Parkway and Stadium Stations, for riders south of the river.
- Minimize temporary and permanent impacts to natural resources (shading, wildlife movement, native plant regrowth, etc.) consistent with the San Diego River Park Master Plan bridge design guidelines.
- Construct the bridge in a manner that minimizes temporary and permanent impacts to sensitive biological resources within the City's Stadium Wetland Mitigation Site.
- Minimize impacts to natural topography and sensitive biological resources.



SOURCE: USGS; BOWMAN/PDC 5/08/2023

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0 500 1,000 Feet

FIGURE 1
Project Location
Fenton Parkway Bridge Project

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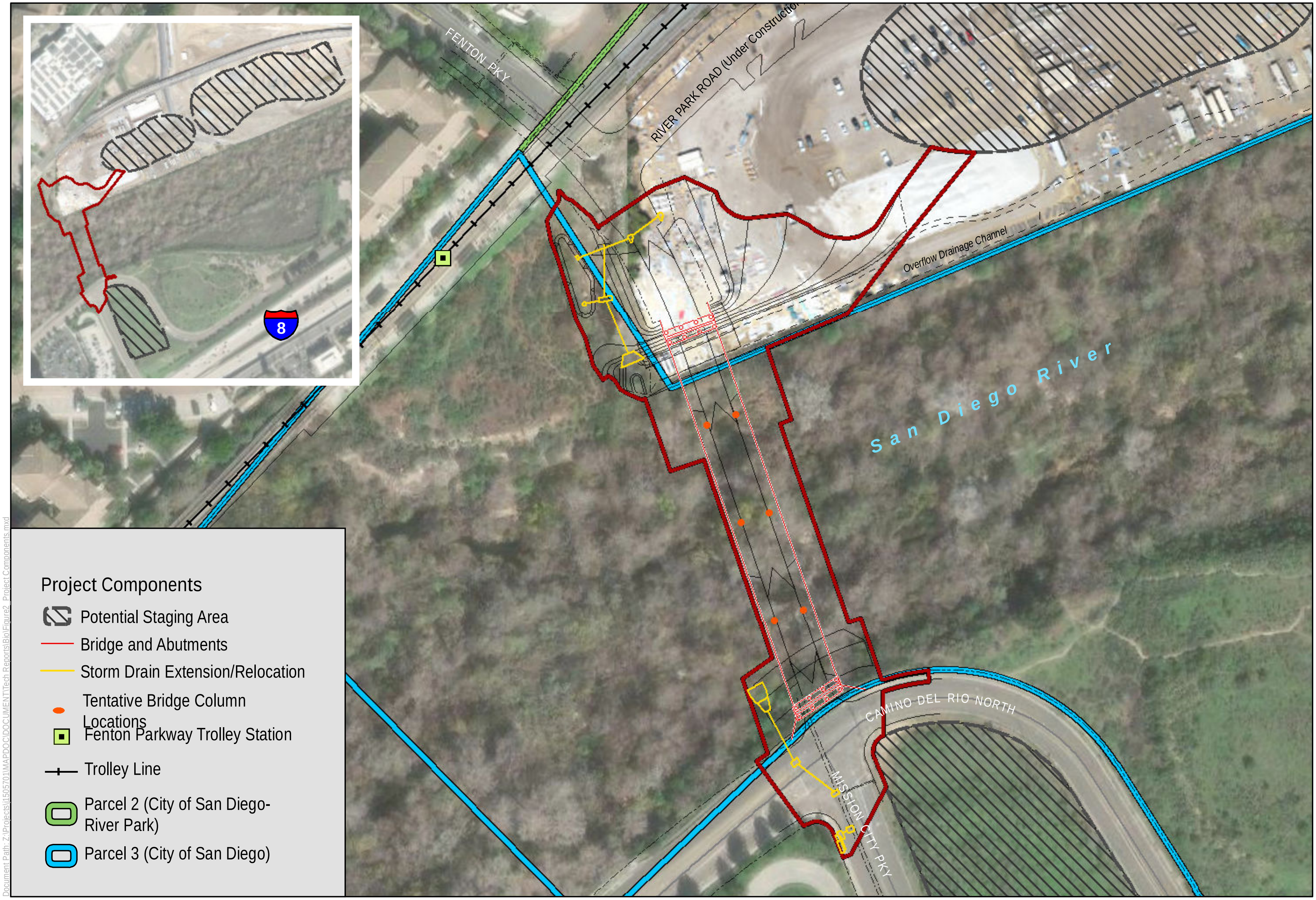

SOURCE: AERIAL-ESRI IMAGERY SERVICE; KLEINFELDER 2/8/2023
DEVELOPMENT-BOWMAN/PDC 5/08/2023; PARCELS-BOWMAN/PDC 3/27/2023

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0 150 300 Feet

FIGURE 2
Proposed Project Components

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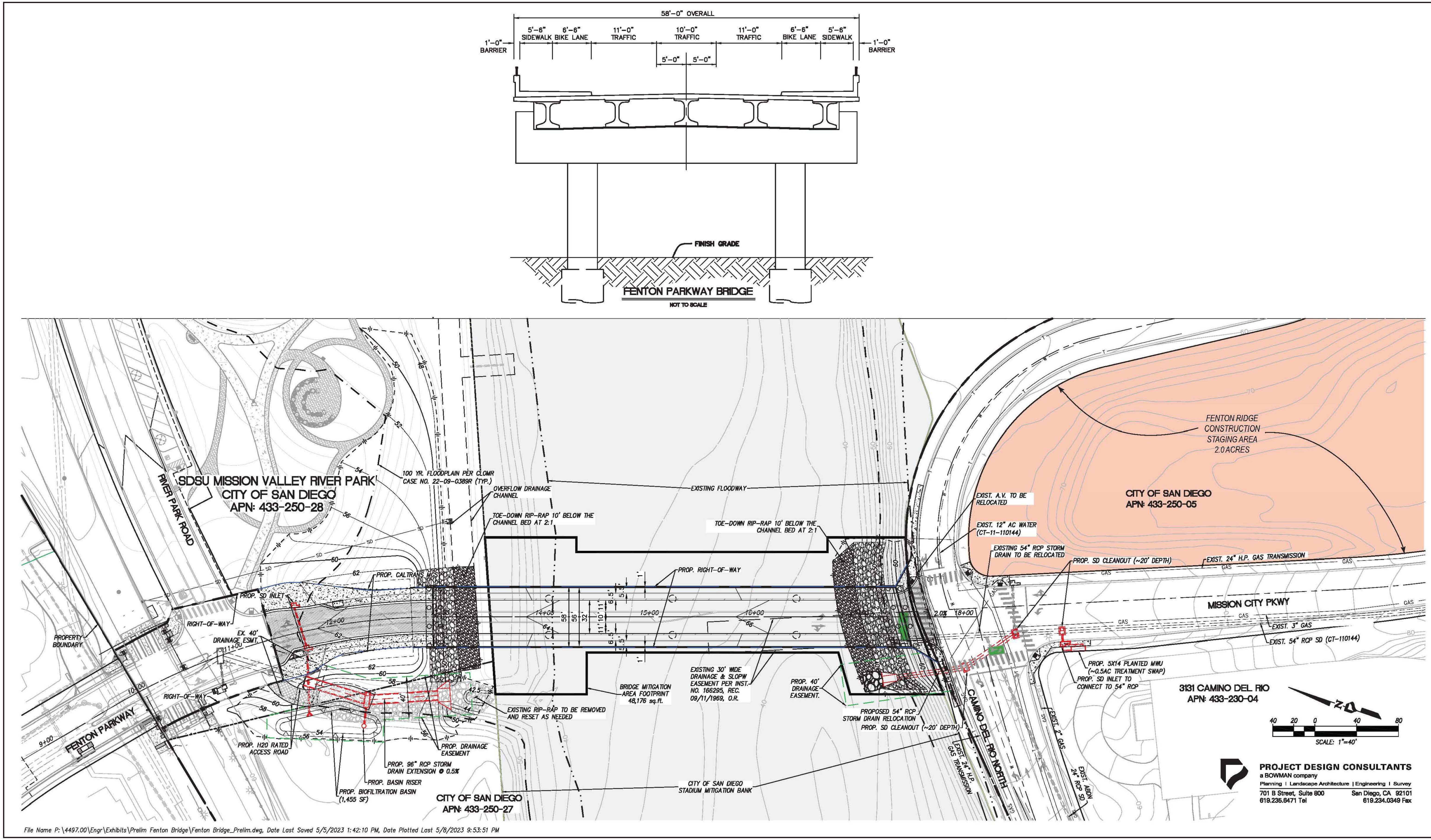

SOURCE: BOWMAN/PDC 5/08/2023

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FIGURE 3
Project Site Plan
SDSU Fenton Parkway Bridge Project

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2 Environmental Setting

Due to the technical nature of noise and vibration impact assessment, a brief overview of basic noise principles and descriptors is provided below, as well as a summary of the existing noise environment.

2.1 Noise and Vibration Basics

2.1.1 Sound

Noise is defined as unwanted sound. Sound may be described in terms of level or amplitude (measured in decibels [dB]), frequency or pitch (measured in hertz or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The dBA scale performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear. Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise, on a community. These descriptors include the equivalent noise level over a given period (L_{eq}), the statistical sound level, the day–night average noise level (L_{dn}), and the Community Noise Equivalent Level (CNEL). Each of these descriptors uses units of dBA. Table 1 provides examples of A-weighted noise levels from common sounds. In general, human sound perception is such that a change in sound level of 3 dBA is barely noticeable, a change of 5 dBA is clearly noticeable, and a change of 10 dBA is perceived as doubling or halving the sound level.

Table 1. Typical Exterior and Interior Sound Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
—	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kilometers per hour (50 mph)	80	Food blender at 1 meter (3 feet)
		Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime	70	Vacuum cleaner at 3 meters (10 feet)
gas lawn mower at 30 meters (100 feet)		
Commercial area	60	Normal speech at 1 meter (3 feet)
Heavy traffic at 90 meters (300 feet)		
Quiet urban daytime	50	Large business office
		Dishwasher, next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night, concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013.
Note: dBA = A-weighted decibel.

The L_{eq} value is a sound level energy-averaged over a specified period (typically no less than 15 minutes for environmental studies). It is a single numerical value that, if constant over time, represents the same amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L_{eq} measurement would represent the average amount of energy contained in all the noise that occurred in that hour. The L_{eq} value is thus an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors.

Unlike the L_{eq} metric that can be defined for any duration, L_{dn} and CNEL descriptors always represent 24-hour periods, often on an annualized basis. The L_{dn} and CNEL values also differ from L_{eq} because they apply a time-weighted dB adjustment designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). “Time weighted” refers to the fact that L_{dn} and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m.–7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m.–10:00 p.m.) is penalized by adding 5 dB, while nighttime (10:00 p.m.–7:00 a.m.) noise is penalized by adding 10 dB. L_{dn} differs from CNEL in that the daytime period is defined as 7:00 a.m.–10:00 p.m., thus eliminating the evening period. L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 dB to 1 dB and, as such, are often treated as equivalent to one another.

2.1.2 Vibration

Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as blasting, pile driving, and heavy earthmoving equipment.

Several different methods are used to quantify vibration. Peak particle velocity (PPV), expressed in inches per second (ips), is defined as the maximum instantaneous peak of the vibration signal and is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body and is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to describe this RMS magnitude with respect to a reference value, which acts to compress the range of numbers required to discuss vibration in the context of impact assessment.

The calculation to determine PPV at a given distance is as follows:

$$PPV_{rcvr} = PPV_{ref} * (25/D)^n$$

Where:

PPV_{rcvr} = the peak particle velocity in inches per second of the equipment adjusted for distance (i.e., at the receiver)

PPV_{ref} = the reference vibration level in inches per second at 25 feet

D = the distance from the equipment to the receiver

n = an exponent, for which a value of 1.1 would be consistent with Caltrans suggestion for class III "hard soils" composed of dense compacted sand or dry consolidated clay.

The above PPV_{rcvr} value can be converted to an RMS vibration velocity level as follows, where the crest factor (CF) is assumed to be a value of 4 per FTA guidance (FTA 2018):

$$VdB_{rcvr} = 20*LOG(PPV_{rcvr}/(CF*0.000001))$$

2.1.3 Sensitive Receptors

Noise- and vibration-sensitive land uses are typically locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would be considered noise and vibration sensitive and may warrant unique measures for protection from intruding noise. Existing sensitive receptors in the vicinity of the project site consist of residential uses (Del Rio Apartments) located to the northwest of the project site and the MSCP-covered wildlife species directly adjacent to the site. At such residentially-zoned land uses, the City's construction noise standard (75 dBA L_{eq} over a 12-hour period) uniquely applies; and, the City's non-construction exterior noise level thresholds are the most stringent. Hence, these nearby residential sensitive receptors represent those studied herein and have the greatest potential to be impacted by construction and/or operation of the project. For MSCP-covered avian breeding areas, the City noise standard of 60 dBA L_{eq} (hourly) applies.

While the project site is surrounded by other land uses, such as offices, a library, and retail/commercial properties, they do not have the same noise sensitivity as residentially-zoned spaces, at which above-mentioned City construction noise limits and the most stringent non-construction exterior noise thresholds (as adopted by CSU) would apply. Additionally, because project noise emission attenuates naturally as it propagates away from sound sources, offsite receptors that are more distant from the nearest noise-sensitive residences would be exposed to lower project-attributed noise levels, and commercial land uses have less stringent noise thresholds. For these reasons, project noise exposures found to be compliant with City standards (with or without application of noise reduction measures) at the nearest residences studied herein would support a logical inference that compliance could thus also be expected at more distant offsite receptors and where such receptors have higher noise thresholds for compliance and impact significance assessment.

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3 Existing Conditions

The project site is located within the Mission Valley Community Plan area in the City of San Diego (City of San Diego 2013). The Mission Valley Community Plan area comprises approximately 2,418 acres, which includes a variety of residential, retail, commercial, transportation, and open space land uses.

The project site is located within the U.S. Geological Survey 7.5-minute La Jolla quadrangle in Township 16 South, Range 2 West (Figure 1). The surrounding quadrangles include, Point Loma, National City, La Mesa, Poway, and Del Mar. The approximate centroid of the project site is -117°7'33.87 W, 32°46'39.25″N.

3.1 Existing Environmental Setting

The project site is situated south of Fenton Parkway and the Fenton Marketplace and north of Camino Del Rio North and would connect these two roadways. The San Diego River bisects the project site from east to west. Surrounding uses include commercial and residential uses to the north, the SDSU Mission Valley development (including Snapdragon Stadium) to the northeast, office and healthcare uses to the south, and open space, including the San Diego River. The bridge would traverse and be adjacent to the City's MHPA as well as the City's Stadium Mitigation Site.

The elevation ranges from approximately 35 feet above mean sea level to 300 feet above mean sea level. The project site is comprised of developed areas, disturbed habitat, and native habitat. The project site includes the lower floodplain of the San Diego River, developed areas associated with the SDSU Mission Valley site development, Camino del Rio North, and an undeveloped area south of Camino del Rio North.

3.1.1 Existing Noise Conditions

Sound pressure level measurements were conducted at six (6) representative positions in the vicinity of the Project site on February 9, 2023 to characterize and quantify samples of the existing outdoor ambient noise environment. The noise measurement locations are shown in Figure 4. Table 2 provides a summary of the noise measurement results as well as the site tag, noted noise sources, and times the noise level measurements were conducted. As shown in Table 2, short-term (up to 14-minutes in duration) noise levels ranged from approximately 48 dBA L_{eq} (at location D) to 76 dBA L_{eq} (at location E). The measurements were conducted by an attending Dudek investigator using a SoftdB Piccolo II model SLM equipped with a 0.5-inch wind-screened microphone. The Piccolo II meets the current ANSI standard for a Type 2 (General Grade) instrument. The accuracy of the Piccolo II was verified using a field calibrator before and after the SPL measurements, and the measurements were conducted with microphone positioned approximately 5 feet above the ground, as shown in photographs appearing in Appendix A.

The measured samples of daytime L_{eq} agree with expectations based on proximity to the I-15 and I-8 freeways: values tend to decrease with distance from these major acoustical contributors to the sound environment, until noise from localized sources (i.e., local roadway traffic, construction activities, etc.) exhibits greater influence on the measured outdoor ambient sound level. The elevation of the freeways (relative to the ground surface) and their connecting ramps at the interchange, and the potential sound-intervening presence of natural and man-made terrain (e.g., commercial buildings) also influence the measured outdoor SPL.

Table 2. Measured Outdoor Ambient Noise Levels on February 9, 2023

Site Tag	Start and End Times (hh:mm)	Sound Level Metrics (dBA)			Statistical Levels (dBA)			Observation Notes (regarding sound sources)
		L_{eq}	L_{max}	L_{min}	L_{10}	L_{50}	L_{90}	
A	10:22 to 10:36 a.m.	55.0	67.3	51.0	55.4	54.2	53.3	Fire alarm activated at Snapdragon Stadium; trolley pass-by.
B	10:53 a.m.	52.4	58.1	48.7	56.0	51.4	48.8	
B	10:56 a.m.	51.6	66.6	49.2	62.6	54.0	49.4	
C	10:39 to 10:54 a.m.	51.3	56.5	48.0	51.7	51.0	50.4	Fire alarm still active at Snapdragon Stadium; trolley pass-by.
D	11:03 a.m.	48.1	48.7	47.6	48.5	48.0	47.7	
E	11:23 a.m.	60.0	65.1	57.9	63.8	60.1	58.6	
E	11:24 a.m.	76.4	79.1	68.0	78.7	76.7	68.4	
F	12:40 to 12:50 p.m.	63.9	78.7	54.3	63.7	61.8	60.4	Cars through Camino Del Rio/Mission City Pkwy intersection "constantly"

Source: Dudek 2023; Appendix A.
Notes: L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; L_{min} = minimum sound level during the measurement interval; L_{90} = sound level exceeded for a cumulative 90% of the measurement period; L_{50} = sound level exceeded for a cumulative 50% of the measurement period; L_{10} = sound level exceeded for a cumulative 10% of the measurement period; dBA = A-weighted decibels.

Appendix A provides sample digital photographs of the field noise level survey locations and measurement data.

SOURCE: Google 2023; Dudek 2023

DUDEK

0 198 396 Feet

FIGURE 4

Outdoor Ambient Sound Level Survey Locations

SDSU Fenton Parkway Bridge Project

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4 Regulatory Setting

The following subsections summarize relevant laws, ordinances, regulations, policies, standards, and guidance that establish noise and vibration impact significance assessment criteria for the proposed project.

4.1 Federal

4.1.1 Federal Transit Administration

In its Transit Noise and Vibration Impact Assessment guidance manual, the FTA recommends a daytime construction noise level threshold of 80 dBA L_{eq} over an 8-hour period (FTA 2018) when detailed construction noise assessments are performed to evaluate potential impacts to community residences surrounding a project. For receiving commercial land uses, the suggested threshold is 85 dBA 8-hour L_{eq} at any time of day or night. Although this FTA guidance is not a regulation, it can serve as a quantified standard in the absence of such noise limits at the state and local jurisdictional levels.

4.1.2 Federal Interagency Committee on Noise

Guidance regarding the determination of a substantial permanent increase in ambient noise levels in the project vicinity above existing levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON 1992), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a qualitative measure of the adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment.

The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of L_{dn}. This day-night sound level (L_{dn}) is comparable to the afore-described CNEL value but considers the 7:00 p.m. to 10:00 p.m. hours as daytime and thus not subject to the +5 dB "evening" penalty that the CNEL value derivation applies. The changes in noise exposure that are shown below are expected to result in equal changes in annoyance at sensitive land uses. Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis to define a substantial increase in community noise levels related to all transportation noise sources and permanent non-transportation noise sources.

- Outdoor ambient sound level without the project is less than 60 dBA L_{dn}, then a project-attributed increase of 5 dBA or more would be considered significant;
- Outdoor ambient sound level without the project is between 60 and 65 dBA L_{dn}, project-attributed increase of 3 dBA or more would be considered significant; and
- Outdoor ambient sound level without the project is greater than 65 dBA L_{dn}, then project-attributed increase of 2 dBA or more would be considered significant.

4.2 State

In its *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020), the California Department of Transportation (Caltrans) recommends 0.5 ips PPV as a threshold for the avoidance of structural damage to typical newer residential buildings exposed to continuous or frequent intermittent sources of groundborne vibration. For transient vibration events, such as blasting, the damage risk threshold would be 1.0 ips PPV (Caltrans 2020) at the same type of newer residential structures. For older structures, these guidance thresholds would be more stringent: 0.3 ips PPV for continuous/intermittent vibration sources, and 0.5 ips PPV for transient vibration events. With respect to human annoyance, Caltrans guidance indicates that building occupants exposed to continuous groundborne vibration in the range of 0.1 ips PPV ("strongly perceptible") to 0.4 ips PPV ("severe") would find it "annoying" at 0.2 ips PPV and "unpleasant" at the 0.4 ips PPV value. Although these Caltrans guidance thresholds are not regulations, they can serve as quantified standards in the absence of such limits at the local jurisdictional level.

4.3 Local

4.3.1 Noise Ordinance

Because SDSU is a component of the California State University, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, SDSU has considered the following planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to federal and state agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, City municipal zoning code, or Significance Determination Thresholds.

The following are summarized portions or reproductions of relevant City of San Diego noise regulations, policies, and guidance, as adopted by CSU, with respect to assessing noise impact assessment for the proposed project.

City of San Diego Municipal Code 59.5.0404 (Noise Ordinance), Construction Noise

(a) It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator. In granting such permit, the Administrator shall consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; whether proposed night work is in the general public interest; and he shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise levels as he deems to be required in the public interest.

(b) Except as provided in subsection C. hereof, it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.

(c) The provisions of subsection B. of this section shall not apply to construction equipment used in connection with emergency work, provided the Administrator is notified within 48 hours after commencement of work.

Although the City Noise Ordinance does express limits with respect to property noise emission to the community, the project—a proposed bridge that will not feature substantial stationary emitters of noise—introduces a new surface transportation route under which different assessment criteria apply.

City of San Diego Municipal Code: Land Use Development Code – Biology Guidelines

The City's Biology Guidelines define thresholds for MSCP breeding species as follows:

> "Noise mitigation… may be required for significant noise impacts to certain avian species during their breeding season depending upon the location of the slope (such as adjacent to an MHPA) and what birds may be present in the area such as the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird, western snowy plover, or burrowing owl. If these avian species (except for the California gnatcatcher) are present, then mitigation will be required if construction or operational noise levels would exceed 60 dbA, or the existing ambient noise level if already above 60dB(A) during the breeding season. For California gnatcatcher habitat within the MHPA and occupied, construction or operational noise levels exceeding 60 dBA (or exceeding the existing ambient noise level if already above 60 dB(A)) during the breeding season is considered significant. There are no restrictions for the gnatcatcher outside the MHPA anytime of the year."

4.3.2 General Plan

The City's General Plan Noise Element identifies compatible exterior noise levels for various land use types (City of San Diego 2015). The maximum allowable noise exposure varies depending on the land use. The maximum acceptable exterior noise level for residential uses and other noise-sensitive uses (including kindergarten through 12th grade schools, libraries, hospitals, daycare facilities, hotels, motels) is 65 dBA CNEL. Table 3 reproduces Table NE-3 from the City's General Plan Noise Element.

Table 3. City of San Diego Land Use – Noise Compatibility Guidelines

Land Use Category	Exterior Noise Exposure (dBA CNEL)				
	55–60	60--65	65–70	70–75	75–80
Parks and Recreational					
Parks, Active and Passive Recreation					
Outdoor Spectator Sports, Golf Courses; Water Recreational Facilities; Indoor Recreation Facilities					
Agricultural					
Crop Raising and Farming; Community Gardens, Aquaculture, Dairies; Horticulture Nurseries and Greenhouses; Animal Raising, Maintain and Keeping; Commercial Stables					
Residential					
Single Dwelling Units; Mobile Homes		45			
Multiple Dwelling Units*		45	45*		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12Educational Facilities; Libraries; Museums; Child Care Facilities		45			
Other Educational Facilities including Vocational/Trade Schools and Colleges and Universities		45	45		
Cemeteries					
Retail Sales					
Building Supplies/Equipment; Food, Beverages and Groceries; Pets and Pet Supplies; Sundries, Pharmaceutical, and Convenience Sales; Wearing Apparel and Accessories			50	50	
Commercial Services					
Building Services; Business Support; Eating and Drinking; Financial Institutions; Maintenance and Repair; Personal Services; Assembly and Entertainment (includes public and religious assembly); Radio and Television Studios; Golf Course Support			50	50	
Visitor Accommodations		45	45	45	
Offices					
Business and Professional; Government; Medical, Dental and Health Practitioner; Regional and Corporate Headquarters			50	50	
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair and Maintenance; Commercial or Personal Vehicle Sales and Rentals; Vehicle Equipment and Supplies Sales and Rentals; Vehicle Parking					
Wholesale, Distribution, Storage Use Category					
Equipment and Materials Storage Yards; Moving and Storage Facilities; Warehouse; Wholesale Distribution					

Table 3. City of San Diego Land Use – Noise Compatibility Guidelines

Land Use Category	Exterior Noise Exposure (dBA CNEL)				
	55–60	60--65	65–70	70–75	75–80
Industrial					
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking and Transportation Terminals; Mining and Extractive Industries					
Research and Development				50	

Table Shading Key			
	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 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 of San Diego 2015.
* For uses affected by aircraft noise, refer to General Plan Noise Element Policies NE-D.2 and NE-D.3.

The City's General Plan Noise Element also lists the following policies with respect to noise and land use compatibility.

- 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.
- 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 2) to minimize the effects on noise-sensitive land uses.
- NE-A.3. Limit future residential and other noise-sensitive land uses in areas exposed to high levels of noise.
- 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 2), so that noise mitigation measures can be included in the project design to meet the noise guidelines.
- 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.

4.3.3 City CEQA Significance Determination Thresholds

The City's CEQA Significance Determine Thresholds address noise and vibration under different sections as follows:

- Section II.C – Step 2, note (e) has language similar to the afore-mentioned Biology Guidelines described in Section 4.3.1 and states:

  "Noise mitigation, however may be required for significant noise impacts to certain avian species during their breeding season depending upon the location of the slope (such as adjacent to an MHPA) and what birds may be present in the area such as the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird, or western snowy plover. If these avian species (except for the California gnatcatcher) are present, then mitigation will be required if construction or operational noise levels would exceed 60 dB(A), or the existing ambient noise level if already above 60dB(A) during the breeding season. For California gnatcatcher habitat within the MHPA and occupied, construction or operational noise levels exceeding 60 dB(A) (or exceeding the existing ambient noise level if already above 60 dB(A)) during the breeding season is considered significant. There are no restrictions for the gnatcatcher outside the MHPA anytime of the year."

- Section II.K – Significance Threshold 1 describes interior and exterior noise impact thresholds from traffic generated noise as appearing in Table 4, reproduced from Table K-2 in the City's CEQA Significance Determination Thresholds document.

Table 4. Traffic Noise Significance Thresholds

Structure or Proposed Use that would be impacted by Traffic Noise	Interior Space	Exterior Useable Space [A]	General Indication of Potential Significance
Single-family detached	45 dB	65 dB	Structure or outdoor useable area [B] is < 50 feet from the center of the closest (outside) lane on a street with existing or future ADTs >7500 [C]
Multi-family, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes	Development Services Department (DSD) ensures 45 dB pursuant to Title 24		
Offices, Churches, Business, Professional Uses	n/a	70 dB	Structure or outdoor usable area is < 50 feet from the center of the closest lane on a street with existing or future ADTs > 20,000
Commercial, Retail, Industrial, Outdoor Spectator Sports Uses	n/a	75 dB	Structure or outdoor usable area is < 50 feet from the center of the closest lane on a street with existing or future ADTs > 40,000

Source: City of San Diego 2020.
Notes: dBA = A-weighted decibel; n/a = not applicable; ADT = average daily traffic.
A If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3 dB increase, then the impact is not considered significant.
B Exterior usable areas do not include residential front yards or balconies, unless the areas such as balconies are part of the required usable open space calculation for multi-family units.
C Traffic counts are available from San Diego Regional Association of Governments (SANDAG) Traffic Forecast Information Center (TFIC).

- Section II.K.5 – states with respect to impacts to sensitive wildlife:

  "Noise mitigation may be required for significant noise impacts to certain avian species during their season, depending upon the location of the project such as in or adjacent to an MHPA, whether or not the project is occupied by the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird or western snowy plover, and whether or not noise levels from the project, including construction during the breeding season of these species would exceed 60dB(A) or existing ambient noise level if above 60dB(A). In addition, please note that significant noise impacts to the California gnatcatcher are only analyzed if the project is within an MHPA; there are no restrictions for the gnatcatcher outside the MHPA any time of year."

- Section II.K.6 – states with respect to construction noise:

  "Temporary construction noise which exceeds 75 dB (A) L_{eq} at a sensitive receptor would be considered significant. 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- decibels (dB) during the 12-hour period from 7:00 a.m. to 7:00 p.m. In addition, construction activity is prohibited between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, that would create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator, in conformance with San Diego Municipal Code Section 59.5.0404.

  Additionally, where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as day care facilities, a significant noise impact may be identified."

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5 Thresholds of Significance

The following significance criteria are based on Appendix G of the California Environmental Quality Act Guidelines (14 CCR 15000 et seq.) and will be used to determine the significance of potential noise impacts. Impacts to noise would be significant if the proposed project would result in the following:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
b. Generation of excessive groundborne vibration or groundborne noise levels
c. Expose people residing or working in the project area to excessive noise levels (for a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport)

In light of these above significance criteria, this analysis uses the following standards to evaluate potential noise and vibration impacts.

- **Construction noise** – For purposes of this assessment, SDSU has adopted the City's construction noise threshold of not exceeding 75 dBA for a twelve-hour period, between 7:00 a.m. and 7:00 p.m., when received at any property zoned as residential. For MSCP avian breeding impacts, a 60 dBA hourly L_{eq} threshold is adopted per the City's Biology Guidelines.
- **Off-site Project-attributed transportation noise** – For purposes for this analysis, and consistent with Table 4, a direct roadway noise impact would be considered significant if increases in roadway traffic noise levels attributed to the proposed project were greater than 3 dBA CNEL at an existing noise-sensitive land use. An increase or decrease in noise level of at least 3 dB is required before any noticeable change in community response would be expected (Caltrans 2013).
- **Construction vibration** – Guidance from Caltrans indicates that a vibration velocity level of 0.2 ips PPV received at a structure would be considered annoying by occupants within (Caltrans 2020). As for the receiving structure itself, aforementioned Caltrans guidance from Section 2 recommends that a vibration level of 0.3 ips PPV would represent the threshold for building damage risk of older residential structures exposed to continuous or frequently intermittent sources of groundborne vibration.

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6 Impact Analysis

a) ***Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***

6.1 Short-Term Construction Noise

Construction noise and vibration are temporary phenomena, varying from hour to hour and day to day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. Equipment that would be in use during construction would include, in part, graders, scrapers, backhoes, rubber-tired dozers, loaders, cranes, forklifts, cement mixers, pavers, rollers, and air compressors. The typical maximum noise levels for various pieces of construction equipment at a distance of 50 feet are presented in Table 5. Usually, construction equipment operates in alternating cycles of full power and low power, which the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's Guide (FHWA 2006) characterizes as "acoustical usage factor" (AUF) and thereby produces energy-average noise levels over time (L_{eq}) that are less than the listed maximum noise level (L_{max}). The average sound level of construction activity also depends on the amount of time that the equipment actually operates onsite.

Table 5. Typical Construction Equipment Maximum Noise Levels

FHWA RCNM Equipment Type	Acoustical Usage Factor (%)	Typical Equipment L_{max} (dBA at 50 Feet)	Typical Equipment L_{eq} (dBA at 50 Feet)
all other equipment > 5 HP	50	85	82
backhoe	40	78	74
compressor (air)	40	78	74
concrete mixer truck	40	79	75
crane	16	81	73
dozer	40	82	78
generator	50	72	69
grader	40	85	81
man lift	20	75	68
paver	50	77	74
roller	20	80	73
scraper	40	84	80
welder / torch	40	73	69

Source: FHWA 2006.
Note: L_{max} = maximum sound level; where L_{eq} = energy-equivalent sound level and can be calculated here with $L_{eq} = L_{max} + 10*LOG(AUF)$; dBA = A-weighted decibels.

As described in Section 1.2, the project would involve construction of a vehicular and bicycle/pedestrian bridge spanning the San Diego River from north to south, connecting Fenton Parkway and Camino Del Rio North. In addition to bridge infrastructure, construction would also include roadway expansion and other offsite improvements.

For the purposes of this analysis, two potential construction methods were evaluated: Cast-in-Place (CIP) and Pre-Cast. Conceptual schedules were developed based on available information provided by the project engineers, typical construction practices, and CalEEMod default assumptions. Construction phasing is intended to represent a schedule of anticipated activities for use in estimating potential project-generated construction emissions.

6.1.1 Cast-in-Place Bridge Construction Method Analysis

The CIP Bridge Construction method would take approximately 60 weeks of active construction. The project was assumed to require the following construction phases, with likely overlaps provided by project engineers (durations are approximate):

- General Construction: 60 weeks
- ESA Fencing, Clearing, Grubbing, and Mobilization: 3 weeks
- CIDH Piles (Pier 2,3): 4 weeks
- Ground Improvements (Abut 1): 3 weeks
- Column Form, Rebar, Pour (Pier 2,3): 4 weeks
- Embankment Grading (Abut 1): 1 week
- Excavation (Abut 1): 1 week
- Ground Improvements (Abut 4): 3 weeks
- Embankment Grading (Abut 4): 1 week
- Excavation (Abut 4): 1 week
- CIDH Piles (Abut 1, 4): 9 weeks
- Form, Rebar, Pour (Abut 1 & 4, Footing, Stem, Walls): 13 weeks
- Erect Falsework: 8 weeks
- Form, Rebar, Pour (Soffit, Stems, Deck): 23 weeks
- Cure Deck, Stress Bridge, Strip Falsework: 7 weeks
- Riprap (Abut 1 & 5): 4 weeks
- Sidewalk Barrier Installation and Deck Grind: 3 weeks

Cast-in-Place Off-site Improvements

- Grubbing and Land Clearing: 1 week
- Grading and Excavation: 2.5 weeks
- Drainage, Utilities, and Sub-Grade: 2 weeks
- Paving: 1 week
- Architectural Coating: 1 week

Table 6. Cast-in-Place Method Construction Schedule and Equipment

Phase	Start	End	Total Work Days	Equipment Type	Qty	hrs/day
General Construction	1/1/2025	2/25/2026	301	Aerial Lift	1	8
				Air Compressors	1	8
				Cranes	1	8
				Forklifts	1	8
				Generator Sets	4	8
				Welders	1	8
ESA Fencing; Clear & Grub; Mobilization	1/1/2025	1/22/2025	16	Excavators	1	8
				Graders	1	8
				Loader	1	8
				Bulldozer	1	8
				Scrapers	1	8
				Chipper	1	8
CIDH Piles (Pier 2, 3)	1/22/2025	2/19/2025	21	Bore/Drill Rig	1	8
				Cranes	1	8
				Rubber Tired Loaders	1	8
				Generator Sets	3	8
Ground Improvement Abut 1	1/22/2025	2/12/2025	16	Cranes	1	10
				Drill Rig	1	10
				Generator/Powerpack	1	10
				Air compressor	1	10
				Telehandler	1	10
				Loader	1	10
Column Form, Rebar, Pour (Pier 2, 3)	2/12/2025	3/12/2025	21	Cranes	1	8
Embankment Grading (Abut 1)	2/12/2025	2/19/2025	6	Excavators	1	8
				Rubber Tired Dozers	1	8
				Rubber Tired Loaders	1	8
				Rollers	1	8
Excavation Abut 1	2/19/2025	2/26/2025	6	Excavators	1	8
				Rubber Tired Loaders	1	8
Ground Improvement Abut 4	2/19/2025	3/12/2025	16	Cranes	1	10
				Drill Rig	1	10
				Generator/Powerpack	1	10
				Air compressor	1	10
				Telehandler	1	10
				Loader	1	10
Embankment Grading (Abut 4)	3/12/2025	3/19/2025	6	Excavators	1	8
				Bulldozer	1	8
				Rubber Tired Loaders	1	8

Table 6. Cast-in-Place Method Construction Schedule and Equipment

Phase	Start	End	Total Work Days	Equipment Type	Qty	hrs/day
				Roller compactor	1	8
Excavation Abut 4	3/19/2025	3/26/2025	6	Excavators	1	8
				Rubber Tired Loaders	1	8
CIDH Piles (Abuts 1, 4)	2/26/2025	4/30/2025	46	Bore/Drill Rig	1	8
				Cranes	1	8
				Rubber Tired Loaders	1	8
				Generator Sets	3	8
Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls)	4/2/2025	7/2/2025	66	Track-mounted crane	1	8
Erect Falsework	5/28/2025	7/23/2025	41	Track-mounted crane	1	8
Form, Rebar, Pour (Soffit, Stems & deck)	6/18/2025	11/26/2025	116	Track-mounted crane	1	8
Cure Deck, Stress Bridge, Strip Falsework	11/26/2025	1/14/2026	36	Cranes	1	8
Riprap (Abut 1 & 4)	12/31/2025	1/28/2026	21	Excavators	1	8
				Rubber Tired Loaders	1	8
Sidewalk Barrier Install, Deck Grind	1/14/2026	2/4/2026	16	Cranes	1	8
Offsite Improvements-Linear, Grubbing & Land Clearing	2/7/2026	2/10/2026	3	Crawler Tractors	1	8
				Excavators	1	8
Offsite Improvements-Linear, Grading & Excavation	2/11/2026	2/23/2026	12	Excavators	3	8
				Graders	1	8
				Crawler Tractors	1	8
				Rollers	2	8
				Rubber Tired Loaders	1	8
				Scrapers	2	8
				Tractors/Loaders/Backhoes	2	8
Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade	2/24/2026	3/7/2026	11	Signal Boards	0	8
				Tractors/Loaders/Backhoes	2	8
				Scrapers	2	8
				Rough Terrain Forklifts	1	8
				Plate Compactors	1	8
				Pumps	1	8
				Air Compressors	1	8
				Graders	1	8
				Generator Sets	1	8

Table 6. Cast-in-Place Method Construction Schedule and Equipment

Phase	Start	End	Total Work Days	Equipment Type	Qty	hrs/day
Offsite Improvements-Linear, Paving	3/8/2026	3/13/2026	5	Rollers	3	8
				Pavers	1	8
				Paving Equipment	1	8
				Signal Boards	0	8
				Tractors/Loaders/Backhoes	2	8
Offsite Improvements-Architectural Coating	3/14/2026	3/19/2026	5	Air Compressors	1	6

Using the provided construction information, prediction results are summarized in Table 7 at the nearest noise-sensitive receptor (the multi-family residences to the north of the project) for two calculation scenarios as follows:

- Usage of the shortest activity-to-receptor distance for the loudest equipment type and quantity associated with the studied construction phase, with a sample of each of the less noisy equipment types further from the receptor at successively more distant increments of 50 feet; and
- An "acoustic centroid" approach, akin to the Federal Transit Administration (FTA) general assessment technique for estimating construction noise, whereby all listed equipment for a construction phase is represented by a common location at the geographic center of the studied construction zone or area.

The first of these methods is considered a conservative approach to assess what might be characterized as a peak exposure level, applicable to not more than approximately 10%–15% of the total construction period and when the studied construction activity is taking place with loudest equipment along the property boundary closest to these nearest off-site receivers. The second approach utilizes the acoustic centroid technique to represent a time-averaged location for the phase equipment and activity, thereby yielding average noise levels to represent overall noise exposure as experienced for adjacent receivers over the duration of each construction phase.

A Microsoft Excel–based noise prediction model emulating and using reference data from the FHWA RCNM (FHWA 2008) was used to estimate construction noise levels. Input variables for the predictive modeling consist of the equipment type and number of each, the afore-mentioned AUF, the expected duration (in hours) of onsite activity, the distance from the receiver, and the construction schedule for the consideration of concurrent construction activities. Conservatively, no topographical or structural shielding was assumed in the modeling.

Appendix B displays the construction noise model worksheets for each of these analysis approaches. Although the quantities and types of equipment per construction phase are the same in each of the two approaches, due primarily to the differences in source-to-receptor distance variables, Table 7 shows that prediction results of both scenarios for the CIP method by individual phase. Table 8 shows the cumulative monthly prediction results of both scenarios for the CIP method with the construction schedule taken into consideration.

Table 7. Predicted Construction Noise Levels per Activity Phase, CIP Method

Construction Phase (and Equipment Types Involved)	Closest Distance to Nearest Noise Sensitive Receptor	Acoustic Center to Nearest Noise Sensitive Receptor
	12-hour L_{eq}, dBA	12-hour L_{eq}, dBA
1 General Construction (Man Lifts, Air Compressor, Crane, Generators, Welder)	66	52
2 ESA Fencing; Clear & Grub; Mob (Excavator Grader, Front End Loader, Dozer, Scraper, All Other Equipment > 5 HP)	74	59
3 CDH Piles (Pier 2, 3, 4) (Drill Rig Truck, Crane, Front End Loader, Generators)	66	51
4 Ground Impr. Abut 1 (Crane, Drill Rig Truck, Generator, Air Compressor, Man Lift, Front End Loader)	67	53
5 Column Form, Rebar, Pour (Pier, 2, 3, 4) (Crane)	64	45
6 Embankment Grading (Abut 1) (Excavator, Dozer, Front End Loader, Roller)	71	54
7 Exc. Abut 1 (Excavator, Front End Loader)	69	51
8 Ground Impr. Abut 4 (Crane, Drill Rig Truck, Generator, Air Compressor, Man Lift, Front End Loader)	67	53
9 Embankment Grading (Abut 4) (Excavator, Dozer, Front End Loader, Ground Compactor)	71	54
10 Exc, Abut 4 (Excavator, Front End Loader)	69	51
11 CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls) (Drill Rig Truck, Crane, Front End Loader, Generator)	66	51
12 Form, Rebar, Pour (Abut 1 & 4 Ftg., Stem, Walls) (Crane)	64	45
13 Erect Falsework (Crane)	64	45
14 Form, Rebar, Pour (Soffit, Stems, Deck) (Crane)	64	45
15 Cure Deck, Stress Bridge, Strip Falsework (Crane)	64	45
16 Riprap (Abut 1 & 4) (Excavator, Front End Loader)	69	51
17 Sidewalk Barrier Install, Deck Grind (Crane)	64	45
18 Offsite Improvements-Linear, Grubbing & Land Clearing (Tractor, Excavator)	72	54
19 Offsite Improvements-Linear, Grading * Excavation (Excavator, Grader, Tractor, Roller, Front End Loader, Scraper, Backhoe)	74	60
20 Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade (Front End Loader, Scraper, Man Lift, Ground Compactor, Pumps, Air Compressor, Grader, Generator)	74	59
21 Offsite Improvements-Linear, Paving (Roller, Paver, Front End Loader)	71	54
22 Offsite Improvements-Architectural Coating (Air Compressor)	64	45

Notes: L_{eq} = equivalent noise level; dBA = A-weighted decibels.

Table 8. Predicted Construction Noise Levels per Construction Month, CIP Method

Construction Month	Closest Distance to Nearest Noise Sensitive Receptor	Acoustic Center to Nearest Noise Sensitive Receptor
	Cumulative 12-hour L_{eq}, dBA	Cumulative 12-hour L_{eq}, dBA
January 2025	73	56
February 2025	75	60
March 2025	76	61
April 2025	68	53
May 2025	68	53
June 2025	68	54
July 2025	68	54
August 2025	66	53
September 2025	66	53
October 2025	66	53
November 2025	69	55
December 2025	69	55
January 2026	71	55
February 2026	69	54
March 2026	61	51

Notes: L_{eq} = equivalent noise level; dBA = A-weighted decibels.

As presented in Table 8, the estimated construction noise exposure levels are predicted to exceed 75 dBA L_{eq} over a 12-hour period due to six concurrent construction phases occurring adjacent to the nearest residential receptors during the month of March 2025. The predicted aggregate construction noise levels by month range from 66 to 76 dBA L_{eq} over a 12-hour period at the nearest residential receptors.

With the application of Best Management Practices (BMPs) during project construction, the noise level can be reduced to below the construction noise threshold. By way of example, BMP may include implementation of temporary noise barriers, pro-active public relations such as: clear and abundant notices or alerts of potentially noisy construction activity well in advance of actual work periods, community engagement to inform potentially affected project vicinities of the local benefits of efforts to modernize its infrastructure, and special consideration for selected receptors that may be closest to project activities or otherwise at risk of greatest adverse effects (with respect to noise and other topics, such as traffic interruption).

As shown in Table 9, and as an illustration of BMP application, a temporary eight-foot-tall noise barrier was added to the RCNM prediction scenarios, and noise levels at the nearest residential receptors were predicted to be below the 75 dBA threshold for the concurrent construction phases during the month of March 2025. The right-most column in Table 9 also presents the anticipated reduction (a.k.a. “delta” or decibel difference) in noise exposure level at the nearest noise-sensitive receptor attributed to insertion of the temporary construction noise barrier.

Table 9. Predicted Construction Noise Levels per Construction Month with 8 Foot Barrier, CIP Method

Construction Month	Predicted Construction Noise Exposure Levels and Delta at Nearest NSR		
	Cumulative 12-hour L_{eq}, dBA - Without Barrier	Cumulative 12-hour L_{eq}, dBA - With 8' Barrier	Delta (difference between with and without barrier)
January 2025	73	63	10
February 2025	75	68	7
March 2025	76	69	7
April 2025	68	60	8
May 2025	68	62	6
June 2025	68	62	6
July 2025	68	62	6
August 2025	66	60	6
September 2025	66	60	6
October 2025	66	60	6
November 2025	69	63	6
December 2025	69	62	7
January 2026	71	63	8
February 2026	69	62	7
March 2026	61	58	3

Notes: L_{eq} = equivalent noise level; dBA = A-weighted decibels; NSR = noise-sensitive receptor.

Therefore, with proper application of onsite BMPs, specifically eight-foot temporary barriers located as close to the construction equipment as possible when construction noise from multiple concurrent project construction phases are expected to exceed the City's limit of 75 dBA 12-hour L_{eq} in March 2025 (or the actual month on which this concurrency would occur, if different), temporary construction-related noise impacts at nearby residential receptors would be considered **less than significant.**

6.1.2 Pre-Cast Bridge Construction Method Analysis

The Pre-Cast Bridge Construction method would take approximately 43 weeks of active construction, however due to potential weather delays, supplies and equipment scheduling the duration of project construction may take up to 60 weeks. However, given that construction emission generating activities would not occur during periods of inactivity, the 43-week schedule provides a conservative estimate of potential maximum daily emissions. The project was assumed to require the following construction phases, with likely overlaps provided by project engineers (durations are approximate):

- General Construction: 43 weeks
- Environmentally Sensitive Areas (ESA) Fencing, Clearing, Grubbing, and Mobilization: 3 weeks
- Cast-In-Drilled-Hole (CIDH) Piles (Pier 2,3,4): 4 weeks
- Ground Improvements (Abut 1): 3 weeks
- Column Form, Rebar, Pour (Pier 2,3,4): 6 weeks
- Embankment Grading (Abut 1): 1 week

- Excavation (Abut 1): 1 week
- Ground Improvements (Abut 5): 3 weeks
- Cap Falsework (Pier 2,3,4): 6 weeks
- Cap Form, Rebar, Pour (Pier 2,3,4): 7 weeks
- Embankment Grading (Abut 5): 1 week
- Excavation (Abut 5): 1 week
- Form, Rebar, Pour (Abut 1 & 5, Stem, Walls, Diaphragms & Deck): 22 weeks
- Erect Precast Girders: 1 week
- Cure Deck, Strip Overhangs: 2 weeks
- Riprap (Abut 1 & 5): 4 weeks
- Sidewalk Barrier Installation and Deck Grind: 3 weeks

Pre-Cast Off-site Improvements

- Grubbing and Land Clearing: 1 week
- Grading and Excavation: 2.5 weeks
- Drainage, Utilities, and Sub-Grade: 2 weeks
- Paving: 1 week
- Architectural Coating: 1 week

Due to the similarity between construction phases, equipment roster during those phases, and expected construction schedule for the construction phases, pre-cast construction noise levels are expected to be similar to the previously provided CIP predicted construction noise levels. As a result, with proper application of onsite BMPs, specifically eight-foot temporary barriers located as close to the construction equipment as possible when construction noise from multiple concurrent project construction phases are anticipated to exceed the City's limit of 75 dBA 12-hour L_{eq} in March 2025 (or the actual month on which this concurrency would occur, if different), temporary construction-related noise impacts at nearby residential receptors would be considered **less than significant.**

6.1.3 MSCP Avian Breeding Construction Noise Analysis

Noise generated during Project construction would be directly adjacent to MSCP Multi-Habitat Planning Areas (MHPA) and would thus expose sensitive avian species to temporary construction noise levels greater than the City threshold of 60 dBA for over the construction period. Mitigation Measure MM-BIO-15 shall be incorporated into the project to help protect sensitive avian species from excessive exposure to temporary construction noise.

MM-BIO-15 Short-Term Noise. Pre-construction biological and noise surveys shall be conducted for any work between February 1 and September 15. Between 3 and 7 days prior to start of construction activities, a qualified biologist with experience in identifying least Bell's vireo (Vireo bellii pusillus), southwestern willow flycatcher (Empidonax traillii extimus), and coastal California gnatcatcher (Polioptila californica californica) shall conduct a pre-construction survey for the least Bell's vireo, coastal California gnatcatcher, and, if needed, southwestern willow flycatcher to document presence/absence and the extent of habitat being occupied by the species. The pre-construction survey area for these species shall encompass all suitable habitats within the impact area, as well as suitable habitat within a 500-foot buffer of the construction activities. If active nests for any of these species are detected, the project biologist shall flag and map the nest location and a 500-foot avoidance buffer on the construction plans and provide the information to the construction supervisor and any personnel working near the nest buffer. To the extent feasible, no construction activities shall occur within the 500-foot avoidance buffer. Should it be necessary for construction activities to occur within the 500-foot avoidance buffer, a qualified biologist will conduct sound monitoring near the observed nesting position(s) to sample the pre-construction outdoor ambient noise level and document any signs of disturbance prior to construction activities. Nest locations, their horizontal distances to planned construction activities, and the measured outdoor ambient noise levels shall be provided to a qualified acoustician, who shall recommend where implementation of practical noise reduction technique(s) would yield predicted construction noise exposure at the nest location not greater than the allowable threshold of 60 dBA Leq or ambient noise level, whichever is higher. To the extent feasible, on-site noise reduction techniques shall be implemented prior to construction activity to minimize construction noise levels and meet this Leq threshold at the nest location(s). During construction activity, a qualified biologist shall monitor the observed nest locations and document any signs of disturbance, which would trigger further implementation of noise reduction techniques or alternatives that may include utilization of quieter equipment, adherence to equipment maintenance schedules, shifting construction phase timelines so that they occur outside of the breeding season, installation of temporary sound barriers, or shifting construction work further from the nest.

1. Timing: Surveys will be completed within 72 prior to the start of construction activities during the breeding season (typically February 1 through September 15).
2. Reporting: The biologist shall submit a report to the City of San Diego documenting the methods and results of the surveys prior to clearing/grubbing activities. Additionally, a monitoring report will be prepared and submitted to the City of San Diego after the construction activities are completed.

Nevertheless, MSCP avian species within impacted MHPAs would experience **significant and unavoidable temporary noise impacts on sensitive receptors including wildlife due to construction noise even with implementation of MM-BIO-15.**

6.2 Long-Term Off-Site Traffic Noise Exposure

According to acoustical principles, the increase in traffic noise level relates directly to the increase in volumes by the following expression: $10*LOG(V_f/V_e)$, where V_f is the future traffic volume, V_e is the existing traffic volume, and vehicle speeds and proportion of vehicle types are essentially unchanged. The Project would therefore have to roughly double the traffic volumes on nearby studied roadway segments in order to increase traffic by 3 dBA, which would be considered a barely perceptible increase (Caltrans 2013).

The proposed Project would result in the creation of additional vehicle trips on local roadways (i.e., Fenton Parkway, Mission City Parkway, and Camino Del Rio North), which could result in increased traffic noise levels at adjacent noise-sensitive land uses. Utilizing the information provided by the Project traffic engineer via e-mail (Fehr & Peers, 2023), an emulator based on the FHWA's Highway Traffic Noise Prediction Model RD-77-108 was used to estimate potential noise impacts at adjacent noise-sensitive uses. Information used in the model included posted traffic speeds, truck mix percentage, and average daily traffic (ADT) volumes (expressed as vehicles per hour) for the existing (2023), near-term year 2035 with and without Project, and horizon year 2050 with and without Project conditions.

Consistent with Caltrans guidance (Caltrans, 2013), this analysis assumes 80% of the ADT occurs during daytime hours (7:00 a.m. to 7:00 p.m.), 5% during the evening (7:00 p.m. to 10:00 p.m.), and 15% during the nighttime (10:00 p.m. to 7:00 a.m.). The truck percentages used in the noise model were 2.0% medium trucks and 1.0% heavy trucks—the same proportion applied in the modeling of traffic noise for the SDSU Mission Valley Campus Master Plan EIR. The k-factor used to convert the ADT volumes to peak hour volumes was 10%. Appendix C, Traffic Noise Model Calculations, contains the input data and results of the traffic noise modeling effort.

The traffic noise model results are summarized in Table 10 and represented by CNEL values.

Table 10. Off-site Roadway Traffic Noise Modeling Results

Roadway Segment	From	To	Existing (2023) Noise Level	Near-Term (2035) Without Project	Near-Term (2035) With Project	Project-Related Near-Term (2035) Noise Level Increase	Horizon (2050) Without Project	Horizon (2050) With Project	Project-Related Horizon (2050) Noise Level Increase
			(CNEL)	(CNEL)	(CNEL)	(dB)	(CNEL)	(CNEL)	(dB)
Fenton Parkway	Rio San Diego	Bridge	57.6	60.7	62.9	2.2	60.4	62.6	2.2
Fenton Parkway Bridge	Bridge	Camino Del Rio North	—	—	66.4	—	—	66.1	—
Mission City Parkway	Camino Del Rio North	Camino Del Rio South	62.0	62.7	65.3	2.6	62.4	64.9	2.6
Camino Del Rio North	Qualcomm Way	Mission City Parkway	65.4	65.7	65.2	-0.5	65.4	64.9	-0.5
Camino Del Rio North	Mission City Parkway	Rancho Mission Road	64.2	65.8	66.2	0.3	65.5	65.8	0.3

Notes: dBA = A-weighted decibel; CNEL = Community Noise Equivalent Level; dB = decibel.

Table 10 shows that at roadways surrounding the project, the addition of proposed project traffic to the local roadway network would result in a CNEL increase of less than or equal to 3 dB, which is below the discernible level of change for the average healthy human ear. Thus, a **less-than-significant impact** is expected for proposed project-related off-site traffic noise increases affecting existing residences in the vicinity.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

6.3 Construction Vibration

Section 2.1.2 provides the groundborne vibration propagation expression for estimating vibration velocity (in inches per second [ips] PPV) level at a receiving offsite structure. Although ignored for purposes of conservatism in this analysis, FTA guidance information suggests that coupling losses between the vibrating soil mass and that of a receiving building foundation (e.g., the multi-story residences to the north) might provide further attenuation to this estimated PPV value by an amount represented by a 3 VdB reduction (FTA 2018).

The main concern associated with ground-borne vibration is annoyance; however, in extreme cases, vibration can cause damage to buildings, particularly those that are old or otherwise fragile. Some common sources of ground-borne vibration are trains, and construction activities such as blasting, pile-driving, and heavy earth-moving equipment. The primary source of ground-borne vibration occurring as part of the project is construction activity.

According to Caltrans, D-8 and D-9 Caterpillars, earthmovers, and trucks such as those expected to be used during project construction have not exceeded 0.10 inches/second PPV at 10 feet (Caltrans Division of Environmental Analysis 2020). Since the closest off-site residence is located approximately 90 feet away from likely heavy construction equipment, vibration from construction activities at the closest sensitive receiver would not exceed the significance threshold of 0.20 ips PPV.

Operationally, vibration from the newly constructed bridge would be attributed to vehicle traffic on its deck. However, as stated in FTA guidance: “If the roadway is fairly smooth, the vibration from rubber-tired traffic is rarely perceptible” and “buses and trucks rarely create vibration that exceeds 70 VdB unless there are bumps due to frequent potholes in the road” (FTA 2018). Due to this low vibration quantity (70 VdB translates to 0.013 ips PPV), the distance of the bridge deck to nearest offsite receptors, and the bridge design (a span above grade, which will limit groundborne transmission of vibration), operational vibration impacts due to the project would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The San Diego International Airport is approximately ten miles from the Project area. The Project area is outside of the 60 dB CNEL contour shown in the San Diego International Airport Land Use Compatibility Plan (SDCRAA 2014). Montgomery-Gibbs Executive Airport is less than 3 miles north of the project, but its 60 dB CNEL aviation noise contour is similarly beyond the project area. Therefore, the construction workers in the project area or pedestrians/cyclists using the bridge would not be subjected to excessive noise levels.

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Appendix A

Baseline Field Measurement Photos and Collected Data

02/09/23 – View of Sound Level Meter (SLM) at Position A
(left: looking west, right: looking north; SLM encircled in yellow dashes)

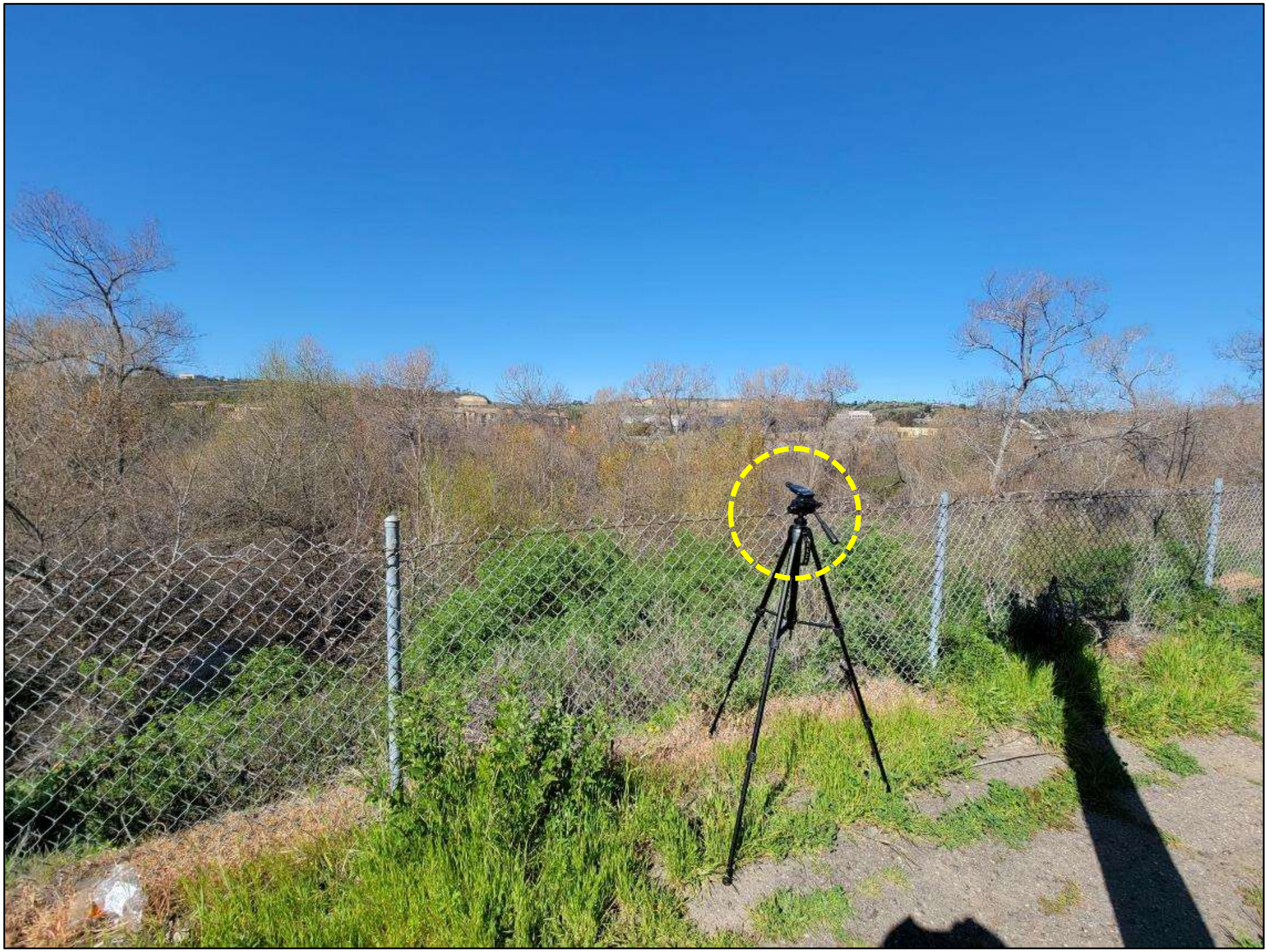
02/09/23 – View of Sound Level Meter (SLM) at Position B

(left: looking west, right: looking southeast; SLM encircled in yellow dashes)

02/09/23 – View of Sound Level Meter (SLM) at Position C
(looking north; SLM encircled in yellow dashes)

02/09/23 – View of Sound Level Meter (SLM) at Position D
(SLM encircled in yellow dashes)

02/09/23 – View of Sound Level Meter (SLM) at Position **E**
(SLM encircled in yellow dashes)



02/09/23 – View of Sound Level Meter (SLM) at Position F
(looking north; SLM encircled in yellow dashes)

02/09/23 – View of Sound Level Meter (SLM) at Position F
(looking east; SLM encircled in yellow dashes)

Appendix A -- Noise Level Measurement Data – February 9, 2023

Number	Start Date	Start Time	End Time	Duration	Meas Mod	Input Rang	Input Type	SPL Time W	LN% Freq W	Overload	UnderRang	Sensitivity
Location B												
12	2/9/2023	10:53:02 AM	10:53:08 AM	0:00:06	Auto	Low	Mic	Slow	dBA	No	No	15.52mV/P
13	2/9/2023	10:56:46 AM	10:56:56 AM	0:00:10	Single	Low	Mic	Slow	dBA	No	No	15.52mV/P
Location D												
14	2/9/2023	11:03:37 AM	11:03:40 AM	0:00:03	Auto	Low	Mic	Slow	dBA	No	No	15.52mV/P
15	2/9/2023	11:03:39 AM	11:03:41 AM	0:00:02	Auto	Low	Mic	Slow	dBA	No	No	15.52mV/P
Location E												
16	2/9/2023	11:23:08 AM	11:23:18 AM	0:00:10	Single	Low	Mic	Slow	dBA	No	No	15.52mV/P
17	2/9/2023	11:24:54 AM	11:25:04 AM	0:00:10	Single	Low	Mic	Slow	dBA	No	No	15.52mV/P

Number	LZeq	LCeq	LAeq	LZSmax	LCSmax	LASmax	LZSmin	LCSmin	LASmin	LZE	LCE	LAE
Location B												
12	67.9	65.2	52.4	69.1	66.9	58.1	66.8	63.7	48.7	75.7	73	60.2
13	69	64.2	51.6	86.9	85	66.6	68.3	64.2	49.2	79	74.2	61.6
Location D												
14	65.7	62.4	48.1	66.2	62.9	48.7	64.4	61.6	47.6	70.5	67.2	52.9
15	65.7	62	47.6	66.1	62.8	47.9	65.5	61.8	47.6	68.7	65	50.6
Location E												
16	76.1	72.1	60	80.8	79.8	65.1	72	68.3	57.9	86.1	82.1	70
17	83.6	82.5	76.4	86.8	85.6	79.1	75.6	74.8	68	93.6	92.5	86.4

Number	LZpk	LCpk	LApk	LAS1%	LAS2%	LAS5%	LAS8%	LAS10%	LAS25%	LAS50%	LAS90%	LAS95%	LAS99%
Location B													
12	89.2	88.3	87.6	58	57.7	57.1	56.4	56	53.4	51.4	48.8	48.8	48.7
13	81.8	76.6	76	66.3	65.9	64.6	63.4	62.6	57.6	54	49.4	49.3	49.3
Location D													
14	76.7	74.2	70.4	48.7	48.7	48.6	48.6	48.5	48.2	48	47.7	47.6	47.6
15	76.2	72.9	61.3	47.9	47.9	47.9	47.9	47.9	47.8	47.8	47.6	47.6	47.6
Location E													
16	93.7	91.1	88.3	65	64.7	64.4	64.2	63.8	61	60.1	58.6	58.3	57.9
17	101.2	101.2	97	79.1	79	78.9	78.8	78.7	78.4	76.7	68.4	68.1	68

Number	Start Date	Start Time	End Time	Duration	Meas Moc	Input Rang	Input Type	SPL Time V	LN% Freq	Overload	UnderRan	Sensitivity	LZeq	LCeq	LAeq	LZSmax	LCSmax	LASmax	LZSmin	LCSmin	LASmin	LZE	LCE	LAE	LZpk	LCpk	LApk	LAS1%	LAS2%	LAS5%	LAS8%	LAS10%	LAS25%	LAS50%	LAS90%	LAS95%	LAS99%
Location A																																					
1	2/9/2023	10:22:24 AM	10:22:30 AM	0:00:06	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.4	67.8	57.9	70.9	69.5	59.4	68.3	66.8	56.1	77.2	75.6	65.7	85	81.1	79.4	59.3	59.3	59.3	59.3	59.2	58.9	58.3	56.7	56.4	56.1
2	2/9/2023	10:22:30 AM	10:22:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.4	66.8	55.2	70.4	69.1	56.7	66.7	64.9	54	78.4	76.8	65.2	85	80.9	77.8	56.7	56.6	56.4	56.4	56.3	55.8	55.3	54.5	54.1	54
3	2/9/2023	10:22:40 AM	10:22:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	65.1	53.5	68	65.9	55.4	66.5	64.5	52.7	77.2	75.1	63.5	78.7	77.7	73.8	55.3	55.1	54.9	54.8	54.7	53.7	53	52.8	52.7	52.7
4	2/9/2023	10:22:50 AM	10:23:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	64.9	54.1	67.6	65.7	55.9	66.6	64.2	52.9	77.1	74.9	64.1	79.4	76.9	79.5	55.8	55.6	55.4	55.3	55.2	54.6	54	53.1	53	52.9
5	2/9/2023	10:23:00 AM	10:23:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.5	65.6	57.4	68.9	67.6	63.1	66.5	64.5	53.1	77.5	75.6	67.4	84.4	82	79.8	63	62.8	62	61.9	61.4	57.8	55	53.4	53.3	53.2
6	2/9/2023	10:23:10 AM	10:23:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64.5	55.5	67.8	65.8	58.4	65.9	63.7	53.9	76.6	74.5	65.5	81.1	81.9	76.9	58.3	58.1	57.3	56.9	56.7	56.1	55.3	54.4	54.3	54
7	2/9/2023	10:23:20 AM	10:23:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67	64.4	52.7	68.2	65.5	54.2	66.2	63.6	52	77	74.4	62.7	81	76.1	72.3	54.1	54	53.7	53.6	53.6	53.2	52.8	52.2	52.1	52.1
8	2/9/2023	10:23:30 AM	10:23:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	64.7	52.7	67.9	65.8	53.8	66.4	63.9	52.1	77.1	74.7	62.7	81.6	80.7	81	53.7	53.7	53.5	53.4	53.4	53.1	52.6	52.1	52.1	52.1
9	2/9/2023	10:23:40 AM	10:23:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	64.5	52.5	68.1	66	53	66.2	63.5	51.9	76.8	74.5	62.5	79.1	76.4	70.5	53	53	52.9	52.9	52.9	52.7	52.6	52.1	52	51.9
10	2/9/2023	10:23:50 AM	10:24:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.5	63.8	52.7	67.1	64.6	53.9	65.8	63.2	51.4	76.5	73.8	62.7	80.5	77.8	77.8	53.8	53.8	53.6	53.4	53.3	53.2	52.2	51.6	51.5	51.5
11	2/9/2023	10:24:00 AM	10:24:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.2	63.7	53.9	66.9	64.7	58.5	65.7	63.2	52.1	76.2	73.7	63.9	83.8	82.5	83	58.4	58.2	57.5	56.8	56.3	54	53.2	52.2	52.2	52.1
12	2/9/2023	10:24:10 AM	10:24:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.9	64.6	53	67.5	65.1	55.6	65.9	63.5	52	76.9	74.6	63	86.4	83.1	85.5	55.4	55.2	54.5	54	53.9	53.1	52.4	52.2	52.2	52
13	2/9/2023	10:24:20 AM	10:24:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64.8	57.6	68.3	66.8	61.2	65.3	63.3	53.9	76.6	74.8	67.6	81.1	80.1	79.9	61.2	61.2	60.9	60.8	60.7	59.1	55.7	54.4	54.2	53.9
14	2/9/2023	10:24:30 AM	10:24:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	65.1	59.1	67.7	66.1	61.3	65.2	63	53.4	76.8	75.1	69.1	89.2	87.2	88.7	61.3	61.2	61.1	61	60.7	60.3	58.6	53.5	53.4	53.4
15	2/9/2023	10:24:40 AM	10:24:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	65.1	57	67.9	66	61.4	66.6	64.4	54.1	77.2	75.1	67	79.2	77.8	72.9	61.4	61.4	61.3	61	61	59.5	56.2	54.4	54.4	54.2
16	2/9/2023	10:24:50 AM	10:25:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.6	69	60	72.1	70.5	62.1	67	64.7	54.6	80.6	79	70	85.3	82.4	75.7	62	62	62	61.9	61.9	61	60	55.5	55.2	54.7
17	2/9/2023	10:25:00 AM	10:25:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.3	67.3	56.5	71.6	70.2	60.4	67.5	65.2	54.2	79.3	77.3	66.5	83.7	82.4	75.6	60.2	60.1	59.8	59.7	59.5	58.4	56.9	54.4	54.3	54.2
18	2/9/2023	10:25:10 AM	10:25:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	64.6	52.2	68.2	66	54.4	66.6	64.1	51.5	77.1	74.6	62.2	84	78.2	80.8	54.3	54.3	54	53.6	53.4	52.6	52.4	51.6	51.5	51.5
19	2/9/2023	10:25:20 AM	10:25:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64	51.7	67.3	64.7	52.2	65.8	63.1	51.4	76.6	74	61.7	79.1	75.8	65.4	52.1	52.1	52	52	52	51.8	51.7	51.5	51.5	51.4
20	2/9/2023	10:25:30 AM	10:25:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.9	64.6	53.2	67.7	65.5	57.4	66.2	63.8	51.4	76.9	74.6	63.2	78.7	77.8	73.3	57.3	57.1	56.5	55.7	55.3	53.2	52.2	51.5	51.5	51.4
21	2/9/2023	10:25:40 AM	10:25:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.6	65.6	52.7	68.4	66.3	53.1	66.8	64.5	52.1	77.6	75.6	62.7	80.9	78	67.2	53.1	53.1	53	53	53	52.8	52.7	52.3	52.2	52.2
22	2/9/2023	10:25:50 AM	10:26:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.1	65.6	53.1	69.5	67.2	53.5	67.1	64.6	52.6	78.1	75.6	63.1	80.4	78.6	66.5	53.5	53.5	53.4	53.4	53.4	53.2	53.1	52.8	52.7	52.7
23	2/9/2023	10:26:00 AM	10:26:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68	65.2	52.8	68.8	65.8	53.7	67.1	64.5	52.4	78	75.2	62.8	80.3	76.8	65.8	53.7	53.6	53.5	53.4	53.3	52.9	52.8	52.5	52.5	52.4
24	2/9/2023	10:26:10 AM	10:26:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.3	64.7	52.6	68.3	65.6	53	66.5	64.2	52.3	77.3	74.7	62.6	80.4	76.4	65.8	53	53	53	52.9	52.9	52.8	52.6	52.4	52.4	52.3
25	2/9/2023	10:26:20 AM	10:26:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	64.7	53.1	68.4	65.8	53.5	66.2	63.8	52.6	77.2	74.7	63.1	78.7	77.6	66.3	53.5	53.5	53.4	53.4	53.3	53.1	53	52.9	52.8	52.7
26	2/9/2023	10:26:30 AM	10:26:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	64.3	52.8	67.6	64.9	53	66.1	63.6	52.5	76.8	74.3	62.8	79.4	76.4	72.2	52.9	52.9	52.9	52.9	52.9	52.8	52.8	52.6	52.6	52.5
27	2/9/2023	10:26:40 AM	10:26:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	64.8	53.2	67.9	65.5	53.8	66.3	63.7	52.6	77.2	74.8	63.2	78.8	77.4	67.5	53.7	53.7	53.6	53.6	53.6	53.3	53	52.8	52.7	52.7
28	2/9/2023	10:26:50 AM	10:27:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.5	64.3	53	67.8	65.4	53.4	65.2	63.2	52.7	76.5	74.3	63	78.6	77.3	66.7	53.3	53.3	53.3	53.3	53.3	53.2	53.1	52.8	52.8	52.7
29	2/9/2023	10:27:00 AM	10:27:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.4	64.3	52.6	67.3	65	53.3	65.6	63.5	52.1	76.4	74.3	62.6	79.1	76.1	66.2	53.3	53.3	53.2	53.1	53.1	52.9	52.6	52.2	52.2	52.2
30	2/9/2023	10:27:10 AM	10:27:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.4	63.9	52.8	67.2	64.7	53.1	65.7	63.4	52.5	76.4	73.9	62.8	78.3	76.6	66.5	53.1	53.1	53	53	53	52.8	52.7	52.5	52.5	52.5
31	2/9/2023	10:27:20 AM	10:27:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67	64.6	52.8	67.9	65.3	53.2	66	63.4	52.3	77	74.6	62.8	78.3	77.9	68.9	53.2	53.2	53.2	53.1	53.1	53.1	52.8	52.4	52.4	52.3
32	2/9/2023	10:27:30 AM	10:27:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.8	65.3	53.6	68.7	66	54.2	67	64.6	52.5	77.8	75.3	63.6	79.4	78.7	66.8	54.2	54.1	54.1	54.1	54.1	54	53.2	52.8	52.7	52.6
33	2/9/2023	10:27:40 AM	10:27:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.1	65.5	54	69.4	66.4	54.5	67.1	64.5	53.6	78.1	75.5	64	80.7	78.8	67.7	54.5	54.5	54.4	54.3	54.3	54.1	54	53.6	53.6	53.6
34	2/9/2023	10:27:50 AM	10:28:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.8	65.2	54.1	68.6	65.9	55.2	66.9	64.6	53.2	77.8	75.2	64.1	79.3	77.6	68.1	55.2	55.1	55	54.8	54.7	54.4	53.9	53.3	53.2	53.2
35	2/9/2023	10:28:00 AM	10:28:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.6	65.3	54.4	68.5	66.1	54.8	66.6	64.5	54.1	77.6	75.3	64.4	79.6	77.2	68.4	54.8	54.7	54.7	54.7	54.7	54.5	54.4	54.2	54.2	54.1
36	2/9/2023	10:28:10 AM	10:28:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.8	65.6	54.3	68.6	66.3	54.9	66.7	64.8	54	77.8	75.6	64.3	80.1	77.7	67.7	54.9	54.8	54.8	54.7	54.7	54.5	54.2	54	54	54
37	2/9/2023	10:28:20 AM	10:28:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.5	66.1	55.7	69.3	66.8	56.3	67.7	65.2	54	78.5	76.1	65.7	80	78	68.7	56.2	56.2	56.2	56.1	56	55.8	55.6	54.9	54.4	54
38	2/9/2023	10:28:30 AM	10:28:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.7	66.4	54.9	69.6	67.4	56.2	67.8	65.4	54.3	78.7	76.4	64.9	81.8	78.2	69.2	56.2	56.2	56.1	56	55.9	55.2	54.9	54.5	54.4	54.3
39	2/9/2023	10:28:40 AM	10:28:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.7	67.7	54.9	70.9	68.9	55.9	68.1	65.8	54	79.7	77.7	64.9	81.7	80.3	67.9	55.9	55.9	55.7	55.6	55.5	55.1	54.6	54.1	54	54
40	2/9/2023	10:28:50 AM	10:29:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.2	66.6	55.1	69.2	67.7	56.4	67.6	65.8	53.8	78.2	76.6	65.1	81.1	80.2	70.3	56.4	56.4	56.3	56.2	56.1	55.5	55.2	54.2	54	53.8
41	2/9/2023	10:29:00 AM	10:29:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.9	65.8	53.5	68.7	67.1	54.3	67.1	65	52.5	77.9	75.8	63.5	80.3	79.7	66.4	54.2	54.2	54.1	54.1	54.1	54	53.5	53.1	52.9	52.6
42	2/9/2023	10:29:10 AM	10:29:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.8	65.3	52.5	68.5	65.9	52.9	67.2	64.5	52.2	77.8	75.3	62.5	79	77.4	65.4	52.8	52.8	52.8	52.7	52.7	52.6	52.5	52.3	52.3	52.3
43	2/9/2023	10:29:20 AM	10:29:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.8	65.5	53.3	68.5	66	54.5	67.2	64.9	52.3	77.8	75.5	63.3	79	77.4	67.1	54.5	54.4	54.4	54.4	54.3	53.4	52.7	52.3	52.3	52.3
44	2/9/2023	10:29:30 AM	10:29:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	65.1	54.4	68.2	66.1	55.8	66.4	64.4	53.4	77.2	75.1	64.4	79.3	77.8	68.8	55.8	55.7	55.6	55.5	55.4	55	54.3	53.7	53.5	53.4
45	2/9/2023	10:29:40 AM	10:29:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64.4	53.7	67.3	65	54.3	65.7	63.4	53.1	76.6	74.4	63.7	79	77	67	54.3	54.3	54.2	54.2	54.2	53.8	53.5	53.3	53.2	53.1
46	2/9/2023	10:29:50 AM	10:30:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67	64.7	54	68.2	66	54.9	66.3	63.8	53.3	77	74.7	64	79	76.5	68.6	54.8	54.8	54.7	54.7	54.6	54.4	54	53.5	53.4	53.3
47	2/9/2023	10:30:00 AM	10:30:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64.1	53.9	67.3	64.7	54.4	65.9	63.5	53.2	76.6	74.1	63.9	79.2	75.8	67.5	54.4	54.4	54.3	54.3	54.3	54.1	54	53.4	53.3	53.2
48	2/9/2023	10:30:10 AM	10:30:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.2	63.9	54.7	66.9	64.7	56.1	65.6	63.2	52.9	76.2	73.9	64.7	78.8	77.2	68.4	56	55.9	55.7	55.6	55.6	55.2	54.8	53.4	53.1	52.9
49	2/9/2023	10:30:20 AM	10:30:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	64.8	54.5	67.7	65.4	56	65.7	63.3	53.6	77.1	74.8	64.5	79.4	77.6	68.4	55.9	55.8	55.5	55.4	55.3	54.9	54.4	53.8	53.7	53.6
50	2/9/2023	10:30:30 AM	10:30:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	64.7	53.9	68.1	65.7	54.8	66.1	63.7	52.8	77.1	74.7	63.9	79.9	77.6	67.8	54.7	54.6	54.6	54.6	54.5	54.4	53.8	53.1	53	52.8
51	2/9/2023	10:30:40 AM	10:30:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.5	65.4	55.3	68.1	66.1	56	66.8	64.6	53.9	77.5	75.4	65.3	80.1	78	69.7	55.9	55.9	55.8	55.7	55.7	55.6	55.2	54.3	54	53.9
52	2/9/2023	10:30:50 AM	10:31:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.2	65.6	55.3	69.1	66.3	56.1	67	64.9	54.5	78.2	75.6	65.3	79.8	78.1	69	56	56	55.9	55.9	55.8	55.7	55.4	54.8	54.7	54.6
53	2/9/2023	10:31:00 AM	10:31:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.1	66.3	54.3	71.1	67.7	55.4	67.8	65.2	53.5	79.1	76.3	64.3	82.1	78.9	67.2	55.3	55.3	55.2	55.2	55.1	54.8	54.2	53.7	53.6	53.6
54	2/9/2023	10:31:10 AM	10:31:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.9	65.5	54.5	68.7	66.3	55	67.2	64.6	53.9	77.9	75.5	64.5	80.6	78.6	67.8	54.9	54.9	54.9	54.8	54.8	54.6	54.4	54.1	54.1	53.9
55	2/9/2023	10:31:20 AM	10:31:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	65	54.3	68.3	65.7	55.1	66.6	64.5	53.4	77.2	75	64.3	79.3	76.5	68.8	55.1	55	54.9	54.9	54.9	54.6	54.2	53.7	53.6	53.5
56	2/9/2023	10:31:30 AM	10:31:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.6	65.3	54.8	68.5	66.4	56.9	66.8	64.3	53.4	77.6	75.3	64.8	79.9	78.9	70.6	56.9	56.8	56.7	56.5	56.4	55.4	54.6	53.6	53.5	53.4
57	2/9/2023	10:31:40 AM	10:31:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.7	65.4	55.1	68.9	66.5	56.4	66.5	64.2	53.2	77.7	75.4	65.1	79.4	77.9	69.9	56.3	56.2	56	55.9	55.9	55.6	55	54	53.6	53.3
58	2/9/2023	10:31:50 AM	10:32:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.4	67.1	54.3	70.6	68.4	55.1	68.3	66.1	53.5	79.4	77.1	64.3	81.9	79.5	69.1	55.1	55.1	55	55	54.9	54.6	54.3	53.8	53.6	53.5
59	2/9/2023	10:32:00 AM	10:32:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.8	67.4	54	70.6	68.5	54.7	68.5	66.1	52.9	79.8	77.4	64	81.5	78.9	68.2	54.7	54.6	54.6	54.6	54.5	54.2	54	53.3	53.1	52.9
60	2/9/2023	10:32:10 AM	10:32:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69	66.8	53.9	69.9	67.5	54.8	68.3	66	52.9	79	76.8	63.9	80.8	77.5	68	54.8	54.8	54.7	54.7	54.7	54.4	53.9	53.1	53	52.9
61	2/9/2023	10:32:20 AM	10:32:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.3	67.2	54.4	70.5	68.5	55.3	67.6	65.5	52.9	79.3	77.2	64.4	83.2	79.8	68.1	55.3	55.2	55.1	55	55	54.6	54.2	53.4	53.2	52.9
62	2/9/2023	10:32:30 AM	10:32:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.1	64.2	54.3	68.1	66.1	55.7	65.8	63.8	53.4	76.1	74.2	64.3	78.5	76.1	68.8	55.7	55.6	55.5	55.4	55.3	54.8	54.3	53.6	53.5	53.4
63	2/9/2023	10:32:40 AM	10:32:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.6	65.9	56.3	68.7	67.3	59.5	65.9	63.9	52.6	77.6	75.9	66.3	80	80.7	72.9	59.5	59.4	59.1	59.1	58.8	58.1	55.1	52.8	52.7	52.6
64	2/9/2023	10:32:50 AM	10:33:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.3	66.9	54.3	69.8	67.5	55.3	68.3	66.1	53.3	79.3	76.9	64.3	80.5	79.3	68.8	55.3	55.3	55.2	55.2	55.2	54.9	54.1	53.5	53.4	53.3
65	2/9/2023	10:33:00 AM	10:33:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.4	67.4	56.7	71.2	69.7	61.9	67.8	65.6	54.3	79.4	77.4	66.7	84	81.4	73.1	61.8	61.6	60.8	60.2	59.7	57.1	55.1	54.5	54.4	54.3
66	2/9/2023	10:33:10 AM	10:33:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.7	66	54.6	69.3	67.7	55.4	66.6	64.9	54	77.7	76	64.6	80.4	80.2	68.7	55.3	55.2	55.2	55.1	55.1	54.8	54.5	54.2	54.1	54.1
67	2/9/2023	10:33:20 AM	10:33:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.4	67.5	56	71.9	69.2	58.7	66.7	64.8	53.3	79.4	77.5	66	83.2	81.6	75.3	58.6	58.6	58.5	58.1	58	56.9	56	53.6	53.5	53.3
68	2/9/2023	10:33:30 AM	10:33:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.4	65.5	52.7	68.9	67.1	53.3	65.8	63.8	51.9	77.4	75.5	62.7	81	79.1	65.9	53.3	53.3	53.2	53.2	53.1	52.9	52.8	52.3	52.1	52
69	2/9/2023	10:33:40 AM	10:33:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	65.2	52.5	68.9	67.3	53.3	66.1	64.1	52	77.1	75.2	62.5	80.4	77.8	66.8	53.2	53.1	53	53	53	52.7	52.5	52.2	52.1	52
70	2/9/2023	10:33:50 AM	10:34:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.5	65.6	52.2	69.6	67.8	52.9	65.4	63.4	51.5	77.5	75.6	62.2	80.2	78.1	66.5	52.9	52.9	52.8	52.7	52.7	52.5	52.2	51.8	51.7	51.5
71	2/9/2023	10:34:00 AM	10:34:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64.4	52.1	67.7	65.8	52.7	65.4	63.2	51.2	76.6	74.4	62.1	79.4	77.7	71.7	52.7	52.7	52.6	52.6	52.5	52.3	52	51.5	51.4	51.3
72	2/9/2023	10:34:10 AM	10:34:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.3	65.3	52.7	68.9	66.6	53.5	66.3	64.2	51.9	77.3	75.3	62.7	79.5	76.5	73.5	53.5	53.5	53.4	53.3	53.3	53	52.6	52.2	52	51.9
73	2/9/2023	10:34:20 AM	10:34:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67	65.1	53.6	68.2	66.6	55	65.9	63.8	51.1	77	75.1	63.6	79.4	77.8	68.5	55	54.8	54.6	54.5	54.5	54.2	53.3	51.7	51.4	51.2
74	2/9/2023	10:34:30 AM	10:34:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.3	66.7	55.4	69.6	68.1	55.9	67.6	65.7	54.6	78.3	76.7	65.4	81.1	80.3	71.6	55.9	55.8	55.8	55.8	55.8	55.6	55.3	54.8	54.7	54.6
75	2/9/2023	10:34:40 AM	10:34:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.8	66	55.3	68.5	66.6	55.7	67.3	65.5	54.9	77.8	76	65.3	80.8	79.5	68.7	55.7	55.6	55.5	55.5	55.5	55.4	55.3	55	55	55
76	2/9/2023	10:34:50 AM	10:35:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.3	66.2	55.4	71.1	67.7	56.5	67.3	65.7	54.7	78.3	76.2	65.4	86.7	81.2	69	56.5	56.4	56.3	56.2	56.1	55.8	55.2	54.9	54.8	54.7
77	2/9/2023	10:35:00 AM	10:35:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.3	66.5	54.9	69	67.1	55.3	67.3	65.5	54.5	78.3	76.5	64.9	80.1	78.4	68	55.3	55.3	55.2	55.2	55.2	55	54.8	54.6	54.5	54.5
78	2/9/2023	10:35:10 AM	10:35:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.7	67	62.2	70.4	69.4	67.3	67.1	65.4	54.8	78.7	77	72.2	84.7	81.6	80	67.2	67	66.3	65.8	65.5	64	58.8	55	54.9	54.9
79	2/9/2023	10:35:20 AM	10:35:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70	68.8	60.1	72.4	71.5	64.5	67	65.2	55.6	80	78.8	70.1	84.7	84.2	76.7	64.5	64.4	63.9	63.3	63	60.9	58.3	55.8	55.8	55.7
80	2/9/2023	10:35:30 AM	10:35:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.8	68.6	61	72.5	71.7	64.8	67.1	65.2	55.2	79.8	78.6	71	83.9	83.5	78.2	64.7	64.7	64.7	64.6	64.6	63.9	61.2	55.5	55.4	55.3
81	2/9/2023	10:35:40 AM	10:35:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.9	64.7	56	68.1	66.3	57.5	66.1	63.7	54.2	76.9	74.7	66	79.8	77.7	71.6	57.5	57.5	57.3	57.3	57.2	56.8	55.6	54.6	54.3	54.2
82	2/9/2023	10:35:50 AM	10:36:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.3	65	56	68.1	65.7	56.8	66.5	64.6	54.8	77.3	75	66	80.1	77.4	70.1	56.8	56.8	56.7	56.7	56.6	56.4	56.1	55.1	54.9	54.8
83	2/9/2023	10:36:00 AM	10:36:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	64.5	55.4	68.6	65.8	57	65.6	63.2	53.4	77.2	74.5	65.4	80.3	77.8	70.6	56.9	56.9	56.8	56.7	56.5	55.9	55.6	53.9	53.6	53.5
84	2/9/2023	10:36:10 AM	10:36:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.7	64	52.6	67.6	64.9	53.7	65.6	63.2	51.8	76.7	74	62.6	78.3	75.7	66.5	53.6	53.5	53.3	53.2	53.1	52.8	52.6	52.3	52.1	51.9
85	2/9/2023	10:36:20 AM	10:36:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.1	63.7	51.6	66.6	64.2	52.6	65.6	63.1	51	76.1	73.7	61.6	78.2	76.6	65.4	52.6	52.6	52.4	52.2	52.2	51.9	51.6	51.2	51.2	51
86	2/9/2023	10:36:30 AM	10:36:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64.2	52.7	68.1	66	53.6	65	62.7	51.8	76.6	74.2	62.7	78.1	77.5	67.1	53.5	53.4	53.4	53.4	53.3	53	52.6	52.1	51.9	51.8
87	2/9/2023	10:36:40 AM	10:36:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.5	64	53	67.6	65.1	54.1	65.9	63.4	51.8	76.5	74	63	80.6	79.7	80	54.1	54	53.8	53.7	53.7	53.3	52.8	52	51.9	51.8
88	2/9/2023	10:36:50 AM	10:36:56 AM	0:00:06	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	64.8	54.6	67.7	65.5	55.8	66.3	64	52.9	74.9	72.6	62.4	81	77	76.2	55.7	55.6	55.5	55.4	55.3	54.8	54.4	53.4	53.2	53
															55.0			**67.3**			**51.0**											**55.4**		**54.2**	**53.3**		
Location C																																					
89	2/9/2023	10:39:31 AM	10:39:40 AM	0:00:09	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.9	64.6	51.9	68.1	66.1	57.8	65.6	62.9	48.9	76.4	74.1	61.4	87.1	87.9	88	57.6	57.3	56.3	55.5	54.9	51.8	50.5	49.5	49.3	49
90	2/9/2023	10:39:40 AM	10:39:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.2	63.4	48.7	67	64.1	49.7	65.1	62.4	48.3	76.2	73.4	58.7	78.9	74.8	62.2	49.6	49.6	49.4	49.2	49.1	49	48.8	48.5	48.4	48.4
91	2/9/2023	10:39:50 AM	10:40:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.6	62.9	48.8	66.7	63.7	49.5	64.8	62.2	48	75.6	72.9	58.8	76.7	75	67.1	49.5	49.5	49.4	49.2	49.2	49	48.8	48.4	48.1	48
92	2/9/2023	10:40:00 AM	10:40:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.8	62.8	49.3	67.3	63.8	49.5	64.6	61.9	48.7	75.8	72.8	59.3	78.7	75.5	62.7	49.5	49.5	49.5	49.5	49.4	49.4	49.3	48.8	48.7	48.7
93	2/9/2023	10:40:10 AM	10:40:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.1	63	50.7	68.1	64.5	53.7	64.4	61.8	49.1	76.1	73	60.7	79	76.6	66.1	53.6	53.4	52.8	52.2	51.9	50.2	49.5	49.2	49.1	49.1
94	2/9/2023	10:40:20 AM	10:40:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.7	63.2	54.9	67.9	64.3	56.2	64.8	62	51.8	75.7	73.2	64.9	78.7	76.4	68.8	56.1	56.1	56	56	56	55.9	55.4	52.8	52.3	51.9
95	2/9/2023	10:40:30 AM	10:40:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.8	63.4	51.1	66.7	64.5	51.8	64.8	62.2	50.4	75.8	73.4	61.1	78.2	76.1	67.6	51.8	51.8	51.8	51.7	51.7	51.3	51.1	50.6	50.5	50.4
96	2/9/2023	10:40:40 AM	10:40:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.8	63.3	50.8	66.4	64.1	52	65.2	62.5	49.6	75.8	73.3	60.8	77.5	76.8	67.2	52	51.9	51.9	51.9	51.8	51.6	51	49.8	49.7	49.6
97	2/9/2023	10:40:50 AM	10:41:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.6	62.8	49.6	66.1	63.3	50	65.1	62.2	49.2	75.6	72.8	59.6	77.8	74.5	62.9	49.9	49.9	49.9	49.9	49.9	49.8	49.7	49.4	49.3	49.2
98	2/9/2023	10:41:00 AM	10:41:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.8	63.3	51.1	66.4	63.9	52.4	64.9	62.5	49.5	75.8	73.3	61.1	79.2	78.7	76.2	52.3	52.2	52.1	52	52	51.4	51	50.2	50.1	49.5

99	2/9/2023	10:41:10 AM	10:41:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.3	63.9	50.2	66.9	64.4	51	65.6	63.2	49.8	76.3	73.9	60.2	77.7	75.9	64.4	51	50.9	50.9	50.8	50.7	50.5	50.2	49.9	49.8	49.8
100	2/9/2023	10:41:20 AM	10:41:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.8	63.3	51.1	66.7	64	52.1	65	62.6	49.9	75.8	73.3	61.1	77.9	75.2	65.8	52.1	52	52	51.9	51.8	51.3	50.9	50.2	50.2	50
101	2/9/2023	10:41:30 AM	10:41:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	63.5	50.4	67.4	64.1	51.4	65.6	62.8	49.8	76.6	73.5	60.4	78.7	75.5	64.9	51.4	51.4	51.2	51	50.9	50.6	50.4	50.1	50	49.8
102	2/9/2023	10:41:40 AM	10:41:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	63.9	50.6	67.3	64.5	51.1	65.9	63.3	50.3	76.6	73.9	60.6	79.2	75.8	64.3	51	51	51	51	50.9	50.8	50.6	50.4	50.3	50.3
103	2/9/2023	10:41:50 AM	10:42:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69	67	50.9	73.8	72.5	53	66.1	63.4	49.9	79	77	60.9	87.6	86.4	66.3	53	53	52.7	52.4	52.2	50.9	50.5	50.1	49.9	49.9
104	2/9/2023	10:42:00 AM	10:42:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.9	63.2	51.1	68.3	66	52.1	64.9	62.3	50.3	75.9	73.2	61.1	78.5	75.9	67.5	52	51.9	51.7	51.5	51.5	51.3	51	50.5	50.4	50.3
105	2/9/2023	10:42:10 AM	10:42:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.4	65.3	53.1	68.7	67	54.7	65.2	63	51.7	77.4	75.3	63.1	79.2	78.3	67.6	54.6	54.6	54.5	54.5	54.4	53.5	52.2	51.8	51.8	51.7
106	2/9/2023	10:42:20 AM	10:42:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.8	67	54.6	69.6	67.7	55.5	67.8	66	53.7	78.8	77	64.6	81.7	78.8	70.3	55.5	55.5	55.3	55.2	55.1	54.9	54.7	54.1	53.9	53.8
107	2/9/2023	10:42:30 AM	10:42:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.9	65.5	52.2	69	67.2	54.6	66.8	64.3	50.6	77.9	75.5	62.2	79.7	78.2	69.7	54.6	54.6	54.4	54.2	54.1	53.6	51.9	50.8	50.7	50.6
108	2/9/2023	10:42:40 AM	10:42:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.9	65.8	51.3	69.7	67.7	52.1	66.6	64.1	50.5	77.9	75.8	61.3	80.8	78.5	64.8	52	52	51.9	51.8	51.7	51.5	51.3	50.9	50.7	50.6
109	2/9/2023	10:42:50 AM	10:43:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.6	65.4	51.3	68.5	66.5	51.9	66.7	64.6	51	77.6	75.4	61.3	79.1	78.1	64.3	51.8	51.8	51.7	51.6	51.6	51.5	51.2	51.1	51	51
110	2/9/2023	10:43:00 AM	10:43:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	64.7	50.5	69	65.9	51.4	66.4	64.2	50.2	77.2	74.7	60.5	79.6	76.8	64.7	51.4	51.4	51.3	51.1	51	50.7	50.6	50.3	50.3	50.2
111	2/9/2023	10:43:10 AM	10:43:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.7	65.5	51.1	68.5	66.2	51.7	66.6	64.4	50.3	77.7	75.5	61.1	79	76.4	64.9	51.7	51.7	51.6	51.6	51.6	51.4	51	50.5	50.4	50.3
112	2/9/2023	10:43:20 AM	10:43:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.1	65.7	52.6	68.5	66.4	53.9	67.5	64.8	50.9	78.1	75.7	62.6	79.2	78.5	66.6	53.8	53.8	53.7	53.5	53.4	53	52.6	51.3	51.1	51
113	2/9/2023	10:43:30 AM	10:43:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.4	64.5	51	68.8	65.8	52.9	66.5	63.6	50	77.4	74.5	61	79.8	77.1	64.4	52.8	52.6	52.2	52	51.9	51.6	51.2	50.4	50.2	50.1
114	2/9/2023	10:43:40 AM	10:43:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.9	63.5	51.1	66.8	64.3	51.5	65.3	63	50.3	75.9	73.5	61.1	77.5	75.7	64.3	51.5	51.5	51.4	51.4	51.4	51.2	51.1	50.6	50.5	50.3
115	2/9/2023	10:43:50 AM	10:44:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.1	63.8	50.3	66.9	64.5	50.8	65.2	62.9	49.9	76.1	73.8	60.3	77.6	76	63.9	50.8	50.8	50.7	50.7	50.7	50.5	50.3	50	49.9	49.9
116	2/9/2023	10:44:00 AM	10:44:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67	65.2	50.6	68.3	66.6	50.9	65.6	63.5	50	77	75.2	60.6	79.6	78.6	62.9	50.8	50.8	50.8	50.8	50.8	50.6	50.5	50.3	50.2	50.1
117	2/9/2023	10:44:10 AM	10:44:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	65.1	50.7	67.6	65.9	51	66	64.3	50.4	76.8	75.1	60.7	78.9	77	64.1	51	51	51	50.9	50.9	50.8	50.7	50.5	50.5	50.4
118	2/9/2023	10:44:20 AM	10:44:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.3	65.2	52.8	67.9	66.5	53.6	65.9	63.9	50.9	77.3	75.2	62.8	79.8	78.4	68.4	53.6	53.6	53.5	53.3	53.2	53	52.7	51.2	51	50.9
119	2/9/2023	10:44:30 AM	10:44:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.1	66.4	54.8	70.5	69.3	56.5	66.7	64.5	52.5	78.1	76.4	64.8	87.9	88.7	74.2	56.5	56.4	56.1	55.9	55.8	55.6	54.4	52.8	52.6	52.6
120	2/9/2023	10:44:40 AM	10:44:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	65.3	53.1	68.1	66.6	55.2	66.7	64.8	52.1	77.1	75.3	63.1	79	77.9	68.4	55.1	55	54.8	54.7	54.7	54	53.1	52.6	52.2	52.1
121	2/9/2023	10:44:50 AM	10:45:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.5	65.8	52.3	68.4	66.9	53.4	66.7	64.9	51.2	77.5	75.8	62.3	80	77.2	68.6	53.3	53.3	53.2	53.2	53.1	52.8	52.3	51.5	51.4	51.2
122	2/9/2023	10:45:00 AM	10:45:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.2	67.4	51.3	71.1	69.3	51.6	67.1	65.3	50.9	79.2	77.4	61.3	80.5	80	64	51.6	51.5	51.5	51.4	51.4	51.4	51.3	51.1	51	50.9
123	2/9/2023	10:45:10 AM	10:45:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.2	70.6	52.4	74.1	72.3	53.2	70.1	68.7	51	82.2	80.6	62.4	84.2	83.8	66.4	53.2	53.2	53.2	53.2	53.1	52.9	52.4	51.2	51.1	51
124	2/9/2023	10:45:20 AM	10:45:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71.9	70.3	51.7	74.2	72.4	53.1	69.1	67.2	51	81.9	80.3	61.7	82.8	80.7	64.8	53.1	53	52.8	52.8	52.6	52.1	51.8	51.2	51.1	51.1
125	2/9/2023	10:45:30 AM	10:45:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.3	67.5	51.8	70.7	69.2	52.8	67.5	65.6	51	79.3	77.5	61.8	81	79.6	65.8	52.8	52.7	52.6	52.5	52.5	52	51.7	51.2	51.1	51.1
126	2/9/2023	10:45:40 AM	10:45:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.2	67.5	52	70.2	68.5	52.5	68	66.2	51.4	79.2	77.5	62	81.1	79.5	65.4	52.5	52.5	52.5	52.4	52.4	52.2	51.9	51.5	51.5	51.5
127	2/9/2023	10:45:50 AM	10:46:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.5	66.7	51.3	69.2	67.4	51.8	67.7	65.9	51	78.5	76.7	61.3	79.7	77.9	64.4	51.7	51.7	51.7	51.5	51.5	51.4	51.3	51.1	51.1	51
128	2/9/2023	10:46:00 AM	10:46:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.5	65.5	50.9	69.2	67.5	51.3	66.6	64.3	50.5	77.5	75.5	60.9	80.9	78.7	63.8	51.3	51.3	51.3	51.2	51.2	51	50.9	50.6	50.5	50.5
129	2/9/2023	10:46:10 AM	10:46:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69	67.4	52.3	69.7	68.3	53.3	66.6	64.5	50.8	79	77.4	62.3	80.8	79.2	66.8	53.3	53.2	53.1	53.1	53.1	52.8	52.3	51	51	50.9
130	2/9/2023	10:46:20 AM	10:46:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.3	66.6	52.3	69.7	68.1	53.2	67.4	65.5	51.5	78.3	76.6	62.3	79.2	78.1	66.4	53.2	53.1	53.1	53	53	52.7	52.3	51.6	51.6	51.5
131	2/9/2023	10:46:30 AM	10:46:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	65	51.3	68.3	66.5	52.1	66.2	64	50.6	77.1	75	61.3	79.1	78.6	65.4	52.1	52.1	52	51.9	51.9	51.8	51.4	50.7	50.7	50.6
132	2/9/2023	10:46:40 AM	10:46:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.4	64	50.5	67.3	64.7	51.7	65.5	63.4	49.7	76.4	74	60.5	79.1	76.5	64.7	51.6	51.6	51.6	51.5	51.5	51.3	50.4	49.8	49.8	49.7
133	2/9/2023	10:46:50 AM	10:47:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.7	64.1	50.2	67.6	65.2	50.5	66	63.3	49.6	76.7	74.1	60.2	78.8	76.8	64.2	50.5	50.5	50.5	50.4	50.4	50.4	50.3	49.7	49.6	49.6
134	2/9/2023	10:47:00 AM	10:47:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	64.1	49.9	67.7	64.9	50.4	66.1	63.4	49.6	76.8	74.1	59.9	79.5	76.7	62.4	50.4	50.4	50.4	50.4	50.4	50.2	49.9	49.7	49.6	49.6
135	2/9/2023	10:47:10 AM	10:47:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.7	64	49.7	67.5	65	50.2	65.7	63.1	49.2	76.7	74	59.7	79.2	76.2	63.5	50.2	50.1	50	49.9	49.9	49.8	49.7	49.4	49.3	49.3
136	2/9/2023	10:47:20 AM	10:47:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.9	65.3	50.2	68.6	66.1	50.5	67.1	64.7	49.9	77.9	75.3	60.2	80.2	76.9	64.3	50.5	50.5	50.5	50.4	50.4	50.4	50.1	49.9	49.9	49.9
137	2/9/2023	10:47:30 AM	10:47:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.2	65.7	49.9	68.8	66.3	50.3	67.5	65.1	49.7	78.2	75.7	59.9	80.4	78.8	63	50.3	50.3	50.2	50.2	50.1	50	50	49.8	49.8	49.7
138	2/9/2023	10:47:40 AM	10:47:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.1	65.7	50	69.1	66.6	50.9	67	64.8	49.5	78.1	75.7	60	80	77.4	67.4	50.8	50.8	50.7	50.7	50.6	49.9	49.7	49.5	49.5	49.5
139	2/9/2023	10:47:50 AM	10:48:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.4	65.3	51.3	68.7	66.4	53.3	66.4	64.3	49.5	77.4	75.3	61.3	81.9	77.9	72.6	53.2	53.2	53	52.9	52.8	52.3	51.3	49.8	49.5	49.5
140	2/9/2023	10:48:00 AM	10:48:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.6	65.3	50.2	69.3	67	50.8	66.2	64	49.5	77.6	75.3	60.2	78.7	77.2	64.3	50.8	50.7	50.6	50.5	50.3	50.2	50.2	49.6	49.6	49.5
141	2/9/2023	10:48:10 AM	10:48:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	64.5	49.9	68.7	66.3	50.6	65.7	63.6	49.6	76.8	74.5	59.9	78.6	76.2	62.5	50.5	50.5	50.4	50.3	50.3	50	49.8	49.6	49.6	49.6
142	2/9/2023	10:48:20 AM	10:48:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.6	63.5	50.3	67.1	64.7	51.2	65	62.8	49.8	75.6	73.5	60.3	77.8	75.5	64.2	51.1	51.1	51	50.8	50.4	50.2	50.1	49.8	49.8	49.8
143	2/9/2023	10:48:30 AM	10:48:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.4	63.2	50.4	66.1	63.9	51.1	64.6	62.3	49.7	75.4	73.2	60.4	77.6	75	64.1	51.1	51	51	50.9	50.9	50.7	50.5	49.9	49.8	49.7
144	2/9/2023	10:48:40 AM	10:48:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.2	64	50.6	66.9	64.7	51.3	65.2	63.3	50.1	76.2	74	60.6	78.9	75.9	63.4	51.3	51.3	51.1	51	51	50.7	50.5	50.1	50.1	50.1
145	2/9/2023	10:48:50 AM	10:49:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.3	63.8	50.6	67.6	65.4	51.3	65.2	62.2	49.5	76.3	73.8	60.6	78.4	77.4	65.1	51.2	51.2	51.2	51.1	51.1	51	50.7	49.8	49.7	49.5
146	2/9/2023	10:49:00 AM	10:49:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.2	63.3	49.7	66.8	64	49.9	65.1	62.2	49.3	76.2	73.3	59.7	77.6	75.4	62.7	49.9	49.9	49.8	49.8	49.8	49.8	49.7	49.4	49.3	49.3
147	2/9/2023	10:49:10 AM	10:49:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.9	62.9	50.4	67.3	64.3	50.8	64.6	61.5	49.9	75.9	72.9	60.4	78.4	75.2	64.5	50.7	50.7	50.7	50.7	50.7	50.5	50.4	50.1	50.1	50
148	2/9/2023	10:49:20 AM	10:49:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67	64.3	50.6	68	65.3	50.9	65.8	63.3	50.3	77	74.3	60.6	78.3	76.9	64.8	50.8	50.8	50.8	50.8	50.8	50.7	50.6	50.3	50.3	50.3
149	2/9/2023	10:49:30 AM	10:49:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.4	65.2	50.9	68.9	66.7	51.7	66.3	63.9	50.5	77.4	75.2	60.9	80.5	77.1	69.9	51.7	51.7	51.6	51.5	51.4	50.8	50.7	50.5	50.5	50.5
150	2/9/2023	10:49:40 AM	10:49:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.5	64.2	50.4	68.1	66.1	51.6	65.7	63.7	49.9	76.5	74.2	60.4	78.2	75.5	64.1	51.6	51.6	51.4	51.2	51.1	50.9	50.2	50	50	49.9
151	2/9/2023	10:49:50 AM	10:50:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	64.8	51.5	67.3	65.5	52.5	65.7	63.7	50.5	76.8	74.8	61.5	78.3	77.5	64.8	52.5	52.5	52.4	52.4	52.4	52.1	51.1	50.7	50.7	50.6
152	2/9/2023	10:50:00 AM	10:50:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67	64.8	50.8	68.4	66.5	51.9	65.6	63.3	49.6	77	74.8	60.8	80	77.4	63.8	51.9	51.8	51.8	51.7	51.6	51.3	50.4	49.7	49.7	49.7
153	2/9/2023	10:50:10 AM	10:50:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.5	66.6	52.2	69.9	68.3	52.8	67.2	65.3	51.7	78.5	76.6	62.2	80.7	78.4	65.1	52.7	52.7	52.7	52.6	52.6	52.3	52.1	51.9	51.8	51.7
154	2/9/2023	10:50:20 AM	10:50:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	65.1	51	68.2	66.5	52	66.5	64.5	50.3	77.2	75.1	61	78.7	77.4	64.2	52	51.9	51.9	51.8	51.8	51.7	51.2	50.3	50.3	50.3
155	2/9/2023	10:50:30 AM	10:50:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.5	64.9	50.6	68.6	66.1	53	66.1	63.5	49.7	77.5	74.9	60.6	79.7	76.3	68.4	52.9	52.8	50.8	50.7	50.6	50.4	50.1	49.7	49.7	49.7
156	2/9/2023	10:50:40 AM	10:50:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	64.6	51.2	68	65.3	55.6	66.3	63.8	49.9	77.2	74.6	61.2	79.7	77.3	69	55.6	55.4	54.9	54.3	53.8	51.4	50.5	50.1	50	49.9
157	2/9/2023	10:50:50 AM	10:51:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.1	65	52.7	68.3	66.3	56	66.4	63.8	49.8	77.1	75	62.7	79.9	78.6	70.6	56	55.9	55.2	54.6	54.2	53.3	51.3	50.3	50.1	49.8
158	2/9/2023	10:51:00 AM	10:51:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.3	66.2	54.5	69.8	67.6	55.9	66.8	64.8	53	78.3	76.2	64.5	81.5	79.8	72.4	55.8	55.8	55.6	55.5	55.5	54.7	54.4	53.9	53.4	53.1
159	2/9/2023	10:51:10 AM	10:51:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.6	65.4	51.4	68.4	66.4	53	66.7	64.5	51.1	77.6	75.4	61.4	79.2	77.9	64.5	52.9	52.9	52.6	52.3	52.2	51.7	51.4	51.2	51.2	51.1
160	2/9/2023	10:51:20 AM	10:51:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.3	65.4	52.8	68.1	66.4	54.3	66.3	64.2	51.7	77.3	75.4	62.8	80.5	77.5	71.7	54.3	54.2	54.2	54.1	54	53.4	52.4	52	51.9	51.7
161	2/9/2023	10:51:30 AM	10:51:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.2	65.4	51.8	68.2	66.2	52.4	66.5	64.5	51.4	77.2	75.4	61.8	78.5	77.6	70	52.4	52.4	52.3	52.2	52.2	52	51.8	51.6	51.5	51.5
162	2/9/2023	10:51:40 AM	10:51:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.4	64.4	50.9	67.2	65.3	51.4	65.4	63.4	49.8	76.4	74.4	60.9	78.5	76.4	67.7	51.3	51.3	51.3	51.3	51.3	51.2	51.1	50.1	50	49.8
163	2/9/2023	10:51:50 AM	10:52:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.6	64.3	50.8	68.2	65.4	51.7	65.7	63.5	50.3	76.6	74.3	60.8	80.1	78	74.5	51.6	51.6	51.6	51.4	51.4	51	50.6	50.4	50.3	50.3
164	2/9/2023	10:52:00 AM	10:52:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	67.8	65.4	50.3	68.5	66.2	50.9	66.5	63.9	49.3	77.8	75.4	60.3	79.6	77.8	73.5	50.9	50.9	50.9	50.9	50.9	50.7	50.5	49.5	49.3	49.3
165	2/9/2023	10:52:10 AM	10:52:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	68.6	65.5	50.1	70.1	66.7	50.9	66.5	63.9	49.6	78.6	75.5	60.1	81.2	78.1	70.3	50.8	50.7	50.4	50.3	50.3	50.2	50	49.8	49.7	49.6
166	2/9/2023	10:52:20 AM	10:52:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.2	65.7	50	70.9	67	50.7	66.9	64.5	49.5	79.2	75.7	60	81.5	78.1	74	50.7	50.6	50.5	50.5	50.5	50.2	50	49.6	49.5	49.5
167	2/9/2023	10:52:30 AM	10:52:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.1	63.5	50.8	67.3	64.9	52.5	65.2	62.6	49.3	76.1	73.5	60.8	85	82.9	82.6	52.4	52.4	52.2	52	51.9	51.6	50.5	49.5	49.4	49.3
168	2/9/2023	10:52:40 AM	10:52:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.4	62.4	49.8	67	64.3	50.6	63.8	61.1	49.4	75.4	72.4	59.8	76.6	75.3	68.8	50.5	50.5	50.5	50.4	50.4	50.2	49.9	49.4	49.4	49.4
169	2/9/2023	10:52:50 AM	10:53:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.1	62.9	50.2	66.8	63.5	50.8	65	61.9	49.7	76.1	72.9	60.2	78.3	75.1	64.3	50.7	50.7	50.7	50.6	50.6	50.3	50.1	49.8	49.7	49.6
170	2/9/2023	10:53:00 AM	10:53:10 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.4	63.2	50.9	67.2	63.8	51.4	65.4	62.3	50.4	76.4	73.2	60.9	78.7	75.5	72	51.3	51.3	51.2	51.2	51.2	51.1	50.9	50.6	50.6	50.5
171	2/9/2023	10:53:10 AM	10:53:20 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.7	62.6	50.2	66.6	63.5	51.2	64.6	61.5	49.5	75.7	72.6	60.2	79.3	77.9	77.6	51.1	51.1	51	50.9	50.9	50.5	50.2	49.7	49.6	49.6
172	2/9/2023	10:53:20 AM	10:53:30 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65	62.1	50.1	66.2	63.4	50.4	64.2	61.3	49.8	75	72.1	60.1	77.2	75.2	63.2	50.3	50.3	50.3	50.2	50.2	50.2	50.1	49.9	49.9	49.9
173	2/9/2023	10:53:30 AM	10:53:40 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	65.3	62.5	51	65.8	63	52.4	64.6	61.5	50	75.3	72.5	61	76.8	74.6	67	52.3	52.3	52.2	52	51.9	51	50.8	50.2	50.1	50
174	2/9/2023	10:53:40 AM	10:53:50 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66	63.2	50.8	67.3	64.2	51.6	64.8	62.3	50.1	76	73.2	60.8	78.2	75.3	63.9	51.6	51.5	51.4	51.4	51.4	50.9	50.7	50.3	50.2	50.1
175	2/9/2023	10:53:50 AM	10:54:00 AM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	63.8	50.8	67.7	64.6	51.4	65.8	62.8	50.2	76.8	73.8	60.8	78.3	75.9	70.2	51.4	51.4	51.4	51.3	51.3	50.8	50.6	50.4	50.4	50.2
176	2/9/2023	10:54:00 AM	10:54:09 AM	0:00:09	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	66.8	63.9	51.9	67.9	64.9	52.9	65.6	62.9	50.8	76.3	73.4	61.4	81.7	76.3	78.8	52.9	52.8	52.7	52.6	52.6	52.1	51.4	50.9	50.8	50.8
															51.3			**56.5**			**48.0**										**51.7**		**51.0**	**50.4**		
Location F																																					
334	2/9/2023	12:40:42 PM	12:40:50 PM	0:00:08	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.2	72.6	62.5	78.5	74.4	63.1	73.5	70.8	61.9	85.2	81.6	71.5	92	88.7	76.8	63.1	63.1	63	62.9	62.8	62.6	62.3	62.1	62	61.9
335	2/9/2023	12:40:50 PM	12:41:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	75.4	73.2	64.3	78.8	76.3	67.1	72.1	70.2	62.1	85.4	83.2	74.3	90.8	87.8	81	67.1	67.1	67.1	66.9	66.8	64.8	63.7	62.7	62.4	62.1
336	2/9/2023	12:41:00 PM	12:41:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	74.4	71.7	62.2	76.8	73.7	65.4	71.6	69.2	59.9	84.4	81.7	72.2	90.7	86.4	79.4	65.4	65.3	65.3	65.3	65.3	61.7	60.6	60	59.9	59.9
337	2/9/2023	12:41:10 PM	12:41:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.5	73	63.2	78.4	75.6	65.9	72.7	70.7	60.6	86.5	83	73.2	90.8	87.5	82	65.8	65.8	65.8	65.7	65.6	65.1	63.4	60.8	60.7	60.6
338	2/9/2023	12:41:20 PM	12:41:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71.6	69.1	61.5	77.5	72.9	62.9	69.4	67.3	59.3	81.6	79.1	71.5	85.4	82.6	75.7	62.9	62.9	62.9	62.8	62.8	62.4	61.7	59.7	59.5	59.3
339	2/9/2023	12:41:30 PM	12:41:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73.9	72.6	59.9	75.9	74.4	60.6	69.9	67.9	59.3	83.9	82.6	69.9	87.2	84.1	76.9	60.6	60.6	60.5	60.4	60.3	60.1	59.8	59.4	59.3	59.3
340	2/9/2023	12:41:40 PM	12:41:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	77.3	76.4	62.1	78.9	78.2	64.3	73.9	72.3	59.7	87.3	86.4	72.1	89.1	88.7	77.6	64.2	64	63.8	63.4	63.3	62.2	61	59.8	59.8	59.7
341	2/9/2023	12:41:50 PM	12:42:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	78.3	77.4	64.7	79.3	78.6	65.1	77.5	76.6	64	88.3	87.4	74.7	90.7	89.4	77.7	65	65	65	65	64.9	64.7	64.6	64.3	64.1	64.1
342	2/9/2023	12:42:00 PM	12:42:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	77.7	76.8	63.8	78.7	77.9	67.4	77.1	76.3	61.1	87.7	86.8	73.8	89.5	88.8	81.6	67.3	67.3	67.2	67	66.9	65.5	62.9	61.2	61.1	61.1
343	2/9/2023	12:42:10 PM	12:42:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	77.4	76.7	61.3	79	78.2	63.1	76.7	76	60.3	87.4	86.7	71.3	89.9	89.4	76.3	63.1	63	62.7	62.5	62.3	61.3	60.8	60.4	60.3	60.3
344	2/9/2023	12:42:20 PM	12:42:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	79.2	78.6	65.3	83.3	82.9	68.7	76.7	75.9	62.4	89.2	88.6	75.3	94.6	94	82.8	68.3	67.6	65.8	65.7	65.7	65.6	64.2	62.6	62.5	62.5
345	2/9/2023	12:42:30 PM	12:42:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	89.1	88.8	75.5	92	91.7	78.7	83.3	83	68.7	99.1	98.8	85.5	102.4	103.2	97	78.7	78.6	78.2	78.1	78.1	77.3	75.1	69.1	68.8	68.7
346	2/9/2023	12:42:40 PM	12:42:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.7	76.2	64.4	83.6	83.2	71.3	72.1	71.3	61.7	86.7	86.2	74.4	90.8	90.3	80.4	71	70.7	69.9	69.3	68.9	66.2	65.1	62.1	61.8	61.7
347	2/9/2023	12:42:50 PM	12:43:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.3	68.8	61.4	72.1	71.3	62.2	69.5	68	60.4	80.3	78.8	71.4	82.5	81.8	74.5	62.1	62.1	62.1	62.1	62.1	61.8	61.5	60.7	60.6	60.4
348	2/9/2023	12:43:00 PM	12:43:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.2	68.8	60.9	71.5	70.4	61.2	68.9	67.6	60.4	80.2	78.8	70.9	83.3	83.9	74.1	61.2	61.2	61.1	61.1	61.1	61	60.9	60.5	60.5	60.4
349	2/9/2023	12:43:10 PM	12:43:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	69.2	67.7	60.4	70	68.5	62.5	68.2	66.6	58.5	79.2	77.7	70.4	81.3	80	74.1	62.4	62.4	62.4	62.3	62.1	61.4	60.9	58.6	58.6	58.5
350	2/9/2023	12:43:20 PM	12:43:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.1	68	58.7	70.8	68.5	59.8	68.9	67.4	57.6	80.1	78	68.7	82.1	80.1	71.7	59.8	59.8	59.7	59.6	59.6	59.3	58.6	57.7	57.6	57.6
351	2/9/2023	12:43:30 PM	12:43:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71.1	68.2	60.2	73.3	69.5	61.1	69.1	67.1	58.9	81.1	78.2	70.2	86.2	80.3	73.7	61.1	61.1	61.1	61.1	61	60.7	60.3	59	59	58.9
352	2/9/2023	12:43:40 PM	12:43:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.9	73.9	64.9	82	77.4	67.3	68.8	66.8	60.1	86.9	83.9	74.9	96.8	93.2	81.5	67.3	67.2	67.2	67.1	67.1	66.8	63.6	60.2	60.1	60.1
353	2/9/2023	12:43:50 PM	12:44:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.8	69.1	61.8	75.5	73.9	65.8	69.5	68.3	61.4	80.8	79.1	71.8	84.1	82	74.3	65.7	65.5	64.9	64.3	64.1	62.7	61.8	61.5	61.5	61.4
354	2/9/2023	12:44:00 PM	12:44:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71.9	68.7	59.1	75	70.4	61.4	69.5	67.6	57	81.9	78.7	69.1	86.8	82.3	73.7	61.4	61.4	61.3	61.2	61.2	60.2	59.4	57.6	57.2	57
355	2/9/2023	12:44:10 PM	12:44:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	74.7	70.7	59.1	77.3	72.9	61	72.3	68.5	57	84.7	80.7	69.1	88.1	85.4	75.6	60.9	60.8	60.6	60.4	60.3	59	58.6	57.1	57	57

piccll_SN2101_SDSU-MV-020923

356	2/9/2023	12:44:20 PM	12:44:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	77	75.7	65	80.6	79.4	67.1	73.5	71.5	61	87	85.7	75	91	90.4	81.6	67.1	67.1	67	66.8	66.8	65.9	64.5	62.4	61.9	61
357	2/9/2023	12:44:30 PM	12:44:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.8	73.9	66.5	79.7	76.6	69.9	74.1	71.9	64	86.8	83.9	76.5	92.1	89.3	86.2	69.8	69.8	69.7	69.4	69.1	67.5	65.2	64.3	64.1	64
358	2/9/2023	12:44:40 PM	12:44:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.1	69.1	61.6	74.5	72	64.8	70.5	67.8	59	82.1	79.1	71.6	86.1	84.1	80.7	64.7	64.7	64.6	64.4	64.3	64	61.2	59	59	59
359	2/9/2023	12:44:50 PM	12:45:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.7	71.4	63	75.2	74.2	64.8	69.9	67.7	59	82.7	81.4	73	86.5	85.6	79.4	64.7	64.7	64.7	64.6	64.5	64	62.7	59.3	59.1	59
360	2/9/2023	12:45:00 PM	12:45:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71	69.5	62	72.8	71.4	63.8	69.8	68.4	61.3	81	79.5	72	85.4	83.2	78.7	63.8	63.8	63.7	63.6	63.4	62.9	61.7	61.3	61.3	61.3
361	2/9/2023	12:45:10 PM	12:45:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	81	80.2	66.5	85.3	84.8	71	72.2	71	61.8	91	90.2	76.5	94.7	94.5	84.4	71	70.9	70.5	70	69.6	67.6	64.9	62.4	62.1	61.8
362	2/9/2023	12:45:20 PM	12:45:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71.2	69.8	60.8	77.9	76.8	63.4	69	67.3	60.1	81.2	79.8	70.8	85.4	84.3	74.3	63.3	63.2	63	63	62.9	61.7	60.5	60.2	60.2	60.2
363	2/9/2023	12:45:30 PM	12:45:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.4	69	60.9	71.9	70.1	62.2	69.5	68	60	80.4	79	70.9	84.7	84.2	79.3	62.1	62.1	61.9	61.9	61.8	61.2	60.8	60.2	60.1	60
364	2/9/2023	12:45:40 PM	12:45:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.6	68.5	60.2	73.3	70.3	61.4	68.9	67.6	58.8	80.6	78.5	70.2	84.8	82.9	77.7	61.4	61.3	61.3	61.3	61.3	60.5	60	59.1	59	58.8
365	2/9/2023	12:45:50 PM	12:46:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.3	68.1	60.7	74.5	70.9	61.8	68.6	66.9	59.8	80.3	78.1	70.7	88.4	83.5	74.6	61.8	61.7	61.7	61.7	61.7	61.1	60.5	59.9	59.8	59.8
366	2/9/2023	12:46:00 PM	12:46:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.1	70.9	62.6	76.8	75.8	65.8	68.9	67.6	59.9	82.1	80.9	72.6	89	88.1	79.2	65.7	65.7	65.6	65.1	64.5	63.1	60.8	60.1	59.9	59.9
367	2/9/2023	12:46:10 PM	12:46:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73.9	71.8	63.7	76.5	75.4	65.7	72.3	69.8	61	83.9	81.8	73.7	88.4	86.1	81.2	65.6	65.6	65.6	65.5	65.5	65.3	64.2	61.4	61.1	61
368	2/9/2023	12:46:20 PM	12:46:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	75.3	71.7	61.1	77.9	73.2	62.4	70.7	68.5	60	85.3	81.7	71.1	91.4	87.1	79.6	62.3	62.3	62.3	62.2	62.1	61.4	61.2	60.2	60.1	60.1
369	2/9/2023	12:46:30 PM	12:46:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	74.8	72.6	63.3	78.3	75.1	65.3	72.6	70.2	60.2	84.8	82.6	73.3	90.6	88.7	78.5	65.3	65.3	65.2	65.1	65	64.4	63.3	60.3	60.3	60.2
370	2/9/2023	12:46:40 PM	12:46:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	80.8	80.1	66	88.1	87.3	70.4	70.6	69.4	62.3	90.8	90.1	76	100.5	99.3	84.5	70.4	70.3	70.3	69.9	69.6	67.2	64.3	62.4	62.3	62.3
371	2/9/2023	12:46:50 PM	12:47:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73.1	72	64.5	76.8	75.9	67.1	70.3	69.2	62.1	83.1	82	74.5	91.4	89.4	86.6	67.1	67.1	67.1	66.9	66.8	65.5	63.8	62.4	62.2	62.2
372	2/9/2023	12:47:00 PM	12:47:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71.4	69.6	61.7	72	70.2	62.7	70.8	68.7	60.5	81.4	79.6	71.7	85	82.6	77.6	62.5	62.5	62.4	62.4	62.4	62.1	61.7	60.6	60.6	60.5
373	2/9/2023	12:47:10 PM	12:47:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	74.4	72.8	65	76	74.9	67.1	72.1	70.2	62.8	84.4	82.8	75	88.8	87.5	81.8	67.1	67	66.7	66.5	66.5	65.3	64.4	63.8	63.7	63.1
374	2/9/2023	12:47:20 PM	12:47:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73.8	70.5	62.4	75.2	72.1	64.9	72.6	69.4	61.4	83.8	80.5	72.4	88.7	85.3	78.6	64.9	64.8	64.8	64.8	64.6	63.1	62	61.4	61.4	61.3
375	2/9/2023	12:47:30 PM	12:47:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73.8	70.5	63.2	77.3	72.5	64.3	71	68.7	61.7	83.8	80.5	73.2	88.9	85	77	64.3	64.3	64.3	64.2	64.1	63.7	63	61.8	61.8	61.7
376	2/9/2023	12:47:40 PM	12:47:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73.5	71.6	63.2	75.8	74	63.7	71.5	69.4	62.4	83.5	81.6	73.2	87.1	84.6	77.6	63.7	63.7	63.7	63.7	63.6	63.6	63.2	62.7	62.6	62.5
377	2/9/2023	12:47:50 PM	12:48:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	74.7	72.5	64.5	76.6	73.8	65.2	72.5	70.7	63.4	84.7	82.5	74.5	88.2	85.6	77.6	65.2	65.2	65.1	65	65	64.7	64.5	63.9	63.6	63.4
378	2/9/2023	12:48:00 PM	12:48:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73	71.6	63.8	75.8	73.4	65.1	70.9	69.7	62.6	83	81.6	73.8	86.5	86.3	77.1	65.1	65	65	64.9	64.8	64.3	63.8	62.8	62.7	62.6
379	2/9/2023	12:48:10 PM	12:48:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	74.4	73.4	64.8	76.5	75.7	66	71.7	70.4	63.5	84.4	83.4	74.8	87.9	86.9	81.3	66	65.9	65.9	65.9	65.8	65.6	64.6	63.7	63.6	63.5
380	2/9/2023	12:48:20 PM	12:48:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	73.3	71.2	63.6	76.6	74.8	67	71	68.7	61	83.3	81.2	73.6	91.8	90.9	86.9	66.9	66.9	66.8	66.7	66.6	64.4	63	61.2	61.1	61
381	2/9/2023	12:48:30 PM	12:48:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	70.1	67.9	60.6	71.2	68.8	61.3	69.1	67.4	59.8	80.1	77.9	70.6	83.9	80.4	73.3	61.3	61.3	61.2	61.2	61.2	61.1	60.8	60.2	60	59.8
382	2/9/2023	12:48:40 PM	12:48:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.3	70.2	61.9	75.6	72.9	62.8	69.2	67.4	59.9	82.3	80.2	71.9	87.4	84.5	79.6	62.8	62.7	62.7	62.7	62.7	62.4	61.7	60.3	60.1	60
383	2/9/2023	12:48:50 PM	12:49:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.1	74.2	64.8	81	79.5	69.3	72.4	69.6	60.9	86.1	84.2	74.8	94	91.6	86.9	69.3	69.3	69.1	68.7	68.4	66	63.2	61.1	60.9	60.9
384	2/9/2023	12:49:00 PM	12:49:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.4	70.2	62.7	74.3	73.2	65.9	70.4	68.1	60	82.4	80.2	72.7	89.6	88.2	82.3	65.9	65.9	65.8	65.7	65.6	63.9	61	60.2	60.1	60
385	2/9/2023	12:49:10 PM	12:49:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	74.4	70.1	59.4	76.8	71.9	61.5	71	67.9	58.7	84.4	80.1	69.4	88.4	84.7	79.5	61.3	61.3	61.1	61	60.8	60	59.3	58.8	58.8	58.7
386	2/9/2023	12:49:20 PM	12:49:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.1	73	63.5	78.8	74.2	64.8	73.9	70.6	59.8	86.1	83	73.5	91.1	86.5	77.4	64.7	64.7	64.7	64.7	64.7	64.1	63.7	60.4	59.9	59.9
387	2/9/2023	12:49:30 PM	12:49:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	77.4	73.9	62.3	79.9	75.7	65.3	74.5	71.9	60.5	87.4	83.9	72.3	91.7	87.4	81.2	65.2	65.1	63.6	63.5	63.5	62.5	61.7	60.6	60.5	60.5
388	2/9/2023	12:49:40 PM	12:49:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	75.5	74	65.5	78.3	77.2	68.3	71.6	69.8	62	85.5	84	75.5	90	88.2	84	68.3	68.3	68.2	68.1	68.1	67.5	65.3	62.2	62.2	62.1
389	2/9/2023	12:49:50 PM	12:50:00 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	75.8	73.5	63.5	80.2	78	67.5	72.2	69.8	61.8	85.8	83.5	73.5	94.3	91.7	83	67	66.4	64.9	63.8	63.3	62.3	62.2	61.9	61.9	61.8
390	2/9/2023	12:50:00 PM	12:50:10 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	80.2	78.3	70.7	86.4	84.4	76.4	73	71.6	64.3	90.2	88.3	80.7	100.2	98	89.9	76.3	76.2	75.8	75.6	75.3	72.3	68.8	64.6	64.5	64.4
391	2/9/2023	12:50:10 PM	12:50:20 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.4	70	62.8	73.6	71.7	64.8	71	69.1	61.9	82.4	80	72.8	85.3	83.1	77.8	64.7	64.7	64.5	64.2	64	63.3	63.1	62.3	62.2	62
392	2/9/2023	12:50:20 PM	12:50:30 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.2	69.2	61.3	73.9	70.2	63	70.8	68.4	60.6	82.2	79.2	71.3	85.3	82.9	77.4	62.9	62.6	62.1	61.9	61.9	61.2	60.9	60.7	60.7	60.6
393	2/9/2023	12:50:30 PM	12:50:40 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	71.4	69.7	63.4	74.1	72.5	67.2	69	67.2	59.8	81.4	79.7	73.4	87.3	83.9	83	67.2	67.2	67.1	67	66.8	65.1	62.3	60	59.9	59.8
394	2/9/2023	12:50:40 PM	12:50:50 PM	0:00:10	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	72.5	69.1	59.6	77.3	73.1	60.2	68.3	66.5	59	82.5	79.1	69.6	91.5	88	76.1	60.2	60.1	60	59.9	59.8	59.7	59.5	59.2	59.1	59.1
395	2/9/2023	12:50:50 PM	12:50:53 PM	0:00:03	Auto	Low	Mic	Slow	dBA	No	No	16.06mV/	76.7	72.6	63	77.5	73.4	63.4	75.3	71	60.2	81.5	77.4	67.8	88.9	86.3	77.2	63.4	63.4	63.4	63.3	63.3	62.7	62	60.5	60.4	60.2
															63.9			**78.7**			**54.3**											**63.7**		**61.8**	**60.4**		

Appendix B

Construction Noise Prediction Model Worksheets

noise level limit for construction phase received at residentially-zoned land use, per City of San Diego = 75
allowable hours over which Leq is to be averaged = 12

Source, receptor, and barrier all share same reference grade elevation; unless otherwise noted)
= Barrier of input height inserted between source and receptor

Comparable FHWA RCNM Construction Equipment Type	Quantity	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Temporary Barrier Insertion Loss (dB)*	*Additional Noise Reduction*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 12-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	Heff (with barrier)	Heff (wout barrier)	G (with barrier)	G (without barrier)	ILbarr (dB)
Man Lift	1	20	75	Aerial Lift	585	0		48.5	8	480	40	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressors	585	0		51.5	8	480	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Crane	1	16	81	Cranes	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Forklifts	585	0		48.5	8	480	40	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	4	50	72	Generator Sets	585	0		45.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Welder / Torch	1	40	73	Welders	585	0		46.5	8	480	41	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from General Construction Phase	**52**																
Excavator	1	40	81	Excavators	585	0		54.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Grader	1	40	85	Graders	585	0		58.5	8	480	53	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Loader	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Dozer	1	40	82	Buldozer	585	0		55.5	8	480	50	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Scraper	1	40	84	Scrapers	585	0		57.5	8	480	52	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
All Other Equipment > 5 HP	1	50	85	Chipper	585	0		58.5	8	480	54	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from ESA Fencing; Clear & Grub; Mob Phase	**59**																
Drill Rig Truck	1	20	79	Bore/Drill Rig	585	0		52.5	8	480	44	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Crane	1	16	81	Cranes	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	3	50	72	Generator Sets	585	0		45.5	8	480	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from CIDH Piles (Pier 2, 3, 4) Phase	**51**																
Crane	1	16	81	Cranes	585	0		54.5	10	600	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Drill Rig Truck	1	20	79	Drill Rig	585	0		52.5	10	600	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	1	50	72	Generator/Powerpack	585	0		45.5	10	600	42	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressor	585	0		51.5	10	600	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Telehandler	585	0		48.5	10	600	41	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Loader	585	0		52.5	10	600	48	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Ground Impr Abut 1 Phase	**53**																
Crane	1	16	81	Cranes	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Column Form, Rebar, Pour (Pier 2, 3, 4) Phase	**45**																
Excavator	1	40	81	Excavators	585	0		54.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Dozer	1	40	82	Rubber Tired Dozers	585	0		55.5	8	480	50	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Roller	1	20	80	Rollers	585	0		53.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Embankment Grading (Abut 1) Phase	**54**																
excavator	1	40	81	Excavators	585	0		54.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Exc Abut 1 Phase	**51**																
Crane	1	16	81	Cranes	585	0		54.5	10	600	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Drill Rig Truck	1	20	79	Drill Rig	585	0		52.5	10	600	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	1	50	72	Generator/Powerpack	585	0		45.5	10	600	42	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressor	585	0		51.5	10	600	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Telehandler	585	0		48.5	10	600	41	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Loader	585	0		52.5	10	600	48	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Ground Impr Abut 4 Phase	**53**																
Excavator	1	40	81	Excavators	585	0		54.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Dozer	1	40	82	Bulldozer	585	0		55.5	8	480	50	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compactor (ground)	1	20	80	Roller Compactor	585	0		53.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Embankment Grading (Abut 4) Phase	**54**																
Excavator	1	40	81	Excavators	585	0		54.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Exc Abut 4 Phase	**51**																
Drill Rig Truck	1	20	79	Bore/Drill Rig	585	0		52.5	8	480	44	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Crane	1	16	81	Cranes	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	3	50	72	Generator Sets	585	0		45.5	8	480	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls) Phase	**51**																
Crane	1	16	81	Track-Mounted Crane	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls) Phase	**45**																
Crane	1	16	81	Track-Mounted Crane	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Erect Falsework Phase	**45**																
Crane	1	16	81	Cranes	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Form, Rebar, Pour (Soffit, Stems, Deck) Phase	**45**																
Crane	1	16	81	Cranes	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Cure Deck, Stress Bridge, Strip Falsework Phase	**45**																
Excavator	1	40	81	Excavators	585	0		54.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Riprap (Abut 1 & 4) Phase	**51**																
Crane	1	16	81	Cranes	585	0		54.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Sidewalk Barrier Install, Deck Grind Phase	**45**																
Tractor	1	40	84	Crawler Tractors	585	0		57.5	8	480	52	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Excavator	1	40	81	Excavators	585	0		54.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Offsite Improvements-Linear, Grubbing & Land Clearing Phase	**54**																
Excavator	3	40	81	Excavators	585	0		54.5	8	480	54	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Grader	1	40	85	Graders	585	0		58.5	8	480	53	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Tractor	1	40	84	Crawler Tractors	585	0		57.5	8	480	52	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Roller	2	20	80	Rollers	585	0		53.5	8	480	48	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	585	0		52.5	8	480	47	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Scraper	2	40	84	Scrapers	585	0		57.5	8	480	55	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Backhoe	2	40	78	Tractors/Loaders/Backhoes	585	0		51.5	8	480	49	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Offsite Improvements-Linear, Grading & Excavation Phase	**60**																
N/A	0	#N/A	#N/A	Signal Boards	585	0		#N/A	8	480	0	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	2	40	79	Tractors/Loaders/Backhoes	585	0		52.5	8	480	50	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Scraper	2	40	84	Scrapers	585	0		57.5	8	480	55	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Rough Terrain Forklifts	585	0		48.5	8	480	40	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compactor (ground)	1	20	80	Plate Compactors	585	0		53.5	8	480	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Pumps	1	50	77	Pumps	585	0		50.5	8	480	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressors	585	0		51.5	8	480	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Grader	1	40	85	Graders	585	0		58.5	8	480	53	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	1	50	72	Generator Sets	585	0		45.5	8	480	41	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade Phase	**59**																
Roller	3	20	80	Rollers	585	0		53.5	8	480	50	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Paver	1	50	77	Pavers	585	0		50.5	8	480	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Paver	1	50	77	Paving Equipment	585	0		50.5	8	480	46	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	2	40	79	Tractors/Loaders/Backhoes	585	0		52.5	8	480	50	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Offsite Improvements-Linear, Paving Phase	**54**																
Compressor (air)	1	40	78	Air Compressors	585	0		51.5	6	360	45	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
										Total Aggregate Noise Exposure from Offsite Improvements-Architectural Coating Phase	**45**																

Construction Schedule

Year	2025											
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Construction Phase												
General Construction	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
ESA Fencing; Clear & Grub; Mob	✔											
CIDH Piles (Pier 2, 3, 4)	✔	✔										
Ground Impr Abut 1	✔	✔										
Column Form, Rebar, Pour (Pier 2, 3, 4)		✔	✔									
Embankment Grading (Abut 1)		✔										
Exc Abut 1		✔										
Ground Impr Abut 4		✔	✔									
Embankment Grading (Abut 4)			✔									
Exc Abut 4			✔									
CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls)		✔	✔	✔								
Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls)				✔	✔	✔	✔					
Erect Falsework					✔	✔	✔					
Form, Rebar, Pour (Soffit, Stems, Deck)						✔	✔	✔	✔	✔	✔	
Cure Deck, Stress Bridge, Strip Falsework											✔	✔
Riprap (Abut 1 & 4)												✔
Sidewalk Barrier Install, Deck Grind												
Offsite Improvements-Linear, Grubbing & Land Clearing												
Offsite Improvements-Linear, Grading & Excavation												
Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade												
Offsite Improvements-Linear, Paving												
Offsite Improvements-Architectural Coating												

Combined Construction Noise at Nearest Offsite Receptor:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General Construction	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
ESA Fencing; Clear & Grub; Mob	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CIDH Piles (Pier 2, 3, 4)	48.8	48.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Impr Abut 1	52.8	52.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Column Form, Rebar, Pour (Pier 2, 3, 4)	0.0	46.8	46.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embankment Grading (Abut 1)	0.0	49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exc Abut 1	0.0	51.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Impr Abut 4	0.0	53.7	53.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embankment Grading (Abut 4)	0.0	0.0	59.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exc Abut 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls)	0.0	43.8	43.8	43.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls)	0.0	0.0	0.0	44.8	44.8	44.8	44.8	0.0	0.0	0.0	0.0	0.0
Erect Falsework	0.0	0.0	0.0	0.0	46.8	46.8	46.8	0.0	0.0	0.0	0.0	0.0
Form, Rebar, Pour (Soffit, Stems, Deck)	0.0	0.0	0.0	0.0	0.0	45.5	45.5	45.5	45.5	45.5	45.5	0.0
Cure Deck, Stress Bridge, Strip Falsework	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.4	51.4
Riprap (Abut 1 & 4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sidewalk Barrier Install, Deck Grind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Grubbing & Land Clearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Grading & Excavation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Paving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Architectural Coating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concurrent Total (dBA)	**56**	**60**	**61**	**53**	**53**	**54**	**54**	**53**	**53**	**53**	**55**	**55**

noise level limit for construction phase received at residentially-zoned land use, per City of San Diego = 75
allowable hours over which Leq is to be averaged = 12

Source, receptor, and barrier all share same reference grade elevation; unless otherwise noted)
= Barrier of input height inserted between source and receptor

Comparable FHWA RCNM Construction Equipment Type	Quantity	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Temporary Barrier Insertion Loss (dB)	Additional Noise Reduction	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 12-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	Heff (with barrier)	Heff (wout barrier)	G (with barrier)	G (without barrier)	ILbarr (dB)
Man Lift	1	20	75	Aerial Lift	190	0		59.5	8	480	51	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressors	140	0		65.8	8	480	60	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Crane	1	16	81	Cranes	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Forklifts	240	0		57.2	8	480	48	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	4	50	72	Generator Sets	340	0		50.7	8	480	52	5	5	0	255	85	340	255.0	85.1	340.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Welder / Torch	1	40	73	Welders	290	0		53.3	8	480	48	5	5	0	205	85	290	205.1	85.1	290.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from General Construction Phase											**66**																
Excavator	1	40	81	Excavators	290	0		61.3	8	480	56	5	5	0	205	85	290	205.1	85.1	290.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Grader	1	40	85	Graders	90	0		78.0	8	480	72	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Loader	340	0		57.7	8	480	52	5	5	0	255	85	340	255.0	85.1	340.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Dozer	1	40	82	Buldozer	240	0		64.2	8	480	58	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Scraper	1	40	84	Scrapers	190	0		68.5	8	480	63	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
All Other Equipment > 5 HP	1	50	85	Chipper	140	0		72.8	8	480	68	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from ESA Fencing; Clear & Grub; Mob Phase											**74**																
Drill Rig Truck	1	20	79	Bore/Drill Rig	90	0		72.0	8	480	63	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Crane	1	16	81	Cranes	190	0		65.5	8	480	56	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	0		66.8	8	480	61	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	3	50	72	Generator Sets	240	0		54.2	8	480	54	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from CIDH Piles (Pier 2, 3, 4) Phase											**66**																
Crane	1	16	81	Cranes	90	0		74.0	10	600	65	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Drill Rig Truck	1	20	79	Drill Rig	140	0		66.8	10	600	59	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	1	50	72	Generator/Powerpack	340	0		50.7	10	600	47	5	5	0	255	85	340	255.0	85.1	340.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressor	240	0		60.2	10	600	55	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Telehandler	290	0		55.3	10	600	47	5	5	0	205	85	290	205.1	85.1	290.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Loader	190	0		63.5	10	600	59	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Ground Impr Abut 1 Phase											**67**																
Crane	1	16	81	Cranes	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Column Form, Rebar, Pour (Pier 2, 3, 4) Phase											**64**																
Excavator	1	40	81	Excavators	140	0		68.8	8	480	63	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Dozer	1	40	82	Rubber Tired Dozers	90	0		75.0	8	480	69	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	240	0		61.2	8	480	55	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Roller	1	20	80	Rollers	190	0		64.5	8	480	56	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Embankment Grading (Abut 1) Phase											**71**																
excavator	1	40	81	Excavators	90	0		74.0	8	480	68	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	0		66.8	8	480	61	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Exc Abut 1 Phase											**69**																
Crane	1	16	81	Cranes	90	0		74.0	10	600	65	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Drill Rig Truck	1	20	79	Drill Rig	140	0		66.8	10	600	59	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	1	50	72	Generator/Powerpack	340	0		50.7	10	600	47	5	5	0	255	85	340	255.0	85.1	340.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressor	240	0		60.2	10	600	55	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Telehandler	290	0		55.3	10	600	47	5	5	0	205	85	290	205.1	85.1	290.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Loader	190	0		63.5	10	600	59	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Ground Impr Abut 4 Phase											**67**																
Excavator	1	40	81	Excavators	140	0		68.8	8	480	63	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Dozer	1	40	82	Bulldozer	90	0		75.0	8	480	69	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	240	0		61.2	8	480	55	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compactor (ground)	1	20	80	Roller Compactor	190	0		64.5	8	480	56	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Embankment Grading (Abut 4) Phase											**71**																
Excavator	1	40	81	Excavators	90	0		74.0	8	480	68	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	0		66.8	8	480	61	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Exc Abut 4 Phase											**69**																
Drill Rig Truck	1	20	79	Bore/Drill Rig	140	0		66.8	8	480	58	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Crane	1	16	81	Cranes	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	190	0		63.5	8	480	58	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	3	50	72	Generator Sets	240	0		54.2	8	480	54	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls) Phase											**66**																
Crane	1	16	81	Track-Mounted Crane	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls) Phase											**64**																
Crane	1	16	81	Track-Mounted Crane	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Erect Falsework Phase											**64**																
Crane	1	16	81	Cranes	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Form, Rebar, Pour (Soffit, Stems, Deck) Phase											**64**																
Crane	1	16	81	Cranes	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Cure Deck, Stress Bridge, Strip Falsework Phase											**64**																
Excavator	1	40	81	Excavators	90	0		74.0	8	480	68	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	0		66.8	8	480	61	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Riprap (Abut 1 & 4) Phase											**69**																
Crane	1	16	81	Cranes	90	0		74.0	8	480	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Sidewalk Barrier Install, Deck Grind Phase											**64**																
Tractor	1	40	84	Crawler Tractors	90	0		77.0	8	480	71	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Excavator	1	40	81	Excavators	140	0		68.8	8	480	63	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Grubbing & Land Clearing Phase											**72**																
Excavator	3	40	81	Excavators	290	0		61.3	8	480	60	5	5	0	205	85	290	205.1	85.1	290.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Grader	1	40	85	Graders	90	0		78.0	8	480	72	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Tractor	1	40	84	Crawler Tractors	140	0		71.8	8	480	66	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Roller	2	20	80	Rollers	340	0		58.7	8	480	53	5	5	0	255	85	340	255.0	85.1	340.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	1	40	79	Rubber Tired Loaders	390	0		56.4	8	480	51	5	5	0	305	85	390	305.0	85.1	390.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Scraper	2	40	84	Scrapers	240	0		66.2	8	480	63	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Backhoe	2	40	78	Tractors/Loaders/Backhoes	440	0		54.2	8	480	52	5	5	0	355	85	440	355.0	85.1	440.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Grading & Excavation Phase											**74**																
N/A	0	#N/A	#N/A	Signal Boards	585	0		#N/A	8	480	0	5	5	0	500	85	585	500.0	85.1	585.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	2	40	79	Tractors/Loaders/Backhoes	240	0		61.2	8	480	58	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Scraper	2	40	84	Scrapers	140	0		71.8	8	480	69	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Man Lift	1	20	75	Rough Terrain Forklifts	390	0		52.4	8	480	44	5	5	0	305	85	390	305.0	85.1	390.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compactor (ground)	1	20	80	Plate Compactors	190	0		64.5	8	480	56	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Pumps	1	50	77	Pumps	340	0		55.7	8	480	51	5	5	0	255	85	340	255.0	85.1	340.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Compressor (air)	1	40	78	Air Compressors	290	0		58.3	8	480	53	5	5	0	205	85	290	205.1	85.1	290.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Grader	1	40	85	Graders	90	0		78.0	8	480	72	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Generator	1	50	72	Generator Sets	440	0		48.2	8	480	43	5	5	0	355	85	440	355.0	85.1	440.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade Phase											**74**																
Roller	3	20	80	Rollers	90	0		73.0	8	480	69	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Paver	1	50	77	Pavers	240	0		59.2	8	480	54	5	5	0	155	85	240	155.1	85.1	240.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Paver	1	50	77	Paving Equipment	190	0		61.5	8	480	57	5	5	0	105	85	190	105.1	85.1	190.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Front End Loader	2	40	79	Tractors/Loaders/Backhoes	140	0		66.8	8	480	64	5	5	0	55	85	140	55.2	85.1	140.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Paving Phase											**71**																
Compressor (air)	1	40	78	Air Compressors	90	0		71.0	6	360	64	5	5	0	5	85	90	7.1	85.1	90.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
Total Aggregate Noise Exposure from Offsite Improvements-Architectural Coating Phase											**64**																

Construction Schedule

Year	2025											
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Construction Phase

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General Construction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ESA Fencing; Clear & Grub; Mob	✓											
CIDH Piles (Pier 2, 3, 4)	✓	✓										
Ground Impr Abut 1	✓	✓										
Column Form, Rebar, Pour (Pier 2, 3, 4)		✓	✓									
Embankment Grading (Abut 1)		✓										
Exc Abut 1		✓										
Ground Impr Abut 4		✓	✓									
Embankment Grading (Abut 4)			✓									
Exc Abut 4			✓									
CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls)		✓	✓	✓								
Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls)				✓	✓	✓	✓					
Erect Falsework					✓	✓	✓					
Form, Rebar, Pour (Soffit, Stems, Deck)						✓	✓	✓	✓	✓	✓	
Cure Deck, Stress Bridge, Strip Falsework											✓	✓
Riprap (Abut 1 & 4)												✓
Sidewalk Barrier Install, Deck Grind												
Offsite Improvements-Linear, Grubbing & Land Clearing												
Offsite Improvements-Linear, Grading & Excavation												
Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade												
Offsite Improvements-Linear, Paving												
Offsite Improvements-Architectural Coating												

Combined Construction Noise at Nearest Offsite Receptor:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General Construction	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1
ESA Fencing; Clear & Grub; Mob	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CIDH Piles (Pier 2, 3, 4)	55.5	55.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Impr Abut 1	72.3	72.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Column Form, Rebar, Pour (Pier 2, 3, 4)	0.0	52.0	52.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embankment Grading (Abut 1)	0.0	58.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exc Abut 1	0.0	62.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Impr Abut 4	0.0	68.0	68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embankment Grading (Abut 4)	0.0	0.0	74.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exc Abut 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls)	0.0	63.3	63.3	63.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls)	0.0	0.0	0.0	55.8	55.8	55.8	55.8	0.0	0.0	0.0	0.0	0.0
Erect Falsework	0.0	0.0	0.0	0.0	61.0	61.0	61.0	0.0	0.0	0.0	0.0	0.0
Form, Rebar, Pour (Soffit, Stems, Deck)	0.0	0.0	0.0	0.0	0.0	54.2	54.2	54.2	54.2	54.2	54.2	0.0
Cure Deck, Stress Bridge, Strip Falsework	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.1	66.1
Riprap (Abut 1 & 4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sidewalk Barrier Install, Deck Grind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Grubbing & Land Clearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Grading & Excavation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Paving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Architectural Coating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concurrent Total (dBA)	**73**	**75**	**76**	**68**	**68**	**68**	**68**	**66**	**66**	**66**	**69**	**69**

noise level limit for construction phase received at residentially-zoned land use, per City of San Diego = 75
allowable hours over which Leq is to be averaged = 12

Source, receptor, and barrier all share same reference grade elevation; unless otherwise noted)
= Barrier of input height inserted between source and receptor

Comparable FHWA RCNM Construction Equipment Type	Quantity	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Temporary Barrier Insertion Loss (dB)	Additional Noise Reduction	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 12-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	Heff (with barrier)	Heff (wout barrier)	G (with barrier)	G (without barrier)	ILbarr (dB)
Man Lift	1	20	75	Aerial Lift	190	3		56.5	8	480	48	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Compressor (air)	1	40	78	Air Compressors	140	4		61.5	8	480	56	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Crane	1	16	81	Cranes	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Man Lift	1	20	75	Forklifts	240	3		54.7	8	480	46	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Generator	4	50	72	Generator Sets	340	2		48.9	8	480	50	5	5	8	255	85	340	255.0	85.1	340.0	0.07	3.1	13.0	5.0	0.5	0.7	1.9
Welder / Torch	1	40	73	Welders	290	2		51.2	8	480	45	5	5	8	205	85	290	205.0	85.1	290.0	0.07	3.3	13.0	5.0	0.5	0.7	2.2
Total Aggregate Noise Exposure from General Construction Phase											**59**																
Excavator	1	40	81	Excavators	290	2		59.2	8	480	53	5	5	8	205	85	290	205.0	85.1	290.0	0.07	3.3	13.0	5.0	0.5	0.7	2.2
Grader	1	40	85	Graders	90	12		66.0	8	480	60	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Front End Loader	1	40	79	Loader	340	2		55.9	8	480	50	5	5	8	255	85	340	255.0	85.1	340.0	0.07	3.1	13.0	5.0	0.5	0.7	1.9
Dozer	1	40	82	Buldozer	240	3		61.7	8	480	56	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Scraper	1	40	84	Scrapers	190	3		65.5	8	480	60	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
All Other Equipment > 5 HP	1	50	85	Chipper	140	4		68.5	8	480	64	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Total Aggregate Noise Exposure from ESA Fencing; Clear & Grub; Mob Phase											**67**			8													
Drill Rig Truck	1	20	79	Bore/Drill Rig	90	12		60.0	8	480	51	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Crane	1	16	81	Cranes	190	3		62.5	8	480	53	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	4		62.5	8	480	57	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Generator	3	50	72	Generator Sets	240	3		51.7	8	480	52	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Total Aggregate Noise Exposure from CIDH Piles (Pier 2, 3, 4) Phase											**60**			8													
Crane	1	16	81	Cranes	90	12		62.0	10	600	53	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Drill Rig Truck	1	20	79	Drill Rig	140	4		62.5	10	600	55	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Generator	1	50	72	Generator/Powerpack	340	2		48.9	10	600	45	5	5	8	255	85	340	255.0	85.1	340.0	0.07	3.1	13.0	5.0	0.5	0.7	1.9
Compressor (air)	1	40	78	Air Compressor	240	3		57.7	10	600	53	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Man Lift	1	20	75	Telehandler	290	2		53.2	10	600	45	5	5	8	205	85	290	205.0	85.1	290.0	0.07	3.3	13.0	5.0	0.5	0.7	2.2
Front End Loader	1	40	79	Loader	190	3		60.5	10	600	56	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Total Aggregate Noise Exposure from Ground Impr Abut 1 Phase											**61**																
Crane	1	16	81	Cranes	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Total Aggregate Noise Exposure from Column Form, Rebar, Pour (Pier 2, 3, 4) Phase											**52**																
Excavator	1	40	81	Excavators	140	4		64.5	8	480	59	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Dozer	1	40	82	Rubber Tired Dozers	90	12		63.0	8	480	57	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Front End Loader	1	40	79	Rubber Tired Loaders	240	3		58.7	8	480	53	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Roller	1	20	80	Rollers	190	3		61.5	8	480	53	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Total Aggregate Noise Exposure from Embankment Grading (Abut 1) Phase											**62**																
excavator	1	40	81	Excavators	90	12		62.0	8	480	56	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	4		62.5	8	480	57	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Total Aggregate Noise Exposure from Exc Abut 1 Phase											**60**																
Crane	1	16	81	Cranes	90	12		62.0	10	600	53	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Drill Rig Truck	1	20	79	Drill Rig	140	4		62.5	10	600	55	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Generator	1	50	72	Generator/Powerpack	340	2		48.9	10	600	45	5	5	8	255	85	340	255.0	85.1	340.0	0.07	3.1	13.0	5.0	0.5	0.7	1.9
Compressor (air)	1	40	78	Air Compressor	240	3		57.7	10	600	53	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Man Lift	1	20	75	Telehandler	290	2		53.2	10	600	45	5	5	8	205	85	290	205.0	85.1	290.0	0.07	3.3	13.0	5.0	0.5	0.7	2.2
Front End Loader	1	40	79	Loader	190	3		60.5	10	600	56	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Total Aggregate Noise Exposure from Ground Impr Abut 4 Phase											**61**																
Excavator	1	40	81	Excavators	140	4		64.5	8	480	59	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Dozer	1	40	82	Bulldozer	90	12		63.0	8	480	57	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Front End Loader	1	40	79	Rubber Tired Loaders	240	3		58.7	8	480	53	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Compactor (ground)	1	20	80	Roller Compactor	190	3		61.5	8	480	53	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Total Aggregate Noise Exposure from Embankment Grading (Abut 4) Phase											**62**																
Excavator	1	40	81	Excavators	90	12		62.0	8	480	56	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	4		62.5	8	480	57	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Total Aggregate Noise Exposure from Exc Abut 4 Phase											**60**																
Drill Rig Truck	1	20	79	Bore/Drill Rig	140	4		62.5	8	480	54	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Crane	1	16	81	Cranes	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Front End Loader	1	40	79	Rubber Tired Loaders	190	3		60.5	8	480	55	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Generator	3	50	72	Generator Sets	240	3		51.7	8	480	52	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Total Aggregate Noise Exposure from CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls) Phase											**59**																
Crane	1	16	81	Track-Mounted Crane	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Total Aggregate Noise Exposure from Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls) Phase											**52**																
Crane	1	16	81	Track-Mounted Crane	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Total Aggregate Noise Exposure from Erect Falsework Phase											**52**																
Crane	1	16	81	Cranes	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Total Aggregate Noise Exposure from Form, Rebar, Pour (Soffit, Stems, Deck) Phase											**52**																
Crane	1	16	81	Cranes	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Total Aggregate Noise Exposure from Cure Deck, Stress Bridge, Strip Falsework Phase											**52**																
Excavator	1	40	81	Excavators	90	12		62.0	8	480	56	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Front End Loader	1	40	79	Rubber Tired Loaders	140	4		62.5	8	480	57	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Total Aggregate Noise Exposure from Riprap (Abut 1 & 4) Phase											**60**																
Crane	1	16	81	Cranes	90	12		62.0	8	480	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Total Aggregate Noise Exposure from Sidewalk Barrier Install, Deck Grind Phase											**52**																
Tractor	1	40	84	Crawler Tractors	90	12		65.0	8	480	59	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Excavator	1	40	81	Excavators	140	4		64.5	8	480	59	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Grubbing & Land Clearing Phase											**62**																
Excavator	3	40	81	Excavators	290	2		59.2	8	480	58	5	5	8	205	85	290	205.0	85.1	290.0	0.07	3.3	13.0	5.0	0.5	0.7	2.2
Grader	1	40	85	Graders	90	12		66.0	8	480	60	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Tractor	1	40	84	Crawler Tractors	140	4		67.5	8	480	62	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Roller	2	20	80	Rollers	340	2		56.9	8	480	51	5	5	8	255	85	340	255.0	85.1	340.0	0.07	3.1	13.0	5.0	0.5	0.7	1.9
Front End Loader	1	40	79	Rubber Tired Loaders	390	2		54.7	8	480	49	5	5	8	305	85	390	305.0	85.1	390.0	0.07	3.0	13.0	5.0	0.5	0.7	1.7
Scraper	2	40	84	Scrapers	240	3		63.7	8	480	61	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Backhoe	2	40	78	Tractors/Loaders/Backhoes	440	2		52.7	8	480	50	5	5	8	355	85	440	355.0	85.1	440.0	0.07	2.9	13.0	5.0	0.5	0.7	1.6
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Grading & Excavation Phase											**67**																
N/A	0	#N/A	#N/A	Signal Boards	585	1		#N/A	8	480	0	5	5	8	500	85	585	500.0	85.1	585.0	0.06	2.8	13.0	5.0	0.5	0.7	1.3
Front End Loader	2	40	79	Tractors/Loaders/Backhoes	240	3		58.7	8	480	56	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Scraper	2	40	84	Scrapers	140	4		67.5	8	480	65	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Man Lift	1	20	75	Rough Terrain Forklifts	390	2		50.7	8	480	42	5	5	8	305	85	390	305.0	85.1	390.0	0.07	3.0	13.0	5.0	0.5	0.7	1.7
Compactor (ground)	1	20	80	Plate Compactors	190	3		61.5	8	480	53	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Pumps	1	50	77	Pumps	340	2		53.9	8	480	49	5	5	8	255	85	340	255.0	85.1	340.0	0.07	3.1	13.0	5.0	0.5	0.7	1.9
Compressor (air)	1	40	78	Air Compressors	290	2		56.2	8	480	50	5	5	8	205	85	290	205.0	85.1	290.0	0.07	3.3	13.0	5.0	0.5	0.7	2.2
Grader	1	40	85	Graders	90	12		66.0	8	480	60	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Generator	1	50	72	Generator Sets	440	2		46.7	8	480	42	5	5	8	355	85	440	355.0	85.1	440.0	0.07	2.9	13.0	5.0	0.5	0.7	1.6
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade Phase											**67**																
Roller	3	20	80	Rollers	90	12		61.0	8	480	57	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Paver	1	50	77	Pavers	240	3		56.7	8	480	52	5	5	8	155	85	240	155.0	85.1	240.0	0.08	3.5	13.0	5.0	0.5	0.7	2.5
Paver	1	50	77	Paving Equipment	190	3		58.5	8	480	54	5	5	8	105	85	190	105.0	85.1	190.0	0.10	3.9	13.0	5.0	0.5	0.7	3.1
Front End Loader	2	40	79	Tractors/Loaders/Backhoes	140	4		62.5	8	480	60	5	5	8	55	85	140	55.1	85.1	140.0	0.13	4.9	13.0	5.0	0.5	0.7	4.3
Total Aggregate Noise Exposure from Offsite Improvements-Linear, Paving Phase											**63**																
Compressor (air)	1	40	78	Air Compressors	90	12		59.0	6	360	52	5	5	8	5	85	90	5.8	85.1	90.0	0.88	12.5	13.0	5.0	0.5	0.7	12.1
Total Aggregate Noise Exposure from Offsite Improvements-Architectural Coating Phase											**52**																

Construction Schedule

Construction Phase

Year	2025											
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General Construction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ESA Fencing; Clear & Grub; Mob	✓											
CIDH Piles (Pier 2, 3, 4)	✓	✓										
Ground Impr Abut 1	✓	✓										
Column Form, Rebar, Pour (Pier 2, 3, 4)		✓	✓									
Embankment Grading (Abut 1)		✓										
Exc Abut 1		✓										
Ground Impr Abut 4		✓	✓									
Embankment Grading (Abut 4)			✓									
Exc Abut 4			✓									
CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls)		✓	✓	✓								
Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls)				✓	✓	✓	✓					
Erect Falsework					✓	✓	✓					
Form, Rebar, Pour (Soffit, Stems, Deck)						✓	✓	✓	✓	✓	✓	
Cure Deck, Stress Bridge, Strip Falsework											✓	✓
Riprap (Abut 1 & 4)												✓
Sidewalk Barrier Install, Deck Grind												
Offsite Improvements-Linear, Grubbing & Land Clearing												
Offsite Improvements-Linear, Grading & Excavation												
Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade												
Offsite Improvements-Linear, Paving												
Offsite Improvements-Architectural Coating												

Combined Construction Noise at Nearest Offsite Receptor:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General Construction	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
ESA Fencing; Clear & Grub; Mob	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CIDH Piles (Pier 2, 3, 4)	53.4	53.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Impr Abut 1	60.3	60.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Column Form, Rebar, Pour (Pier 2, 3, 4)	0.0	50.1	50.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embankment Grading (Abut 1)	0.0	56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exc Abut 1	0.0	59.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Impr Abut 4	0.0	63.8	63.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embankment Grading (Abut 4)	0.0	0.0	67.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exc Abut 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CIDH Piles (Abut 1 & 4 Ftg, Stem, Walls)	0.0	51.3	51.3	51.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Form, Rebar, Pour (Abut 1 & 4 Ftg, Stem, Walls)	0.0	0.0	0.0	52.8	52.8	52.8	52.8	0.0	0.0	0.0	0.0	0.0
Erect Falsework	0.0	0.0	0.0	0.0	56.8	56.8	56.8	0.0	0.0	0.0	0.0	0.0
Form, Rebar, Pour (Soffit, Stems, Deck)	0.0	0.0	0.0	0.0	0.0	51.7	51.7	51.7	51.7	51.7	51.7	0.0
Cure Deck, Stress Bridge, Strip Falsework	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.8	59.8
Riprap (Abut 1 & 4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sidewalk Barrier Install, Deck Grind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Grubbing & Land Clearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Grading & Excavation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Drainage, Utilities, & Sub-Grade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Linear, Paving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite Improvements-Architectural Coating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concurrent Total (dBA)	**63**	**68**	**69**	**60**	**62**	**62**	**62**	**60**	**60**	**60**	**63**	**62**

Appendix C

Traffic Noise Modeling Calculations

Appendix C

Traffic Noise Modeling Calculations - Summary

Project: 15057 SDSU Fenton Bridge

Segment Description and Location				
Number	Name	From	To	Existing 2023
Summary of Net Changes				
1	Fenton Pkwy.	Rio San Diego	Bridge	57.6
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	-
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	62.0
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	65.4
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	64.2

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix C

Traffic Noise Modeling Calculations - Summary

Project: 15057 SDSU Fenton Bridge

Number	Segment Description and Location Name	From	To	Near-Term Year 2035 Base	Near-Term Year 2035 Base with Project	Δ Near-Term Year 2035 Base – Near-Term Year 2035 Base with Project
Summary of Net Changes						
1	Fenton Pkwy.	Rio San Diego	Bridge	60.7	62.9	2.2
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	-	66.4	-
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	62.7	65.3	2.6
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	65.7	65.2	-0.5
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	65.8	66.2	0.3

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix C

Traffic Noise Modeling Calculations - Summary

Project: 15057 SDSU Fenton Bridge

Number	Name	From	To	Horizon Year 2050	Horizon Year 2050 with Project	Δ Horizon Year 2050 – Horizon Year 2050 with Project
	Segment Description and Location					
Summary of Net Changes						
1	Fenton Pkwy.	Rio San Diego	Bridge	60.4	62.6	2.2
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	-	66.1	-
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	62.4	64.9	2.6
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	65.4	64.9	-0.5
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	65.5	65.8	0.3

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix C

Traffic Noise Model Calculations

Project: 15057SDSU Fenton Bridge

Noise Level Descriptor: CNEL
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor: 10

Segment Description and Location				Input											Output				
					Speed	Distance to Directional Centerline, (feet)4		Traffic Distribution Characteristics							CNEL,	Distance to Contour, (feet)3			
Number	Name	From	To	ADT	(mph)	Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		(dBA)5,6,7	70 dBA	65 dBA	60 dBA	55 dBA
Existing 2023 Conditions																			
1	Fenton Pkwy.	Rio San Diego	Bridge	4,000	25	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		57.6	7	16	35	75
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	-	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		#VALUE!	######	######	######	#VALUE!
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	5,100	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		62.0	15	31	68	146
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	7,800	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		65.4	25	53	114	247
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	5,900	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		64.2	20	44	95	205

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix C

Traffic Noise Model Calculations

Project: 15057SDSU Fenton Bridge

Noise Level Descriptor: CNEL
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor: 10

Segment Description and Location				Input										Output				
						Distance to Directional Centerline, (feet)4		Traffic Distribution Characteristics							Distance to Contour, (feet)3			
Number	Name	From	To	ADT	Speed (mph)	Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night	CNEL, (dBA)5,6,7	70 dBA	65 dBA	60 dBA	55 dBA
Near-Term Year 2035 Base																		
1	Fenton Pkwy.	Rio San Diego	Bridge	8,200	25	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	60.7	12	26	56	120
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	-	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	#VALUE!	######	######	######	#VALUE!
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	6,000	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	62.7	16	35	75	162
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	8,400	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	65.7	26	56	120	259
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	8,600	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	65.8	26	57	122	263

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix C

Traffic Noise Model Calculations

Project: **15057SDSU Fenton Bridge**

Noise Level Descriptor: CNEL
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor: 10

Segment Description and Location				Input											Output				
						Distance to Directional Centerline, (feet)4		Traffic Distribution Characteristics							CNEL,	Distance to Contour, (feet)3			
Number	Name	From	To	ADT	Speed (mph)	Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night		(dBA)5,6,7	70 dBA	65 dBA	60 dBA	55 dBA
Near-Term Year 2035 Base with Project																			
1	Fenton Pkwy.	Rio San Diego	Bridge	13,500	25	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		62.9	17	36	78	168
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	14,200	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		66.4	29	62	134	289
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	10,900	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		65.3	24	52	112	242
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	7,500	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		65.2	24	52	112	240
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	9,300	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%		66.2	28	60	129	277

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix C

Traffic Noise Model Calculations

Project: **15057SDSU Fenton Bridge**

Noise Level Descriptor: CNEL
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor: 10

Segment Description and Location				Input										Output				
						Distance to Directional Centerline, (feet)[4]		Traffic Distribution Characteristics							Distance to Contour, (feet)[3]			
Number	Name	From	To	ADT	Speed (mph)	Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night	CNEL, (dBA)[5,6,7]	70 dBA	65 dBA	60 dBA	55 dBA
Horizon Year 2050 Conditions																		
1	Fenton Pkwy.	Rio San Diego	Bridge	7,600	25	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	60.4	11	25	53	114
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	-	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	#VALUE!	######	######	######	#VALUE!
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	5,600	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	62.4	16	33	72	155
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	7,800	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	65.4	25	53	114	247
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	8,000	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	65.5	25	54	116	251

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Appendix C
Traffic Noise Model Calculations

Project: 15057SDSU Fenton Bridge

Noise Level Descriptor: CNEL
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor: 10

Segment Description and Location				Input											Output				
						Distance to Directional Centerline, (feet)[4]		Traffic Distribution Characteristics								Distance to Contour, (feet)[3]			
Number	Name	From	To	ADT	Speed (mph)	Near	Far	% Auto	% Med	% Hvy	% Day	% Eve	% Night	CNEL, (dBA)[5,6,7]	70 dBA	65 dBA	60 dBA	55 dBA
Horizon Year 2050 with Project Conditions																		
1	Fenton Pkwy.	Rio San Diego	Bridge	12,500	25	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	62.6	16	34	74	159
2	Fenton Pwky. Bridge	Bridge	Camino Del Rio N	13,200	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	66.1	27	59	128	275
3	Mission City Pkwy.	Camino Del Rio N	Camino Del Rio S	10,100	35	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	64.9	23	50	107	230
4	Camino Del Rio N	Qualcomm Wy.	Mission City Pkwy.	7,000	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	64.9	23	49	106	229
5	Camino Del Rio N	Mission City Pkwy.	Rancho Mission Rd.	8,600	40	50	50	97.0%	2.0%	1.0%	80.0%	5.0%	15.0%	65.8	26	57	122	263

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.