APPENDIX I

Noise and Vibration Technical Report

ANTELOPE VALLEY LINE CAPACITY AND SERVICE IMPROVEMENTS PROGRAM

NOISE AND VIBRATION TECHNICAL REPORT

Prepared For:

Metro

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ACRONYMS AND ABBREVIATIONS

AVL	Antelope Valley Line
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CPUC	California Public Utilities Commission
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
I-210	Interstate 210
I-5	Interstate 5
LAUS	Los Angeles Union Station
L_{dn}	Day-Night Average Sound Level
L_{eq}	Equivalent Sound Level
Metro	Los Angeles County Metropolitan Transportation Authority
mph	miles per hour
NEPA	National Environmental Policy Act
PPV	Peak Particle Velocity
RMS	Root Mean Square
ROW	Right-of-Way
SB	Senate Bill
SCORE	Southern California Optimized Rail Expansion
SCRRA	Southern California Regional Rail Authority
SR-14	State Route 14
SRP	State Rail Plan
UPRR	Union Pacific Railroad
USDOT	United States Department of Transportation

1. Introduction

The Los Angeles County Metropolitan Transportation Authority (Metro) is initiating the Antelope Valley Line (AVL) Capacity and Service Improvements Program (Proposed Project) which involves the construction of three capital improvements which would provide the capacity required to allow commuter rail service to increase along the AVL to 30-minute bi-directional headways between Los Angeles Union Station (LAUS) and Santa Clarita Valley and up to 60-minute bi-directional headways to Lancaster Terminal along the AVL rail corridor by the year 2028. A Draft Environmental Impact Report (EIR) is being prepared for the following purposes:

- To satisfy the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code (PRC) Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.).
- To inform public agency decision makers and the public of the significant environmental effects of the Proposed Project, as well as possible ways to minimize those significant effects, and reasonable alternatives to the Proposed Project that would avoid or minimize those significant effects.
- To enable Metro to consider environmental consequences when deciding whether to approve the Proposed Project.

The Antelope Valley Line (AVL) is an existing 76.6-mile rail corridor that runs from Los Angeles Union Station (LAUS) in the City of Los Angeles to the Lancaster Terminal in the City of Lancaster within the County of Los Angeles. The Proposed Project would construct three capital improvements along the existing AVL rail corridor to provide operational flexibility and facilitate increased and more reliable commuter rail service along the corridor.

CEQA requires determining the significance of the environmental effects caused by a project. In considering physical changes to the environment, noise and vibration must be examined. This Noise and Vibration Technical Report is comprised of the following sections:

1. Introduction
2. Project Description
3. Regulatory Framework
4. Existing Setting
5. Significance Thresholds and Methodology
6. Impact Analysis
7. References
8. List of Preparers

2. Project Description

The Proposed Project would construct three capital improvements along the existing AVL rail corridor to provide operational flexibility and facilitate increased and more reliable commuter rail service along the corridor. The AVL right of way (ROW) is owned by Metro and used by the Southern California Regional Rail Authority (SCRRA), which operates Metrolink commuter rail service. The AVL is an existing 76.6-mile rail corridor that runs from LAUS in the City of Los Angeles to the Lancaster Terminal in the City of Lancaster within the County of Los Angeles. The corridor consists of the former Southern Pacific Valley Line and parallels the Interstate 5 (I-5) freeway from Los Angeles to Santa Clarita, turns east, then north, to parallel State Route 14 (SR-14) to the City of Lancaster.

The route is Federal Railroad Administration Track Class 4, with a maximum speed of 79 miles per hour (mph). The Union Pacific Railroad (UPRR) operates Class 1 freight service along the corridor as well. There are up to 30 Metrolink commuter trains per day on the AVL.

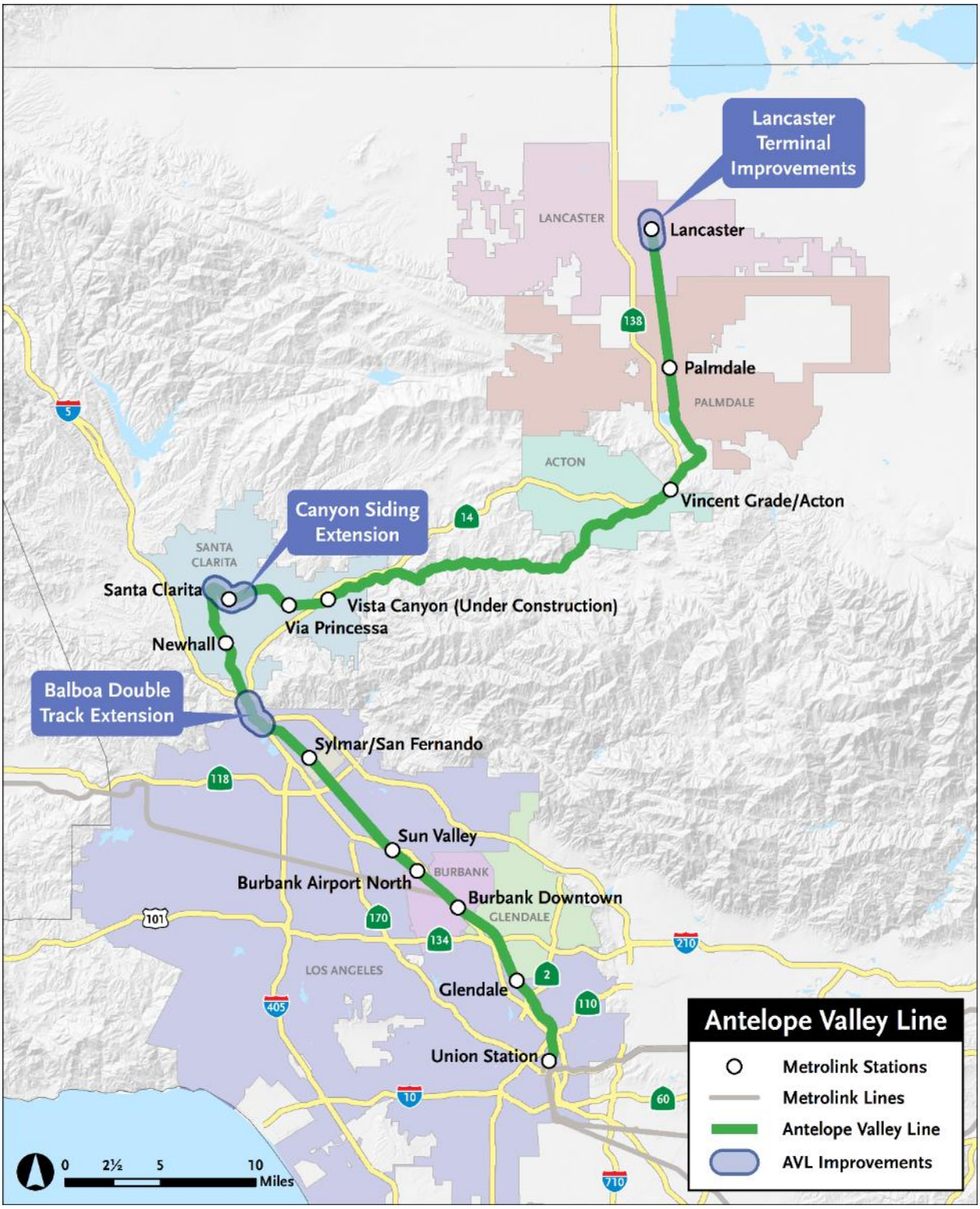
Figure 1 shows the regional context of the Project corridor and the location of the proposed capital improvements.

2.1 PROJECT OBJECTIVES

The AVL plays a critical role in connecting communities in North Los Angeles County to LAUS and the cities in between. Consistent with the State Rail Plan and Metrolink's Southern California Optimized Rail Expansion (SCORE) program, and in anticipation of substantial population and employment growth in the North Los Angeles County region over the next 20 years, Metro seeks to improve rail service on the AVL to realize its full potential as a regional mobility enhancement and not just a peak-hour commuter service. Accordingly, the AVL Capacity and Service Enhancement Improvement Project seeks to:

- Provide regular and more frequent Metrolink services to improve regional connectivity, and accessibility through the enabling of 30-minute bi-directional passenger rail service to the Santa Clarita Valley, and 60-minute bi-directional service to Lancaster along the AVL corridor.
- Improve passenger service reliability and efficiency on the AVL rail corridor.
- Provide necessary infrastructure improvements to enhance operational flexibility and reliability along the AVL corridor.
- Support the vision and goals for rail service in the region consistent with the California State Rail 2040 Plan and Metrolink's SCORE program.

Figure 1: Regional Context of the Study Corridor



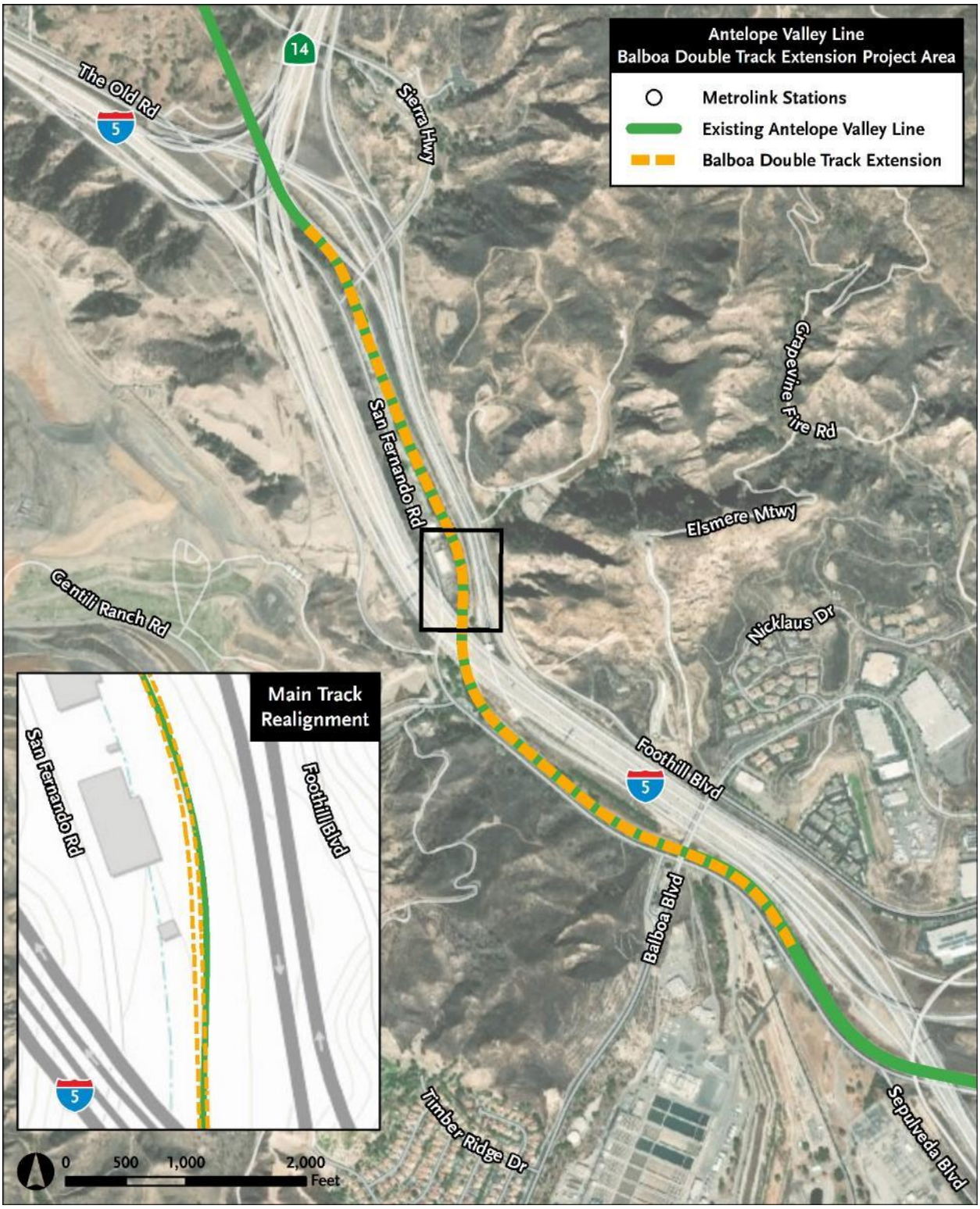
2.2 PROPOSED PROJECT

The Proposed Project is intended to enable improved service along the AVL by constructing three capital improvements at three locations strategically selected along the AVL corridor to provide the most operational flexibility possible for the level of investment available. These three capital improvements are the Balboa Double Track Extension in the City of Los Angeles, the Canyon Siding Extension in the City of Santa Clarita, and the Lancaster Terminal Improvements in the City of Lancaster.

2.2.1 Balboa Double Track Extension

The Balboa Double Track Extension would extend the existing Sylmar siding approximately 6,300 feet north from Balboa Boulevard to Sierra Highway. It is anticipated that the existing railroad ROW would accommodate most of the Balboa Double Track Extension. In addition to installation of the proposed double track extension, the improvement would require realignment of the existing Main Track through portions of the site to accommodate the second track and the required clearance to existing structures. The proposed double track would be positioned to the east of the existing AVL Main Track and would tie-in at the existing Sylmar siding terminus on the south end of the site and reconnect with the existing Main Track at the north end just south of the Sierra Highway road bridge. **Figure 2** presents the location of the proposed improvement and its surroundings.

Figure 2: Balboa Double Track Extension Vicinity



Metro

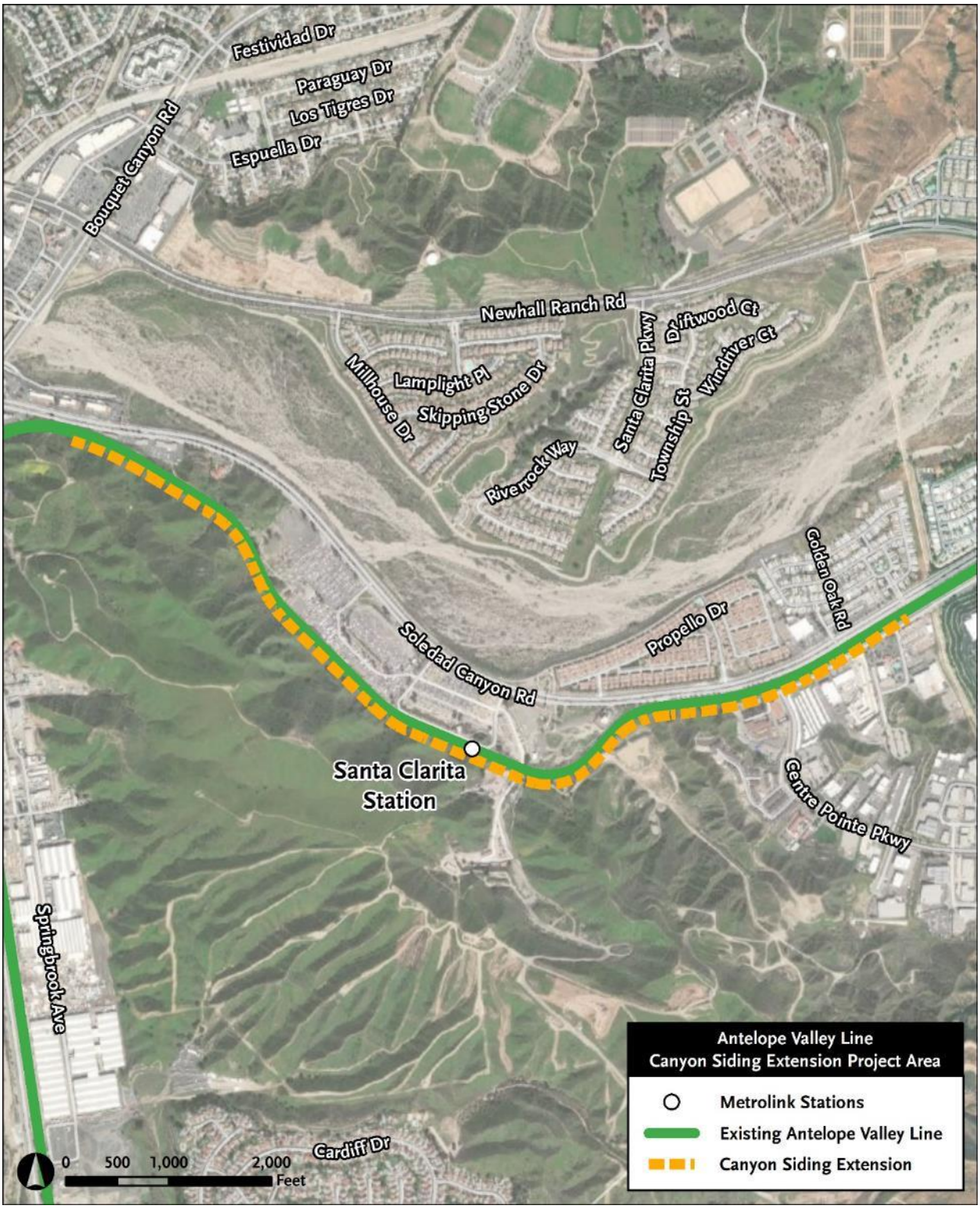
2.2.2 Canyon Siding Extension

The Canyon Siding Extension would improve the existing Saugus Siding by adding approximately 8,400 feet of new track between Bouquet Canyon Road and Golden Oak Road. The Canyon Siding Extension would not require realignment of the Main Track as there is adequate horizontal clearance for both tracks within the existing ROW. The proposed Canyon Siding Extension would include a second side-platform at the existing Santa Clarita Metrolink Station. A new crossover track south of the Santa Clarita Station would be provided to facilitate turnback of Metrolink trains at Santa Clarita Station and improve operational flexibility and reliability. **Figure 3** provides the location of the proposed Canyon Siding Extension and its surroundings.

Platform to Platform Pedestrian Undercrossing Design Option
An option to use a grade separated pedestrian undercrossing at Santa Clarita Station has been considered to connect the existing platform to the new second platform.

Island Platform with Platform to Parking Lot Pedestrian Undercrossing Design Option
An option to provide a new island platform (with two platform faces) has been considered and would include a grade separated pedestrian undercrossing connecting the Santa Clarita Metrolink Station parking area to the new island platform.

Figure 3: Canyon Siding Extension Vicinity



2.2.3 Lancaster Terminal Improvements

The Lancaster Terminal Improvements would include the expansion of the existing train layover facilities by adding one new 1,000-foot-long and two 500-foot-long train storage tracks of Lancaster Boulevard with provision for fueling. The train storage track design may require an operating easement within the UPRR ROW subject to further design refinements. The proposed layover facility would accommodate up to four 5-car trains. **Figure 4** provides the location of the proposed improvement and its surroundings.

Island Platform with Pedestrian Undercrossing Design Option
An option has been developed to provide an island platform with two platform faces at Lancaster Station. The island platform would be constructed within the footprint of the existing station platform and parking lot at Lancaster Station. A grade separated pedestrian undercrossing to the island platform would be constructed in the middle of the new island platform with ramps for access to the proposed island platform.

Island Platform with Pedestrian Overcrossing Design Option
Similar to the previous option (Island Platform with Pedestrian Undercrossing Design Option), the Island Platform with Pedestrian Overcrossing Design Option would have generally the same track and station configuration and would use a grade separated pedestrian overcrossing to access the island platform. The pedestrian overcrossing would be constructed on the north end of the island platform with stairs and an elevator to go up and over the railroad track. Pedestrians would access the ground level in the station parking lot near the existing Lancaster Metrolink Station building.

Island Platform with Pedestrian At-Grade Crossing Design Option
Similar to the previous two options (Island Platform with Pedestrian Undercrossing Design Option and Island Platform with Pedestrian Overcrossing Design Option), the Island Platform with Pedestrian At-Grade Design Option would have generally the same track and station configuration and would use an at-grade pedestrian crossing to access the island platform. The pedestrian at-grade crossings would be constructed on the north and south ends of the island platform. Pedestrians would access the crossing via existing or new sidewalks in the station parking lot.

Figure 4: Lancaster Terminal Improvements Vicinity Map

2.3 OPERATIONAL CHARACTERISTICS

The Proposed Project is intended to enable the increase in commuter rail service to 30-minute bi-directional service from LAUS to the Santa Clarita Valley and 60-minute bi-directional services to Lancaster. As of 2019, Metrolink operates 30 weekday trains, 12 Saturday trains, and 12 Sunday trains with an end-to-end trip time of approximately two hours and 15 minutes. Peak service operates roughly every 30-60 minutes with most of the trains making all stops, and one train providing express service. Non-peak direction service operates from every 45 minutes to over two hours, and does not serve all the northern-most stations (Vincent Grade/Acton, Palmdale and Lancaster). Train speeds along the AVL range from approximately 30 to 70 mph depending on topography, track geometry, and whether there is a single track or double track configuration.

2.4 CONSTRUCTION

The Proposed Project would almost entirely be constructed within existing rail or street ROW. Minor acquisitions, easements, or temporary construction easements may be necessary at select locations mainly to accommodate construction staging and laydown areas and to accommodate the required grading activities associated with the proposed capital improvements. Generally, construction activities associated with each Capital Improvement would include site clearing, grading and retaining wall installation, utility relocation and installation, and track and systems installation and station platform construction.

Construction equipment anticipated to be used for the Proposed Project include track installation equipment, front-end loaders, dump and haul trucks, excavators, medium to large rams for braking rock, small/medium scrapers, drills for tiebacks/rock bolts, construction forklifts, crane, concrete pump trucks, concrete haul trucks, rail-mounted drill rig (for pier protection wall installation) and utility/service vehicles.

The construction duration of the Proposed Project is expected to last approximately 18 months per Capital Improvement. For safety reasons and to limit disruptions to rail service, project specific work windows would be required for much of the construction work. Similarly, certain activities that could disrupt rail service may require nighttime and weekend construction to minimize disruption. The overall project schedule anticipates construction commencing beginning 2024 and completion in 2028.

3. Regulatory Framework

California Environmental Quality Act (CEQA 2019) requires evaluation of potential effects of proposed government actions on the environment. The act calls for an agency relevant to the project to approve the analysis. The Lead Agency for CEQA is the Los Angeles County Metropolitan Transportation Authority (Metro). In compliance with CEQA, this noise and vibration impact assessment was performed in accordance with regulations and guidance set forth by federal, state, and local entities, approved by Metro.

3.1 FEDERAL REGULATIONS

Federal Transit Administration (FTA) and Federal Railroad Administration (FRA) of the United States Department of Transportation (USDOT) regulations apply methods and limits found in the FTA Guidance Manual, *Transit Noise and Vibration Impact Assessment Manual*, 2018, henceforth referred to as FTA Guidance Manual. The FTA/FRA approach is used to discuss noise and vibration environmental analysis, consequences, and abatement in this report. CEQA analyses apply these methods and limits, described further in Section 5.

3.2 STATE REGULATIONS

CEQA provides the following checklist to evaluate potential noise and vibration impacts in Appendix G of the State CEQA Guidelines (list updated in 2019):

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?

b) Would the project result in excessive ground-borne vibration or ground-borne noise levels?

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 checklist requires each question be answered by checking off one of the following columns:

Table 1: CEQA Impact Checklist

Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
❑	❑	❑	❑

In addition to specific questions on noise and vibration, CEQA also asks: Does the project have impacts that are individually limited, but cumulatively considerable? “Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects (included in existing conditions), the effects of other current projects, and the effects of probable future projects.

The State of California does not provide significance thresholds (specific limits) for noise and vibration from transit projects.

The use of heavy equipment during construction of the Proposed Project has the potential to result in substantial, temporary increases in local noise levels along the AVL rail corridor. CEQA qualitatively regulates construction noise at the state level, but recommends using local ordinances to specifically define exceedances. At the state level, CEQA qualitatively recommends reducing construction vibration but does not provide any specifics or recommendations on limits.

3.3 REGIONAL REGULATIONS

The Los Angeles County Code of Ordinances[1] does not regulate noise and vibration from rail operations.

The Los Angeles County Code of Ordinances defines regional limits for construction noise levels and allowable hours when construction activities may generate noise. Significance thresholds are listed in **Table 10** in Section 5.2.3; they include absolute thresholds for residential and commercial receivers. Section 12.08 (Noise Control) Part 440(D) (Construction Noise) of the code, however, states that “in case of a conflict between this chapter and any other ordinance regulating construction activities, provisions of any specific ordinance regulating construction activities shall control.”

More specific, city codes define the hours when construction work may occur in all three cities where construction will take place, therefore those local work hour definitions are used for this analysis. The City of Los Angeles provides specific noise limits for construction work in that city; the limits are defined in Section 3.3.1 and integrated into **Table 10** in Section 5.2.3. However, the noise limits are only qualitatively defined in the City of Santa Clarita and the City of Lancaster codes as causing “loud, unnecessary and unusual noises.” Because the City of Lancaster and City of Santa Clarita noise limits are generic, the numerical noise limits defined in the Los Angeles County Code of Ordinances apply to construction noise in those cities. Noise limits vary based on receiver type and whether the construction equipment generating the noise is mobile (dozers, loaders, etc.) or stationary (generators, pumps, etc.). The list of anticipated construction equipment provided for this Proposed Project only includes mobile construction equipment. Thus, the mobile noise limits are used in this analysis.

Section 12.08, Part 560 of the Los Angeles County Code of Ordinances regulates construction vibration at the regional level, which states that operating any device that creates vibration which

[1] Los Angeles County Code of Ordinances, Section 12.08, Noise Control.

is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz.

3.4 LOCAL REGULATIONS

Under CEQA, construction noise limits are defined through regional and local regulations. Regional regulations are defined above, and the three cities in which construction will occur are listed below, with information on municipal codes and CEQA thresholds.

In addition to construction, City of Los Angeles CEQA thresholds (see section below) apply to operations as well. Other city regulations do not apply to operational noise and vibration.

3.4.1 City of Los Angeles

The *L.A. CEQA Thresholds Guide* provides criteria for meeting CEQA requirements for operations. These criteria are applied for the City of Los Angeles, as well as the remainder of the AVL rail corridor, as described in Section 5.2 of this Noise and Vibration Technical Report.

The *L.A. CEQA Thresholds Guide* also defines the local noise limits and hours for construction work in the City of Los Angeles per the City of Los Angeles Municipal Code.[2] For construction activities taking place between the hours of 9 p.m. and 7 a.m. Monday through Friday, before 8 a.m. or after 6 p.m. on Saturday, anytime on Sunday, work may be permitted if a written variance is approved by the Board of Police Commissioners through its Executive Director. For construction activities that lasts more than 10 days in a three month period – the limit is 5 dBA above the ambient noise levels. This analysis assumes construction activities will all last more than 10 days per three month period, so the noise limit for construction in the City of Los Angeles is ambient +5 dBA. This applies to daytime construction and is recommended as part of a permit for nighttime construction. No specific noise limits for commercial receivers are included in the *L.A. CEQA Thresholds Guide*. Therefore, the Los Angeles County Code Ordinance for noise limit applies to commercial receivers.

The City of Los Angeles General Plan Noise Element discusses rail systems complying with National Environmental Policy Act (NEPA) and CEQA for noise. Vibration is also discussed, and it is assumed that NEPA compliance applies. CEQA is covered in the other methods and limits stated.

3.4.1 City of Santa Clarita

The local municipal code for the City of Santa Clarita[3] identifies hours when construction work may occur, but does not define numerical noise limits that must be met. The City of Santa Clarita defines daytime work hours as “seven a.m. to seven p.m., Monday through Friday, and eight a.m.

[2] City of Los Angeles Municipal Code, Chapter 11, Noise Regulation.
[3] City of Santa Clarita Municipal Code, Title 11, Public Peace and Welfare, Chapter 11.44, Noise Limits.

to six p.m. on Saturday. Further, no work shall be performed on the following public holidays: New Year's Day, Independence Day, Thanksgiving, Christmas, Memorial Day and Labor Day." Work may be allowed outside of these defined hours with a permit from the Department of Community Development.

3.4.1 City of Lancaster

The local municipal code for the City of Lancaster[4] identify hours when construction work may occur, but does not define numerical noise limits that must be met. The City of Lancaster prohibits construction "at any time on Sunday or any day between the hours of eight p.m. and seven a.m." Work may be permitted during the prohibited hours with express written permission of the city engineer.

[4] City of Lancaster Municipal Code, Title 8, Health and Safety, Chapter 8.24, Noise Regulations.

4. Existing Setting

Noise- and vibration-sensitive receivers were identified using the FTA Guidance Manual's definitions of noise- and vibration-sensitive land uses. To identify the sensitive receivers potentially impacted by the Proposed Project, the following FTA screening distances were applied from the FTA Guidance Manual:

- Commuter rail mainline: unobstructed view 750 feet, intervening buildings 375 feet;
- Commuter rail station with horn blowing: unobstructed view 1,600 feet, intervening buildings 1,200 feet;
- Commuter rail station without horn blowing: unobstructed view 250 feet, intervening buildings 200 feet; and
- Commuter railroad crossing with bells and with/without horns: unobstructed view 1,600 feet, intervening buildings 1,200 feet.

Existing noise-sensitive receivers in the Study Area include single-family residences, multi-family residences, hotels, schools, film/recording studios, theaters, churches, cemeteries, and laboratories. A full list of sensitive receivers can be found in Appendix C. Receivers in each construction area are identified from the operational noise analysis, and additional receivers were added in the City of Santa Clarita and City of Lancaster to reflect the sensitivity of commercial properties to construction noise and residences near the train storage track construction areas. These new receivers have been marked with a footnote in the construction noise prediction tables, and more detailed receiver information is available in Appendix D. Construction noise and vibration was assessed at all first-row receivers[5] in vicinity of construction, even if the first row is beyond screening distances specified in city noise codes.

The AVL rail corridor was divided into seven sections that defines the Study Area, optimized for noise and vibration measurement and assessment, as seen in **Table 2**.

Table 2: Noise and Vibration Study Area Sections

Number	Section	Associated City/Jurisdiction
1	LA Union Station to Highway 2	Los Angeles
2	Highway 2 to Highway 134	Los Angeles - Glendale
3	Highway 134 to I-5	Glendale - Burbank
4	I-5 to I-210	Burbank - Sylmar
5	SW mountains: I-210 to Capra Rd	Sylmar - Santa Clarita
6	NE mountains: Capra Rd to Pearblossom Highway	Santa Clarita - Palmdale
7	Pearblossom Highway to Lancaster Station	Palmdale - Lancaster

[5] First-row receivers are the row of buildings closest to the tracks, without intervening structures.

Sensitive receiver identification is based on operations direction, the seven sections of the Study Area, and numerical ID (numbered south to north). An example is southbound, Study Area Section 5, receiver number 68: SB-5-068.

Existing noise in the Study Area was established by noise measurements, and supplemented with predictions to account for non-pandemic operations – See Section 5 of this Noise and Vibration Technical Report. The purpose of the noise measurements was to document the existing noise environment and to develop baseline data for assessing the potential noise impacts resulting from the Proposed Project. To help with understanding noise level discussions, **Table 3** shows noise metrics applied to this Proposed Project. Further information on these metrics can be found in Appendix A.

Table 3: Noise Metrics Applied to Proposed Project

Metric	Description
dBA	Decibel, unit of sound, A-weighted to account for human sensitivity
$L_{eq}(h)$	Loudest 1-hour average sound level
L_{dn}	24-hour average sound level with 10 dBA penalty applied to nighttime hours (10 pm – 7 am)
CNEL	24-hour average sound level with 10 dBA penalty applied to nighttime hours (10 pm – 7 am) and 5 dBA penalty applied to evening hours (7 – 10 pm)

Existing noise data included in this analysis of the Proposed Project included data collected as part of this Proposed project and from three additional proposed projects or studies. All data were collected within the AVL Study Area. The data sets applied included the four proposed projects or studies listed below (refer to Appendix B for details):

- Antelope Valley Line (AVL) – data collected as part of this study
- California High Speed Rail (HSR)
- Metrolink Central Maintenance Facility (CMF)
- LA Metro Link Union Station (Link US).

AVL measurements consisted of 28 long-term measurements (24-hour duration, identified with the prefix “LT”) and 47 short-term measurements (1-hour duration, identified with the prefix “ST”). Maps and photographs showing the measurement locations, as well as location descriptions and associated sound levels, are shown in Appendix B. The measurements were conducted at representative locations, allowing establishment of existing noise at all sensitive receivers. At short-term measurement locations, nearby long-term data were applied to establish 24-hour noise levels. Also, in some cases, adjustments were made to establish the existing noise at locations not specifically measured. This required adjusting for distance from major noise sources (train or highway) and adjusting for differences in shielding during sound propagation (e.g., building rows) based on equations in the FTA Guidance Manual. As an example, data collected at a location with direct line-of-sight to the tracks can be adjusted to a second-row receiver (one row of homes between these receivers and the tracks) by accounting for the difference in distances to the tracks [-10*log(distance from second-row receiver to tracks / distance from measurement location to

tracks) dBA] and by accounting for the sound shielding provided by the intervening row of homes (-5 dBA, assuming the percentage of gap between homes is less than 35%).

During the noise analysis phase of the Proposed Project, existing noise levels were refined to establish more accurate levels at specific locations if the predicted future noise levels were close to moderate noise impact thresholds (see Section 5). For example, where privacy walls were previously not accounted for, they were added in to get a refined existing noise level.

Note that the FTA Guidance Manual's procedure for a general vibration assessment, as applied in this assessment, does not include measurements of existing vibration conditions. A detailed analysis may include existing vibration measurements, but only in certain cases when potential vibration impacts are predicted.

A description of the noise environment in the seven sections of the Study Area is provided in **Table 4**. The existing noise associated with each receiver is listed in Appendix C. In general, existing train operations and highway and local road traffic contribute most to the existing noise, with highway/road traffic representing a more continuous or more frequent noise source. Local truck traffic and train horns sounded at crossings represent the loudest noise sources, with freight train noise exceeding that from passenger rail. The measured day-night sound level (L_{dn}, 24-hour average with nighttime penalty, see Appendix A for more details) is generally about 70 dBA or higher very close to roads and railroad tracks, between 60 and 70 dBA farther away from these sources, and 50 to 60 dBA deep into the neighborhoods. Noise levels in parts of the mountainous region of the Study Area, particularly Section 5, experience quieter environments in between noise events compared to other areas. However, roadway and rail traffic contribute enough noise over a 24-hour period to follow the same general trends for L_{dn} as in other sections of the alignment.

Table 4: General Noise Environment by Study Area Section

Section Number	Associated City/ Jurisdiction	Noise Environment
1	Los Angeles	Train operations (Metrolink AVL and Ventura Line, Amtrak, freight), including horns and bells at crossings; train maintenance yard operations (just N of I-5); freeway and local road traffic; occasional aircraft flyovers
2	Los Angeles - Glendale	Train operations (Metrolink AVL and Ventura Line, Amtrak, freight), including horns and bells at crossings; freeway and local road traffic; occasional aircraft flyovers; local industry
3	Glendale - Burbank	Train operations (Metrolink AVL and Ventura Line, Amtrak, freight), including horns (except in quiet zone at Flower, Grandview, and Sonora crossings) and bells at crossings; freeway and local road traffic; aircraft to/from Burbank Airport
4	Burbank - Sylmar	Train operations (Metrolink AVL, freight), including horns and bells at crossings; freeway and local road traffic; occasional aircraft flyovers

Section Number	Associated City/ Jurisdiction	Noise Environment
5	Sylmar - Santa Clarita	Train operations (Metrolink AVL, freight), including horns and bells at crossings; freeway and local road traffic; occasional aircraft flyovers
6	Santa Clarita - Palmdale	Train operations (Metrolink AVL, freight), including horns and bells at crossings; freeway and local road traffic; occasional aircraft flyovers
7	Palmdale - Lancaster	Train operations (Metrolink AVL, freight), including horns and bells at crossings; freeway and local road traffic; occasional aircraft flyovers

5. Significance Thresholds and Methodology

This section first lists the potential noise and vibration concerns for the Proposed Project, then discusses the significance thresholds/criteria applied to determine if there are potential noise or vibration impacts, and finally describes the methodology applied to the predictions and impact assessments. Both the criteria and methodology sections are separated by phase of the Proposed Project: operational or construction.

5.1 POTENTIAL NOISE AND VIBRATION CONCERNS

5.1.1 Potential Noise Concerns

The following list summarizes the major noise sources associated with the Proposed Project:

Rail Operations: This is the normal noise from the operation of rail vehicles and includes noise from steel wheels rolling on steel rails (wheel/rail noise) and from propulsion motors, air conditioning and other auxiliary equipment on the rail vehicles. Noise from Metrolink, Amtrak, and freight trains are included in the analysis. A key assumption in the noise predictions is that optimal wheel and rail profiles would be maintained through periodic truing of the wheels and rail grinding to prevent wheel/rail noise from increasing in the future.

Audible Warnings: Audible warnings are required by the California Public Utilities Commission (CPUC) at all gate-protected at-grade crossings. The required audible warnings are ringing bells that are located on the masts of the crossing gates and sounding of horns located on the lead vehicle of the trains. Horn noise from both gate-protected and not gate-protected crossings from Metrolink, Amtrak and freight trains are included in the analysis.

Special Trackwork: Turnouts and crossovers, where two rails cross, are the primary type of special trackwork on an alignment. This type of special trackwork is sometimes referred to as a *frog*. Standard frogs have gaps, and the train wheels must “jump” across the gap. The wheels striking the ends of the gap increase noise levels. A standard frog can cause noise levels to increase by approximately 5 decibels (dB) at a distance of 50 feet (FTA Guidance Manual). Low-impact frogs are available that smooth the transition through the gap in the rail and can be used as a mitigation measure where the noise from special trackwork results in a predicted impact. Examples of low-impact frogs include flange-bearing frogs, monoblock frogs, spring-rail frogs and moveable point frogs.

Wheel Squeal: Wheel squeal is generated when steel-wheel transit vehicles traverse tight radius curves. It is very difficult to predict when and where wheel squeal will occur. A general guideline is that there is the potential for wheel squeal at any curve with a radius that is less than approximately 1,000 feet. Although typically applied to light rail analyses, a project with commuter rail with tight curves, such as in mountainous regions, should consider wheel squeal. Common

approaches to controlling wheel squeal include (1) applying a friction modifier to the railhead and/or the wheel tread, (2) applying lubricant to the gauge face of the rail or the wheel flange and (3) optimizing the wheel and rail profiles. Using resilient wheels and maintaining the tracks would help control wheel squeal; also, periodically truing wheels would maintain an optimum profile and can help minimize wheel squeal. Based on observations as part of this Proposed Project, the Metrolink trains did not produces perceptible wheel squeal on curved track, even with track radii being less than 1000 feet; the only perceived wheel squeal was from freight train operations, which is captured in the existing noise.

Construction: All the sources discussed above are associated with the operation of the Proposed Project. The use of heavy equipment during project construction has the potential to result in substantial but temporary increases in local noise levels along the corridor.

5.1.2 Potential Vibration Concerns

The following list summarizes the significant vibration sources associated with rail operations and construction:

Rail Operations: Rail operations create groundborne vibration that can be intrusive to occupants of buildings close to the tracks. Noise impact criteria for vibration are based on annoyance, and the predicted levels of rail vibration at all receivers are well below the thresholds used to protect sensitive and fragile historic structures from damage. The potential for vibration from rail operations to be annoying to occupants of historic structures is based on the appropriate vibration impact criteria for the current use of the building. A key assumption in the vibration predictions is that the optimal wheel and rail profiles would be maintained through periodic truing of the wheels and rail grinding.

Special Trackwork: Turnouts and crossovers, where two rails cross, are the primary type of special trackwork on the alignment. This type of special trackwork is sometimes referred to as a *frog*. Standard frogs have gaps, and the train wheels must “jump” across the gap. The wheels striking the ends of the gap increase vibration levels as well as noise levels. The groundborne vibration levels near special trackwork increase up to approximately 10 VdB because of wheel impacts at the gaps in the rails. Similar to noise, low-impact frogs can be used as a mitigation measure where the vibration from special trackwork results in a predicted vibration impact.

Construction: Construction operations can generate perceptible vibration levels. It is also possible to generate levels that risk damage to susceptible buildings if they are close to the construction activities.

5.2 SIGNIFICANCE THRESHOLDS

The lead agency (Metro) defines the significance thresholds. For this Proposed Project, the thresholds are defined as follows:

Train operational noise is evaluated using Federal Transit Administration (FTA)/Federal Railroad Administration (FRA) criteria defined in the FTA Guidance Manual (*Transit Noise and Vibration*

Assessment Manual, 2018) and *Los Angeles (L.A.) CEQA Thresholds Guide (2006)* criteria. The definition of a significant impact is defined by these criteria, specifically by applying the FTA/FRA severe impact limit and *L.A. CEQA Thresholds Guide* significance thresholds as described in subsequent sections. The L.A. CEQA thresholds are not applied to all projects, since the FTA noise limits are generally more stringent in typical project environments. For the Proposed Project, the L.A. CEQA thresholds are applied along the entire AVL corridor to help evaluate noise impacts for areas with generally lower levels of existing noise. Significant vibration impacts are also evaluated applying FTA criteria. FTA and L.A. CEQA limits are defined further in this section. Per CEQA, construction noise and vibration limits are defined through local and county codes.

For more information about noise and vibration, including metrics and terminology, please refer to Appendix A.

5.2.1 Operational Noise Criteria

The CEQA analysis applies two sets of thresholds per FTA and L.A. CEQA, as defined below.

FTA criteria

The FTA noise impact criteria apply $L_{eq}(h)$ and L_{dn} and are based on the best available research on community response to noise. This research shows that characterizing the overall noise environment using measures of noise exposure provides the best correlation with human annoyance. Noise exposure characterizes noise levels over a period of time.

FTA provides different thresholds for different land uses. **Table 5** lists the three FTA land-use categories and the applicable noise metric for each category. For Category 2 land uses (residential areas where people sleep), noise exposure is characterized using L_{dn}., a 24-hour average. In calculating L_{dn}, noise generated during nighttime hours is more heavily weighted than daytime noise to reflect residents' greater sensitivity to noise during those hours. For Category 1 and Category 3 land uses (areas with primarily daytime use), noise exposure is characterized using the peak hour L_{eq}, which is a time-averaged sound level over the noisiest hour of transit-related activity. Appendix A provides more information on the L_{dn} and L_{eq} noise descriptors.

Table 5: FTA Land Use Categories and Noise Metrics

Land Use Category	Land Use Type	Noise Metric (dBA)	Description of Land Use Category
1	High Sensitivity	Outdoor $L_{eq}(h)$[a]	Land where quiet is an essential element of its intended purpose. Example land uses include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and national historic landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category.
2	Residential	Outdoor L_{dn}[b]	This category is applicable to all residential land use and buildings where people normally sleep, such as hotels and hospitals.

Land Use Category	Land Use Type	Noise Metric (dBA)	Description of Land Use Category
3	Institutional	Outdoor $L_{eq}(h)$[a]	This category is applicable to institutional land uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities can also be considered to be in this category.

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018
[a] L_{eq} for the loudest hour of project-related activity during hours of noise sensitivity.
[b] L_{dn} is a measure that counts for full 24 hours of noise, with penalties for noise at night, which is defined as 10 p.m. to 7 a.m.

The FTA noise impact threshold is a sliding scale based on existing noise exposure and land use of sensitive receivers. The basic concept of the FTA noise impact criteria is that more project noise is allowed in areas where existing noise is higher. However, in areas where existing noise exposure is higher, the allowable increase above the existing noise exposure decreases.

FTA defines two levels of noise impact: Moderate Impact and Severe Impact. Severe noise impacts are usually considered significant within the context of CEQA. Severe noise impacts require the evaluation of alternative locations/alignments or other mitigation measures to avoid severe impacts altogether. Mitigation measures must be considered and incorporated into the project to avoid Severe Impacts unless there are truly extenuating circumstances that prevent it. Moderate noise impacts are not necessarily significant within the context of CEQA, but also require consideration. For this project, Moderate Impacts are not considered to be significant due to the nature of the project and the existing environment.

The FTA noise impact criteria for Category 1 and 2 receivers are shown graphically in **Figure 5**, presented as an increase in cumulative noise level between the existing and post project construction conditions (Category 3 curves are a few decibels higher than those shown in **Figure 5**). Note that evaluating noise-level increases at sensitive receivers, rather than existing and project sound level comparisons, is appropriate for projects where changes are proposed to an existing transit system, and trains are already in operation. The FTA impact criteria are defined by two curves. Below the lower curve in **Figure 5**, a proposed project is considered to have no potential noise impact, because the introduction of the project is not predicted to result in a significant increase in the number of people highly annoyed by the new noise. Noise increases above the upper curve are considered to cause Severe Impact, which correlates to a significant percentage of people highly annoyed by the new noise. Between the two curves, the proposed project is considered to have Moderate Impact.

To help explain the concept of a sliding scale for noise impact, assume that the existing noise has been measured at 60 dBA L_{dn}. This is the total noise from all existing noise sources over a 24-hour period: current train operations, traffic, aircraft, lawnmowers, children playing, birds chirping, etc. Starting at 60 dBA on the horizontal axis, follow the vertical line up to where it intersects the

moderate and severe impact curves. Then refer to the left axis to see the noise increase thresholds for Category 2 receivers (residential). An existing noise of 60 dBA L_{dn} defines an allowable increase of 2 dBA L_{dn} before a Moderate Impact may occur and 5 dBA L_{dn} before a Severe Impact may occur. A CEQA analysis would consider an increase greater than 5 dBA (severe) to be significant.

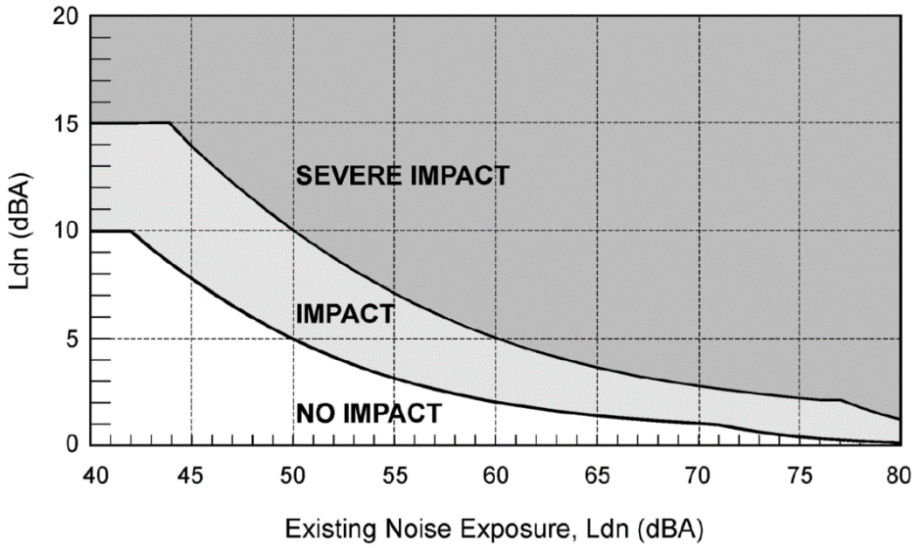


Figure 5: FTA Impact Criteria for Noise Based on Cumulative Level Increase (Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018)

L.A. CEQA criteria

L.A. CEQA guidance thresholds are shown in **Table 6** per land use type. For the L.A. CEQA thresholds, a project would normally have a significant impact with regard to exterior noise levels resulting from rail operations if a project causes noise at a sensitive receptor to increase by 3 dBA in CNEL, to or within the “normally unacceptable” or “clearly unacceptable” category, or any 5 dBA or greater noise increase. Essentially, this means that for existing noise 70 dBA and greater, a 3 dBA increase is considered to be an impact, and below 70 dBA, a 5 dBA increase is considered to be an impact.

Table 6: L.A. CEQA Significance Thresholds

Land Use	Significance Thresholds (CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single family, duplex, mobile homes	50 - 60	55 - 70	70 - 75	above 70
Multi-family homes	50 - 65	60 - 70	70 - 75	above 70
Schools, libraries, churches, hospitals, nursing homes	50 - 70	60 - 70	70 - 80	above 80
Playgrounds, neighborhood parks	50 - 70	--	67 - 75	above 72

SOURCE: *L.A. CEQA Thresholds Guide*, 2006

5.2.2 Operational Vibration Criteria

The potential adverse effects of rail transit groundborne vibration include perceptible building vibration, rattle noises, reradiated noise (groundborne noise) and cosmetic or structural damage to buildings. The vibration caused by modern rapid transit rail operations is well below what is considered necessary to damage buildings; for this Proposed Project, the operational levels are well below the potential damage limits for even the most fragile type of building, which includes historic structures. Therefore, the criteria for building vibration caused by transit operations are only concerned with potential annoyance of building occupants. Damage limits are only discussed in terms of construction-related vibration in Section 5.2.4.

Operational vibration impact for sensitive receivers was assessed using the Existing Vibration Criteria Flow Chart in Figure 6-1 of the FTA Guidance Manual, shown in **Figure 6** of this Noise and Vibration Technical Report. This flow chart is applied to projects where there is an existing vibration source in the study area, such as an existing rail corridor. The vibration criteria applied are: 1) first determine if project vibration will be 5 dB above existing vibration; and 2) based on the corridor usage, determine if the existing vibration exceeds FTA criteria, and if so, determine if the project vibration will be at least 3 dB above existing. Impact criteria are further defined in this Section 5.2.2, and the assessment method is further described in Section 5.3.2.

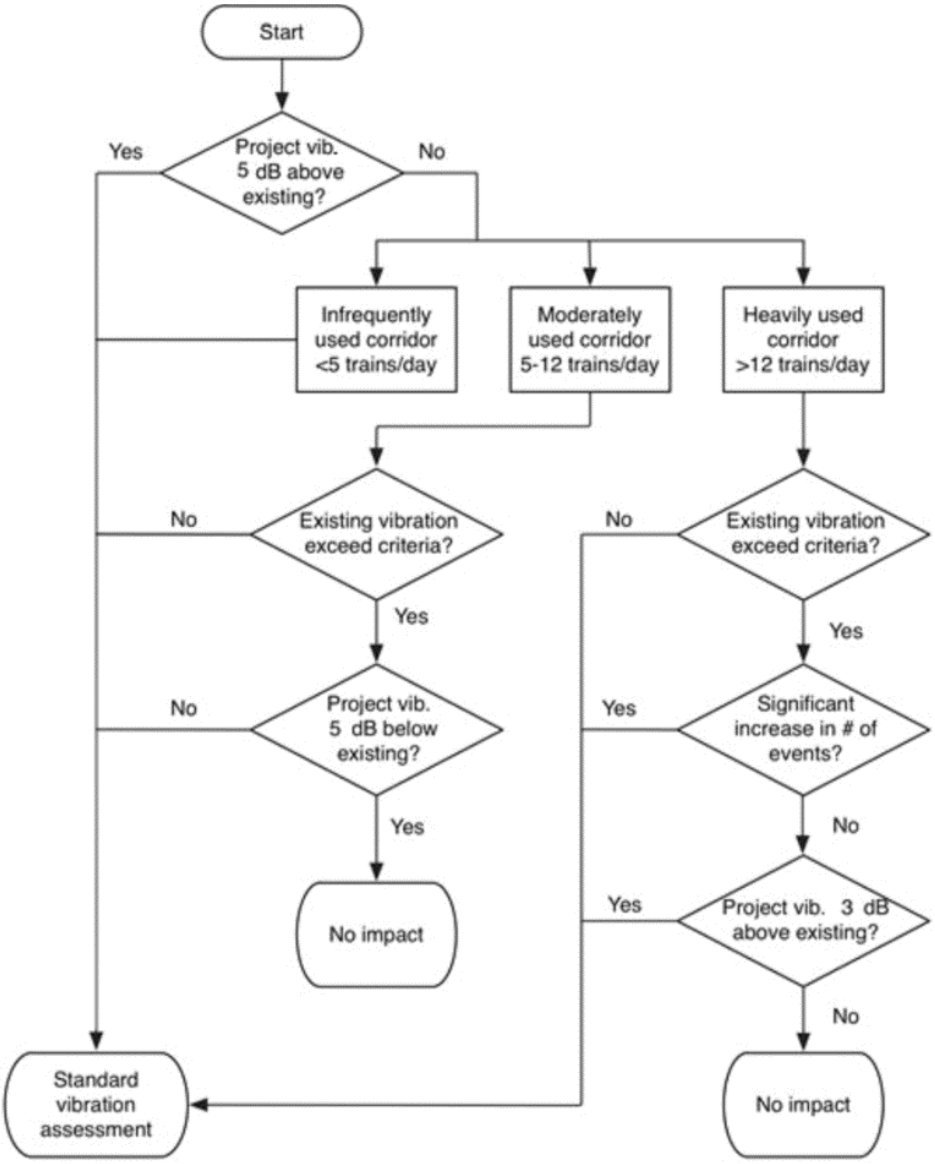


Figure 6: Existing Vibration Criteria Flow Chart (Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018)

The FTA vibration impact criteria are based on the maximum indoor vibration level as a train passes. There are no impact criteria for outdoor spaces such as parks because outdoor groundborne vibration does not provoke the same adverse human reaction as indoor vibration. The FTA Guidance Manual provides two sets of criteria: one based on the overall vibration velocity level for use in General Vibration Impact Assessments, and one based on the maximum vibration level in any 1/3-octave band (the band maximum level) for use with a Detailed Vibration Assessment. This study uses the General Vibration Assessment methodology. The intent of a General Vibration Assessment is to provide a relatively simple method of developing overall levels of groundborne vibration and noise that can be compared to acceptability criteria. The vibration

criteria are shown in **Table 7** and **Table 8**. The Category 1 criteria are applied to buildings where vibration would interfere with interior operations. The Category 2 criteria are applied to residential land uses (homes, hotels, etc.), where there is nighttime use; this category is similar to the Category 2 land use defined for noise. The Category 3 criteria are applied to institutional land uses (schools, libraries, churches, etc.), where use is primarily during the daytime; this category is similar to the Category 3 land use defined for noise analysis.

Table 7: FTA Groundborne Vibration Impact Criteria for General Assessment

Land Use	Groundborne Vibration Impact Levels (VdB)		
	Frequency events (> 70/day)	Occasional events (30-70/day)	Infrequent events (< 30/day)
Highly sensitive (Category 1) – interferes with interior operations	65 VdB	65 VdB	65 VdB
Residential (Category 2)	72 VdB	75 VdB	80 VdB
Institutional (Category 3)	75 VdB	78 VdB	83 VdB

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018.

Table 8: FTA Groundborne Noise Impact Criteria for General Assessment

Land Use	Frequency events (> 70/day)		
	Frequency events (> 70/day)	Occasional events (30-70/day)	Infrequent events (< 30/day)
Highly sensitive (Category 1) – interferes with interior operations	N/A	N/A	N/A
Residential (Category 2)	35 dBA	38 dBA	43 dBA
Institutional (Category 3)	40 dBA	43 dBA	48 dBA

Source: Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018.

Some buildings, such as concert halls, recording studios and theaters, can be very sensitive to vibration. Given the sensitivity of these buildings, they usually warrant special attention during the environmental evaluation of a transit project. **Table 9** gives the FTA criteria for acceptable levels of groundborne vibration and groundborne noise for various categories of special buildings. These criteria are for limits on the overall vibration or noise levels, not the 1/3-octave band spectra.

Note that historic structures that do not fall into the FTA land use categories are not included in the assessment for vibration impact from transit rail operations. The vibration impact thresholds are based on annoyance, and the primary concern for historic structures is the risk of damage. The recommended limit in the FTA Guidance Manual for buildings extremely susceptible to damage is 90 VdB, which is 18 decibels higher than the limit for Category 2 (residential) land uses. Vibration from transit rail operations will be well below the limit for buildings extremely susceptible to damage.

Table 9: Groundborne Noise and Vibration Impact Criteria for Special Buildings

Type of Building or Room	Groundborne Vibration Impact Levels (VdB re 1 micro-inch/second)		Groundborne Noise Impact Levels (dBA re 20 micro Pascals)	
	Frequent events	Occasional or infrequent events	Frequent events	Occasional or infrequent events
Concert halls	65	65	25	25
TV studios	65	65	25	25
Recording studios	65	65	25	25
Auditoriums	72	80	30	38
Theaters	72	80	35	43

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018.

Groundborne noise criteria are also listed in **Table 8** and **Table 9**. Groundborne noise is caused by the vibration of room surfaces radiating sound waves. When audible groundborne noise occurs, it sounds like a low-frequency rumble. When the tracks are above ground, the groundborne noise is usually masked by the normal airborne noise radiated from the rails and it is not necessary to assess impact from groundborne noise. However, for buildings that have no windows facing the rail, or have interior spaces where airborne noise does not penetrate, groundborne noise may be a factor.

5.2.3 Construction Noise Criteria

Appropriate limits for construction noise and are determined through a review of applicable regulations. Noise limits for construction during the Proposed Project are shown in **Table 10**. The limits are those imposed by the L.A. CEQA Thresholds Guide for the City of Los Angeles and by the L.A. County Code for the City of Santa Clarita and The City of Lancaster. Outside the daytime hours listed for each city, a variance is required for construction and demolition activities; the construction contractor will work with permitting officials to establish noise limits and shall recommend the nighttime limits in **Table 10**.

Table 10: Construction Noise Limits for the AVL Project

Land Use	Noise Limit – Daytime [1] L_{eq} (dBA)	Noise Limit – Nighttime Leq (dBA)
Any Residential – City of Los Angeles	Ambient +5 dBA	Ambient +5 dBA [2]
Single-Family Residential – Santa Clarita and Lancaster	75 [2]	60 [2,3]
Multi-Family Residential – Santa Clarita and Lancaster	80 [2]	64 [2,3]
Commercial	85 [2]	n/a [4]

SOURCE: L.A. County Code, City of Los Angeles CEQA Thresholds Guide, City of Santa Clarita Code, City of Lancaster Code

[1] Daytime is defined as follows:

Los Angeles: 7 am – 9 pm (Mon-Fri), 8 am – 6 pm (Sat)
Santa Clarita: 7 am – 7 pm (Mon – Fri), 8 am – 6 pm (Sat)
Lancaster: 7 am – 8 pm (Mon – Sat)

[2] L.A. County Code Limit

[3] Recommended limit if written permission is allowed for work outside of the "Daytime" defined hours

[4] Commercial properties are not typically sensitive at night

5.2.4 Construction Vibration Criteria

Appropriate limits for construction vibration are determined through a review of applicable regulations, and the limits applied to this project are described below. Of primary concern regarding construction vibration is potential damage to structures. The thresholds for potential damage are much higher than the thresholds for evaluating potential annoyance construction vibration.

Section 12.08, Part 560 of the Los Angeles County Code of Ordinances[6] regulates construction vibration, which states that operating equipment where the peak particle velocity (PPV) measured at 150 feet exceeds of 0.01 in/sec is prohibited when working in public right-of-way.

The FTA Guidance Manual provides construction vibration limits for various building categories, as shown in **Table 11.** The table also includes the annoyance criteria for residential structures (72 VdB). The PPV and root mean square (RMS) amplitude are two separate metrics used to quantify a vibration signal. Lv vibration levels are a decibel representation of the RMS velocity levels, using a reference of 1 micro-inch/second (µin/sec.). More information regarding vibration descriptors is available in Appendix A. Predictions and analysis for the Proposed Project will use PPV.

[6] Los Angeles County Code of Ordinances, Section 12.08, Noise Control.

Table 11: FTA Construction Vibration Criteria

Limit Category	Peak Particle Velocity (inches/second)	Approximate Lv (VdB)
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90
Annoyance at institutional structures	0.022	75
Annoyance at residential structures	0.016	72

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018.

5.3 METHODOLOGY

5.3.1 Operational Noise Assessment

The noise assessment methodology follows the Detailed Noise Assessment guidelines outlined in the FTA Guidance Manual. The detailed assessment for noise includes the following steps:

1. **Identify sensitive receivers**. Noise-sensitive land uses along the AVL rail corridor are identified using aerial photography, GIS data, and field visits. For this assessment, the sensitive receiver buildings are divided by study area and operational direction, and distances to the noise sources are extracted. The land uses that qualify as noise-sensitive are defined in the FTA Guidance Manual and include spaces where quiet is an important element of their intended uses, for example, residential land uses where people sleep such as houses or hotels, and institutional land uses such as schools or churches. Appendix C details the receiver locations used in the assessment and Section 4, **Table 2** provides a review of the study areas.
2. **Determine existing conditions**. Existing noise levels were measured throughout the Study Area. FTA noise impact thresholds are a function of the measured existing noise levels. Please refer to Section 4.
3. **Apply prediction models**. The noise prediction models in the FTA Guidance Manual use standard formulas to characterize noise from rail vehicles. Each potential noise element is included in the model.
4. **Evaluate receivers for predicted impact**. The prediction models are used to estimate future noise for each sensitive receiver. Predictions for each receiver are compared to the applicable FTA impact thresholds to identify potential noise impacts. Please refer to Section 6.
5. **Evaluate mitigation options**. Mitigation options are evaluated for all sensitive receivers where the predicted noise levels exceed the applicable threshold. Please refer to Section 6.

The Proposed Project will increase noise for all noise-sensitive receptors along the AVL rail corridor as a result of increased rail operations. For the purposes of the noise assessment methodology, the additional noise from increased rail operations is combined with the existing noise generated from the AVL rail corridor to determine future noise levels. The future noise levels are used to determine the expected increase in noise due to the Proposed Project, and those levels are compared to allowable increases as defined by FTA and L.A. CEQA. Existing noise sources are location-dependent; they include Metrolink operations (both the AVL and Ventura Line), Amtrak operations, freight operations, roadway vehicle traffic, aircraft flyovers, and local noise (e.g., warehouse noise, air conditioning noise, etc.). Due to the COVID-19 pandemic, AVL passenger rail services are less frequent than normal (prior to the COVID-19 pandemic). Thus, existing noise due to AVL rail operations is adjusted using the train noise prediction methods described below to establish typical existing noise.

Prediction methods for the various Metrolink train noise sources are detailed below, including train operations and audible warnings. No other noise sources were applied to the predictions. Although storage tracks are part of the Proposed Project and the trains will also need to be maintained at a facility, information regarding the volumes of trains and where they will be stored/maintained is not yet available. If needed, the noise from related activities could be assessed at a later phase in the Proposed Project.

Noise from Train Operations

The noise prediction model follows the noise impact assessment methodology for detailed noise predictions presented in the FTA Guidance Manual and incorporates assumptions on operating conditions specific to the Proposed Project, including speeds, vehicle type, and train frequencies. The reference levels used for Metrolink commuter trains for this analysis are taken from FTA guidance. The reference levels and other assumptions are:

- Sound Exposure Level (SEL) of a one-car train operating at 50 mph on ballast and tie track at a distance of 50 feet: **82 dBA.** (The approximate L_{max} is 80 dBA.)
- Sound Exposure Level (SEL) of one locomotive operating at 50 mph on ballast and tie track at a distance of 50 feet: **92 dBA** (assumes diesel locomotive)**.** (The approximate L_{max} is 88 dBA.)
- Train speed: varies by section of track from **20 to 79 mph** depending on track section (associated speed shown for each receiver in Appendix C). As a conservative assumption for this Proposed Project assessment, no speed adjustment is applied in the prediction model to account for slower speeds in the vicinity of stations.
- Train length: **1 locomotive and 5 cars for all trains.**
- Noise amplification from crossover frogs: **+5 dB** at a distance of **50 feet** (adjusted by distance).
- Noise amplification from wheel squeal: none applied – wheel squeal was not observed for Metrolink trains on any of the AVL sections.
- Note that it is assumed that the rails and wheels would be maintained in a state of good repair such that noise from rail corrugations and wheels flats would be minimized, and additional noise for these elements is not included in the predictions.

- Number of trains per day.

The reference values were used with formulas included in the FTA Guidance Manual to predict the future noise levels at each sensitive receiver. The FTA use a descriptor known as the Sound Exposure Level (SEL), which normalizes the sound of an event to a 1-second duration. The principal formulas are:

Calculation of L_{dn} and hourly L_{eq} from SEL:

$$L_{dn} = SEL_{ref} + 10\log(N_{TrainDAY} + N_{TrainNIGHT} \times 10) - 10\log\left({Dist}/{Dist_{ref}}\right) - 49.4$$

$$L_{eq}(hour) = SEL_{ref} + 10\log(N_{TrainHOUR}) - 10\log\left({Dist}/{Dist_{ref}}\right) - 35.6$$

where:

SEL_{ref}	=	SEL reference levels, adjusted for speed applying the following: for railcar: speed ≥ 25 mph, +20 log (speed/50 mph) speed < 25 mph, +2 x log (speed/50 mph); corrections are first made to 25 mph, then from 25 down to actual speed using this adjustment for locomotive: -10 log (speed/50 mph) (assumes passenger diesel loco)
$N_{TrainDAY}$	=	Number of trains during daytime hours (7 a.m. to 10 p.m.)
$N_{TrainNIGHT}$	=	Number of trains during nighttime hours (10 p.m. to 7 a.m.)
$N_{TrainHOUR}$	=	Number of trains during 1 hour
Dist	=	Distance from train tracks to the sensitive receiver (distance from LA County database to nearest building façade, or parcel where distance to building façade was not available in database)
$Dist_{ref}$	=	Reference distance (50 feet)

Also included in the noise prediction calculations are adjustments for ground type (for this Proposed Project, hard ground is assumed) and shielding due to buildings (for receivers beyond the first row) as described in the FTA Guidance Manual.

Existing operations (normal for non-pandemic time) and proposed operations for Metrolink commuter trains are shown in **Table 12**. These operations are applied to future noise predictions (when the Proposed Project would be operational).

Table 13 shows the adjustment in operations from the schedule during the COVID-19 pandemic to normal existing operations. These operations are applied to the measured existing noise to estimate the existing noise as it would be during a non-pandemic time. Note that the adjusted existing noise is used in the noise analysis to establish the noise criteria.

Table 12: Normal Existing Operations and Proposed Operations

Hours	Number of trains (both directions combined; existing/future)		
	Union Station to Santa Clarita (Via Princessa)	Santa Clarita to Palmdale	Palmdale to Lancaster
7 a.m. – 7 p.m.	24/47	10/24	9/22
7 p.m. – 10 p.m.	3/5	4/7	3/5
10 p.m. – 7 a.m.	3/8	6/9	6/9
Total	**30/60**	**20/40**	**18/36**

Table 13: Adjustments from Pandemic Operations to Normal Existing Operations

Hours	Number of trains (both directions combined)		
	Union Station to Santa Clarita (Via Princessa)	Santa Clarita to Palmdale	Palmdale to Lancaster
7 a.m. – 7 p.m.	+14	0	-1
7 p.m. – 10 p.m.	+1	+1	0
10 p.m. – 7 a.m.	-1	+3	+3
Total	**+14**	**+4**	**+2**

Noise from Audible Warnings

For this Proposed Project, audible warnings for the trains include horns mounted on the vehicle and the crossing bells at road crossings.

The governing body for freight audible warning practices is the FRA. The FRA regulations for sounding the locomotive horn are:

- Engineers must sound train horns for a minimum of 15 seconds before a grade crossing, or if the train is traveling faster than 45 mph, when the train is within 1/4 mile of the crossing.
- Train horns must be sounded in the standardized pattern of 2 long, 1 short, and 1 long. The horn must continue to sound until the lead locomotive or train car occupies the grade crossing.
- The minimum train horn volume is 96 dBA (L_{max}) at a distance of 100 feet from the train. The maximum volume is 110 dBA (L_{max}) at a distance of 100 feet from the train.

Metrolink train horn noise was measured in the AVL rail corridor at position LT-extra horn (See Section 4 and Appendix B). Measurements conducted over a 24-hour period showed that the series of four horn soundings for Metrolink train horns corresponded to an SEL value of approximately 98 dBA during daytime hours and 96 dBA during nighttime hours, at a distance of 100 feet (note that the maximum level, L_{max}, at 100 feet was about 96 dBA, the minimum volume per regulations).

The measured Metrolink horn noise was approximately 10 dB lower than the freight horn noise. The freight train horns can dominate the L_{dn} noise level in a neighborhood, significantly increasing the 24-hour noise level in areas adjacent to an at-grade crossing where the horn is sounded.

The following formulas from the FTA Guidance Manual were used to predict the future noise contribution from Metrolink horns:

Calculation of L_{dn} and hourly L_{eq} from SEL:

$$L_{dn} = SEL_{Horn} + 10\log(N_{TrainDAY} + N_{TrainNIGHT}x10) - 10\log\left({Dist}/{Dist_{ref}}\right) - 49.4$$

$$L_{eq}(hour) = SEL_{Horn} + 10\log(N_{TrainHOUR}) - 10\log\left({Dist}/{Dist_{ref}}\right) - 35.6$$

where:

SEL_{Horn}	=	SEL reference level as measured (day and night)
$N_{TrainDAY}$	=	Number of trains sounding horn during daytime hours
$N_{TrainNIGHT}$	=	Number of trains sounding horn during nighttime hours
$N_{TrainHOUR}$	=	Number of trains sounding horn during 1 hour
Dist	=	Distance from the sensitive receiver to the nearest horn sounding (it is assumed that horns are sounded with ¼ mile of the crossing for each direction)
$Dist_{ref}$	=	Reference distance (100 feet)

To calculate L_{dn} and L_{eq} values, it was assumed that the train horns would sound with each train pass-by event, except in established quiet zones.

Far-Distance Assessment

For receivers beyond the standard screening distance of 750 feet for rail noise alone, receivers were identified out to a distance of 1,600 feet in the vicinity of grade crossings, to assess the impact of train horn noise. The method applied to closer receivers was also applied to receivers at these farther distances. Rather than predicting the noise increase for each receiver, however, a general examination was completed to determine the required existing noise for which a noise increase would be above the significant thresholds.

Each section of the track was examined where there were operational differences (speeds, number of trains) and varying background noise. For each section, noise increases were predicted at distances of 8,00, 1,200, 1,600, and 2,000 feet. Starting with background noise at 50 dBA, the level was reduced until an impact was identified. The resulting background noise that resulted in impacts was then compared to measured existing noise to determine if impacts were possible at these farther distances.

L.A. CEQA Analysis

The above FTA methodology also applies to the L.A. CEQA analysis. In addition, the existing noise (adjusted for normal operations) and predicted noise were evaluated per the CNEL metric, which penalizes noise in the evening and nighttime. Both existing noise and predicted future noise

were converted to CNEL by applying the maximum difference in measured noise levels between L_{dn} and CNEL. That maximum difference is 0.8 dBA, initially applied to all sensitive receivers, as a conservative measure. This is added to the existing noise to see if the existing CNEL (sound level) is less than or greater than 70 dBA (triggers different impact thresholds). The 0.8 dBA adjustment is also added to the predicted future noise resulting in a future CNEL (sound level). If the predicted future CNEL is greater than or equal to the existing CNEL by 3 dBA when existing noise is greater than or equal to 70 dBA, or if the increase is greater than or equal to 5 dBA when the existing noise is less than 70 dBA, results were examined further and refined. At only one sensitive receiver, results were refined by averaging the measured CNEL minus L_{dn} values in the vicinity of that receiver, rather than assuming the maximum difference of 0.8 dBA, which resulted in no impact.

5.3.2 Operational Vibration Assessment

The Proposed Project will implement infrastructure improvements at three locations along the AVL rail corridor. In the vicinity of each location, the flow chart shown in **Figure 6** is applied to determine if a standard vibration assessment is necessary or if there are no predicted vibration impacts.

The flow chart in **Figure 7** asks, “Is the project vibration 5 dB above existing vibration?,” “Does existing vibration exceed criteria?,” and, after filtering by corridor use, “Is the project vibration 3 dB above existing vibration?” To determine the existing and Proposed Project vibration, two sources were considered: 1) the measured vibration levels as part of the Lone Hill to White Noise and Vibration Technical Study[7] (2017); and 2) the generalized ground surface vibration curves presented in the FTA Guidance Manual. The reference Metrolink vibration data from the Lone Hill to White study are presented in **Figure 7**, along with the FTA prediction curve for locomotive powered passenger trains adjusted lower by 6 decibels to better match the measured Metrolink data. The equation for the prediction curve follows, where *Lv* is the vibration level in decibels and *distance* is the distance from the tracks to a sensitive receiver:

$$Lv = 92.28 + 14.81 * \log(distance) - 14.17 * \log(distance)^2 + 1.65 * \log(distance)^3 - 6$$

[7] Metrolink Lone Hill to White, “Noise and Vibration Impact Assessment, Metrolink Lone Hill to White Double Track Project,” Technical Memorandum, ATS Consulting, June 2017.

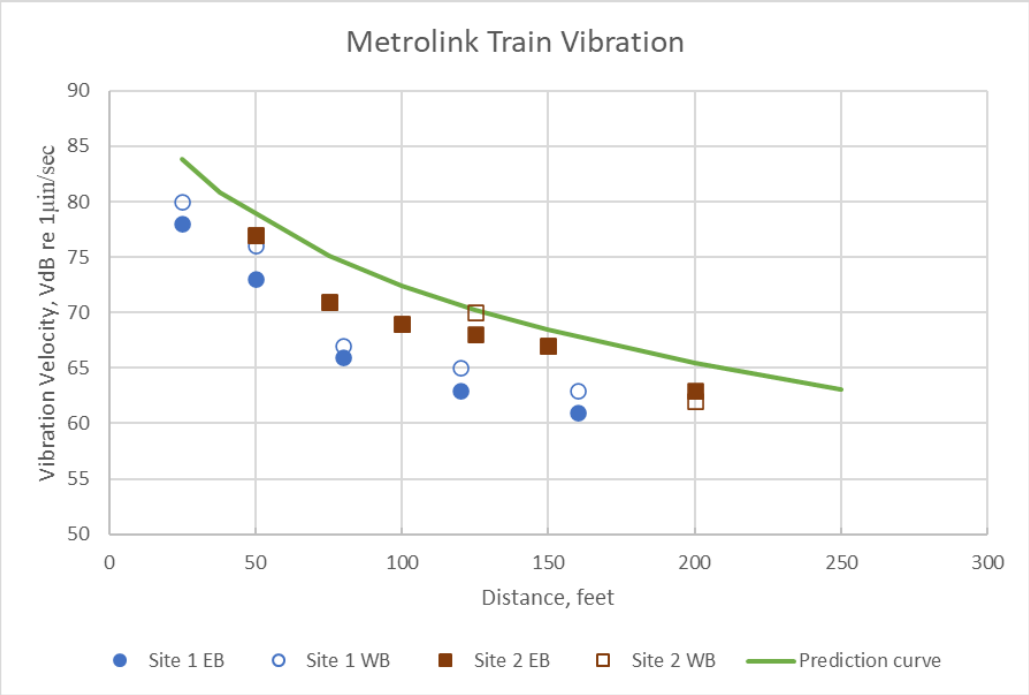


Figure 7: Reference Metrolink Train Vibration

As mentioned, the flow chart in **Figure 6** includes path choices by corridor use (current and future). The AVL rail corridor is currently considered a heavily used corridor (more than 12 trains a day) comprised of Metrolink, Amtrak, and freight services, depending on the section of the rail corridor. The significant increase in number of vibration events is based on current and future use and considers the number of events represented by each train type.

The FTA Guidance Manual states that approximately doubling the number of vibration events is required for a significant increase (see FTA Guidance Manual Table 6-5 footnote). Doubling the number of vibration events is equivalent to a 3 decibel increase in the vibration exposure. Vibration exposure is considered to be the sum of all of the vibration events during a 24-hour period. (Note that vibration impact criteria are based on vibration from one train pass-by.)

For this Proposed Project, “approximately doubling” is considered to be increasing the number of vibration events such that there is a 2.5 decibel or greater increase in vibration exposure. The number of vibration events is the total number of train vibration events at a sensitive receiver, including all trains in the corridor (passenger and freight). Each freight train is considered as two events due to longer train lengths compared to passenger trains. The increase is calculated as follows:

$$Vibration\ exposure\ increase = 10 * \log\left(\frac{total\ future\ train\ vibration\ events}{existing\ train\ vibration\ events}\right)$$

Because the FTA vibration screening process did not result in an impact (see Section 6), a separate groundborne noise assessment was not applied.

5.3.3 Construction Noise Assessment

Predictions of the noise and vibration levels at nearby sensitive receivers are compared to limits defined in Section 5.2.3. Mitigation measures are recommended for areas where levels are expected to exceed the limits.

Construction is planned in three areas along the AVL rail corridor:

1. Double track addition from Balboa Boulevard to Sierra Highway (Balboa Double Track Extension) in the City of Los Angeles,
2. Siding track extension to the north of Golden Oak Road (Canyon Siding Extension) in the City of Santa Clarita, and
3. Terminal improvements between W Avenue J and W Jackman Street (Lancaster Terminal Improvements) in the City of Lancaster.

Construction noise levels depend on the number of active pieces and type of equipment, their general condition, the amount of time each piece operates per day, the presence or lack of noise-attenuating features such as walls and berms and the location of the construction activities relative to the sensitive receivers. The majority of these variables are left to the discretion of the construction contractor selected as the project approaches the construction phase.

Five distinct construction activities are assumed when estimating the noise generated for this Proposed Project. It is also assumed that all five construction activities take place in each of the three areas of construction: City of Los Angeles, City of Santa Clarita, and City of Lancaster. Construction equipment used for each activity are assumed to operate concurrently to present conservative estimates of the noise generated. Construction activities are assumed to not overlap. The construction activities are:

Activity 1. Site Preparation: site preparation and utility relocations
Activity 2. Grading and Retaining: grading and retaining walls
Activity 3. Tracks and Construction: track laying and platform/building construction
Activity 4. Roadway Improvements: paving and quiet zone ready
Activity 5. Trenching: new utility trenching

Specifics on construction equipment that are assumed to be used during each construction activity are listed in **Table 14**. Included in the table are the number of equipment pieces used for each activity, the anticipated usage hours (per 8-hour work day), and the load factor (percentage of time equipment runs at full power). Construction equipment was assigned a representative equipment piece from the FTA Guidance Manual. The associated 50-foot L_{eq} noise level for the reference equipment, along with the other information presented in **Table 14**, are used to generate noise predictions. Distance adjustments to predict noise at sensitive receivers assumes that construction equipment will operate at the track centerline.

Table 14: Construction Phasing and Equipment Noise Inputs

Activity Number	Activity Name	Offroad Equipment Type	Amount	Usage Hours	Load Factor	Reference Equipment	50-ft Reference L_{eq} Noise Level (dBA)
1	Site Preparation	Excavators	2	4	0.38	Dozer	85
	Site Preparation	Other Material Handling Equipment	2	8	0.4	Truck	84
	Site Preparation	Rough Terrain Forklifts	2	8	0.4	Loader	80
	Site Preparation	Rubber Tired Dozers	1	8	0.4	Dozer	85
	Site Preparation	Skid Steer Loaders	1	8	0.37	Loader	80
	Site Preparation	Tractors/Loaders/ Backhoes	2	8	0.37	Backhoe	80
2	Grading and Retaining	Bore/Drill Rigs	1	4	0.5	Rock Drill	95
	Grading and Retaining	Crawler Tractors	2	8	0.43	Truck	84
	Grading and Retaining	Crushing/Proc. Equipment	1	4	0.78	Jack Hammer	88
	Grading and Retaining	Excavators	2	8	0.38	Dozer	85
	Grading and Retaining	Graders	1	8	0.41	Grader	85
	Grading and Retaining	Rough Terrain Forklifts	2	8	0.4	Loader	80
	Grading and Retaining	Rubber Tired Dozers	1	8	0.4	Dozer	85
	Grading and Retaining	Tractors/Loaders/ Backhoes	2	8	0.37	Backhoe	80
3	Tracks and Construction	Bore/Drill Rigs	1	4	0.5	Rock Drill	95
	Tracks and Construction	Cement and Mortar Mixers	2	8	0.56	Concrete Mixer	85
	Tracks and Construction	Cranes	1	7	0.29	Crane, Mobile	83
	Tracks and Construction	Excavators	2	6	0.38	Dozer	85
	Tracks and Construction	Other Material Handling Equipment	1	8	0.4	Truck	84
	Tracks and Construction	Rough Terrain Forklifts	2	8	0.4	Loader	80

Activity Number	Activity Name	Offroad Equipment Type	Amount	Usage Hours	Load Factor	Reference Equipment	50-ft Reference L_{eq} Noise Level (dBA)
	Tracks and Construction	Tractors/Loaders/ Backhoes	3	7	0.37	Backhoe	80
4	Roadway Improvements	Cement and Mortar Mixers	2	8	0.56	Concrete Mixer	85
	Roadway Improvements	Paving Equipment	2	8	0.36	Paver	85
	Roadway Improvements	Rollers	2	8	0.38	Roller	85
	Roadway Improvements	Rough Terrain Forklifts	2	8	0.4	Loader	80
	Roadway Improvements	Skid Steer Loaders	2	8	0.37	Loader	80
	Roadway Improvements	Tractors/Loaders/ Backhoes	2	8	0.37	Backhoe	80
5	Trenching	Other Material Handling Equipment	2	8	0.4	Truck	84
	Trenching	Rollers	2	4	0.38	Roller	85
	Trenching	Rough Terrain Forklifts	2	8	0.4	Loader	80
	Trenching	Skid Steer Loaders	2	8	0.37	Loader	80
	Trenching	Tractors/Loaders/ Backhoes	2	8	0.37	Backhoe	80

Distances to each sensitive receiver are those from the operational noise analysis, with some extended from the property line to the nearest building façade; in cases where the distance to building façade was not available via the Los Angeles County GIS database, the refinement was measured via Google Earth. All receivers examined are listed in the results tables in Appendix D; impacted receivers are listed in Section 6.1.2.

5.3.4 Construction Vibration Assessment

The same construction activities and equipment used when estimating the construction noise generated have been assumed when estimating the construction vibration. A list of the equipment used for each construction activity is available in **Table 14**. The equipment from that list was assigned applicable reference vibration levels from **Table 15** to predict the maximum PPV that each receiver will experience during each construction activity following FTA procedures. All receivers examined are listed in the results tables in Appendix D; impacted receivers are listed in Section 6.2.2.

Table 15: Reference Peak Particle Velocities Used for Construction Vibration Analysis

Equipment	Peak Particle Velocity at 150 ft (inches/second)
Vibratory Roller	0.014
Hoe Ram	0.006
Large Bulldozer	0.006
Caisson Drilling	0.006
Jackhammer	0.002
Small Bulldozer	0.000

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018

6. Impact Analysis

The following section includes the impact analysis, mitigation measures (if necessary), and significance after mitigation (if applicable). The section is organized by CEQA questions and impact criteria.

6.1 NOISE IMPACTS AND MITIGATION (CEQA CRITERION A)

CEQA Criterion (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?

Answer: Yes, for a temporary increase in noise levels (from construction). No, for a permanent increase (from operations).

6.1.1 Operations Noise

Summary of results (details in Sections 6.1.1.1 and 6.1.1.2):

Potential impacts

None. Applying both the FTA and L.A. CEQA significance thresholds, predicted noise increases are within the allowable limits. The maximum increase in noise among all receivers is 2.7 dBA L_{dn} and L_{eq} and 3.5 dBA CNEL. Predictions for all receivers can be found in Appendix C.

Recommended mitigation measures

None required.

Significance of impacts with mitigation applied

Not applicable.

6.1.1.1 Impact Assessment

Project area noise-sensitive land uses for FTA Categories 1, 2, and 3 are listed in Appendix C and can be seen in the maps in Appendix B. In addition to listing the sensitive receivers, Appendix C also provides the predicted noise increase and applicable criterion for each receiver. **Table 22** in Appendix C presents the following:

- **Receiver ID**: Sensitive receiver identification number. The location of each sensitive receiver is presented in the maps in Appendix B. The ID number helps to determine the location. It's written as "operational direction – section number – receiver number or letter." The operational direction is either NB for northbound or SB for southbound. The section numbers are defined at the beginning of Appendix C; there are seven sections numbered from south do north. Receiver numbers are used for residential receivers (Category 2); and letters are used for institutional or studio/theater receivers (Categories 1 and 3). The

numbers and letters advance from south to north. An example for a residential receiver in Section 5 of the Study Area is "NB-5-008," which is a receiver on the northbound side in Section 5 of the Study Area, and the 8th receiver on the NB side in Section 5 of the Study Area. For the results shown in the **Table 22** in Appendix C, receivers were evaluated out to a distance of 750 feet. Additional evaluations included receivers out to 1,600 feet, described further below.

- **FTA Category**: Category 2 is residential (single and multi-family homes, hotels, etc.). Category 1 is a studio or theater (for this project). Category 3 is institutional (school, church, etc.).
- **Address**: Where available from the L.A. County GIS database, an address for a receiver is provided.
- **Distance to near track**: Distance from receiver (nearest building façade or parcel line when no building) to the center of the near track in feet.
- **Speed**: The design speed associated with track closest to a receiver.
- **Existing noise**: Estimated existing noise level (L_{dn} for Category 2, L_{eq} for Categories 1 and 3) at each sensitive receiver based on existing noise measurements.
- **Predicted noise increase**: Predicted future exterior L_{dn} or L_{eq} from all noise sources in the project area. The noise associated with the increase in Metrolink operations is combined with existing noise, which includes existing Metrolink operations, Amtrak operations, freight operations, highway and roadway traffic noise, aircraft flyovers, and other noise sources in communities. The predicted future noise is then compared to existing noise to determine the predicted noise increase.
- **Allowable Increase**: The FTA allowable decibel increases from existing noise, for Moderate and Severe Impact, are based on the existing noise levels. The significant impact for the L.A. CEQA thresholds is 3 dBA for existing noise 70 dBA and above and 5 dBA for existing noise below 70 dBA.

The following is a summary of the noise impact assessment of the Proposed Project:

Results for receivers out to 750 feet (shown in Appendix C) showed no FTA severe threshold for operational noise.

For L.A. CEQA thresholds, analysis out to 750 feet also resulted in no threshold exceedances for operational noise. Recall that these thresholds were applied along the entire AVL rail corridor for added stringency (see Section 5.2). For the results in **Table 22**, 0.8 dBA was added to both the existing noise and noise increase to determine: 1) if the existing noise was greater or less than 70 dBA (level at which CNEL criteria changes from +5 to +3 dBA being allowable); and 2) noise increase in CNEL. The addition of 0.8 dBA is conservative, based on the maximum measured difference between L_{dn} and CNEL for all long-term measurements. Note that for Categories 1 and 3 receivers, the analysis was switched from L_{eq} to L_{dn}/CNEL to comply with the L.A. CEQA

methodology. The L.A. CEQA analysis showed no threshold exceedances for any of the receivers.

- For receivers out to 1,600 feet and beyond, assessed for the purposes of horn soundings near grade crossings, results also showed no threshold exceedances.

Table 16 shows the results of the longer distance horn-based analysis [applying both FTA (L_{dn}) and L.A. CEQA (CNEL) thresholds]. Background noise required for impact at each distance is provided for each section of the Study Area along the AVL rail corridor. In each section of the Study Area, the measured background noise is above that required for a potential impact to occur. Refer to **Table 2** for Section locations.

Table 16: Long-Distance Noise Impact Analysis within Study Area

Section	Speed (mph)	Distance (ft)	Background Noise Required for Impact (dBA)		Lowest Measured Background Noise Adjusted by Distance[a] (dBA)	Background Noise Based on These Measurement Locations
			L_{dn}	CNEL		
1	30	800	42	48	60	LT-01
		1200	40	46	58	LT-01
		1600	38	44	57	LT-01
		2000	37	43	56	LT-01
2-4	79	800	43	48	64	ST-08/LT-05
		1200	40	46	62	ST-08/LT-05
		1600	38	44	61	ST-08/LT-05
		2000	37	43	60	ST-08/LT-05
5	75	800	41	47	61	ST-24/LT-13
		1200	39	45	59	ST-24/LT-13
		1600	37	44	58	ST-24/LT-13
		2000	36	43	57	ST-24/LT-13
6	39	800	41	47	57	ST-24/LT-21
		1200	39	45	55	ST-24/LT-21
		1600	37	44	54	ST-24/LT-21
		2000	36	43	53	ST-24/LT-21
7 (Palmdale)	49	800	42	48	53	HSR-LT-1
		1200	40	46	51	HSR-LT-1
		1600	38	44	50	HSR-LT-1
		2000	37	43	49	HSR-LT-1
7	49	800	42	48	61	LT-25

Section	Speed (mph)	Distance (ft)	Background Noise Required for Impact (dBA)		Lowest Measured Background Noise Adjusted by Distance[a] (dBA)	Background Noise Based on These Measurement Locations
			L_{dn}	CNEL		
(Lancaster)		1200	40	46	59	LT-25
		1600	38	44	58	LT-25
		2000	37	43	57	LT-25

[a]Noise was measured out to ~830-2,000 feet, depending on the section. The adjustments were made by applying distance corrections.

6.1.1.2 Recommended Mitigation

Because there are no impacts predicted from operational noise, no mitigation is recommended for this Proposed Project. It should be noted that Metrolink is already applying the following to minimize horn noise near grade crossings: 1) minimum allowable volume (as estimated from measurements); and 2) length for each horn blast in the sequence of soundings required at each crossing is minimized (as observed through measurements). It should also be noted that freight train horns are sounded at a louder allowable level, and some freight cars are producing substantial wheel squeal noise in portions of the mountainous region of the AVL rail corridor. Although not recommended for the Proposed Project, it may be possible to apply lubrication to reduce the freight car wheel squeal if the squeal is resulting from track curvature.

6.1.2 Construction Noise

Summary of results (details in Sections 6.1.2.1 and 6.1.2.2):

Potential impacts

Potential impacts have been identified in the vicinity of each of the three areas where construction activities are proposed. Applying the Los Angeles County Code Ordinance and local noise ordinances for the City of Santa Clarita and City of Lancaster, as described in previous sections, sensitive receivers are predicted to be exposed to construction noise exceeding allowable limits. The receivers potentially impacted are as follows (shown graphically in **Figure 8** through **Figure 10**):

1. In the vicinity of the Balboa Double Track Extension in the City of Los Angeles, only one sensitive receiver is potentially impacted in the area at 14748 San Fernando Rd. The noise exceedances are predicted to be substantial due to close proximity to construction activities.
2. In the vicinity of the Canyon Siding Extension in the City of Santa Clarita, several sensitive receivers are potentially impacted. The commercial building at 22840 Soledad Canyon Rd, near the westernmost edge of planned construction activities in the City of Santa Clarita, is an example of a sensitive receiver. In addition, on the eastern end of the construction area, first-row homes north and south of Soledad Canyon Road extending out to Golden Oak Rd are potentially impacted.
3. In the vicinity of the Lancaster Terminal improvements in the City of Lancaster, two sensitive receivers are potentially impacted. The first is a commercial building at 44738 Sierra Hwy, and the second is a homeless shelter at 44611 Yucca Ave. For the commercial building, the noise exceedances are predicted to be substantial due to the close proximity to construction activities.

Recommended mitigation measures

For the City of Los Angeles, all noise-producing construction or demolition activities shall be restricted to the following daytime hours without a written variance: 7 a.m. – 9 p.m. Monday through Friday and 8 a.m. – 6 p.m. Saturday. Noise levels (equivalent sound level, Leq) during construction or demolition shall not exceed noise limits defined as

ambient noise plus 5 dBA at potentially impacted sensitive receivers. Measures to reduce noise may include but are not limited to use of quieter equipment; staging away from sensitive receivers; limited idling; routing construction-related truck traffic away from sensitive receivers; and shielding the noise sources with temporary barriers, curtains, or enclosures. Metro's construction contractor shall develop a Noise Control Plan demonstrating how noise criteria will be achieved during construction. The construction contractor will work with permitting officials to establish noise limits for a variance and will recommend ambient noise plus 5 dBA as the nighttime limit.

For the City of Santa Clarita, all noise-producing construction or demolition activities shall be restricted to the following daytime hours without a written variance: 7 a.m. – 7 p.m. Monday through Friday and 8 a.m. – 6 p.m. Saturday. Noise levels (equivalent sound level, Leq) during construction or demolition shall not exceed noise limits at potentially impacted sensitive receivers. Noise limits are time-of-day and land-use-type dependent. At single family residential receivers, noise shall not exceed 75 dBA during daytime hours and 60 dBA during nighttime hours. At multi-family residential receivers, noise shall not exceed 80 dBA during daytime hours and 64 dBA during nighttime hours. For commercial receivers, noise shall not exceed 85 dBA during daytime hours. Measures to reduce noise may include but are not limited to use of quieter equipment; staging away from sensitive receivers; limited idling; routing construction-related truck traffic away from sensitive receivers; and shielding the noise sources with temporary barriers, curtains, or enclosures. Metro's construction contractor shall develop a Noise Control Plan demonstrating how noise criteria will be achieved during construction. The construction contractor will work with permitting officials to establish noise limits for a variance and will recommend the nighttime limits as listed.

For the City of Lancaster all noise-producing construction or demolition activities shall be restricted to the following daytime hours without a written variance: 7 a.m. – 8 p.m. Monday through Saturday. Noise levels (equivalent sound level, Leq) during construction or demolition shall not exceed noise limits at potentially impacted sensitive receivers. Noise limits are time-of-day and land-use-type dependent. At single family residential receivers, noise shall not exceed 75 dBA during daytime hours and 60 dBA during nighttime hours. At multi-family residential receivers, noise shall not exceed 80 dBA during daytime hours and 64 dBA during nighttime hours. For commercial receivers, noise shall not exceed 85 dBA during daytime hours. Measures to reduce noise may include but are not limited to use of quieter equipment; staging away from sensitive receivers; limited idling; routing construction-related truck traffic away from sensitive receivers; and shielding the noise sources with temporary barriers, curtains, or enclosures. Metro's construction contractor shall develop a Noise Control Plan demonstrating how noise criteria will be achieved during construction. The construction contractor will work with permitting officials to establish noise limits for a variance and will recommend the nighttime limits as listed.

Significance of impacts with mitigation applied

Where larger noise exceedances are predicted, mitigation may not reduce noise below impact thresholds, and impacts would be unavoidable. Noise Control Plan predictions for the effectiveness for various mitigation measures will reveal unavoidable impacts. Where unavoidable impacts are predicted, unconventional mitigation measures could be considered. It is expected unconventional mitigation may be required for the impacted City of Los Angeles residential receivers during construction of the Balboa Double Track Extension and possibly for the impacted Lancaster receivers during construction of the Lancaster Terminal Improvements. For a residential receiver, an unconventional mitigation measure is to relocate the residents to a hotel during construction activities that are loudest and most intrusive.

6.1.2.1 Impact Assessment

Construction noise predictions for receivers near construction activities associated with the Canyon Siding Extension in the City of Santa Clarita show several sensitive receivers potentially impacted. The commercial building at SB-5-02c (22840 Soledad Canyon Rd), near the westernmost edge of the construction area, is the closest sensitive receiver to construction of the Canyon Siding Extension in the City of Santa Clarita. The analysis predicts exceedances of the noise limit during all five construction activities at this location. On the eastern side of the construction area, exceedances are expected at several residential receivers north and one south of Soledad Canyon Rd, particularly during Activities 2 – 4. The drill rigs used in Activities 2 & 3 are the loudest equipment identified for use during construction, and are the cause of a majority of the predicted exceedances of the noise limits in the area.

Construction noise predictions for receivers near construction activities associated with the Lancaster Terminal Improvements in the City of Lancaster show two sensitive receivers potentially impacted. The commercial building at SB-7-01c (44738 Sierra Hwy) and the homeless shelter at NB-7-047 (44611 Yucca Ave) are the closest sensitive receivers to construction in the City of Lancaster. These receivers are within 300 feet of each other on opposite sides of the track and are the only receivers in the City of Lancaster where a construction noise impact is predicted. Both receivers are within 100 feet of the near track centerline, which results in predicted exceedances of the noise limit during all 5 construction activities at both receivers. The predicted exceedances range from 8 dBA to 17 dBA. Mitigation of such significant exceedances may require less conventional measures (described in Section 6.1.2.2).

Table 17 presents assessment results for impacted sensitive receivers due to construction noise from the Proposed Project. Potential impacts are shown graphically in **Figure 8** through **Figure 10**. Appendix D presents construction noise predictions at all potentially affected receivers.

Table 17: Construction Noise Predictions

Receiver ID	Land Use Type	Address	Distance to Near Track (ft)	Noise Limit [a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
Balboa Double Track Extension, City of Los Angeles									
SB-5-001	residential	14748 San Fernando Rd	61	78	**86 (8.4)**	**91 (13.1)**	**90 (12.5)**	**89 (10.5)**	**86 (7.7)**
Siding Track Extension, City of Santa Clarita									
NB-5-117	residential	21710 Golden Triangle Rd	369	75	71	**75 (0.4)**	75	73	70
SB-5-058	residential	22119 Propello Dr	379	75	70	**75 (0.2)**	75	73	70
SB-5-059	residential	22082 Propello Dr	313	75	72	**77 (1.9)**	**76 (1.2)**	74	71
SB-5-060	residential	22030 Propello Dr	293	75	73	**77 (2.4)**	**77 (1.8)**	75	72
SB-5-061	residential	1st row Moveo Dr	265	75	74	**78 (3.3)**	**78 (2.7)**	**76 (0.7)**	73
SB-5-062	residential	1st row Moveo Dr	241	75	74	**79 (4.1)**	**79 (3.5)**	**77 (1.5)**	74
SB-5-063	residential	1st row Moveo Dr	236	75	75	**79 (4.3)**	**79 (3.7)**	**77 (1.7)**	74
SB-5-064	residential	1st row Moveo Dr	236	75	75	**79 (4.3)**	**79 (3.7)**	**77 (1.7)**	74
SB-5-065	residential	1st row Moveo Dr	246	75	74	**79 (4)**	**78 (3.3)**	**76 (1.4)**	74
SB-5-066	residential	1st row Moveo Dr	246	75	74	**79 (4)**	**78 (3.3)**	**76 (1.4)**	74
SB-5-067	residential	1st row Moveo Dr	247	75	74	**79 (3.9)**	**78 (3.3)**	**76 (1.3)**	74
SB-5-068	residential	1st row Moveo Dr	245	75	74	**79 (4)**	**78 (3.4)**	**76 (1.4)**	74
SB-5-069	residential	26247 Prima Way	370	75	71	**75 (0.4)**	75	73	70
SB-5-070	residential	26244 Prima Way	340	75	71	**76 (1.1)**	**76 (0.5)**	74	71
SB-5-072	residential	1st row Candella Dr	226	75	75	**80 (4.7)**	**79 (4.1)**	**77 (2.1)**	74
SB-5-074	residential	1st row Candella Dr	216	75	**75 (0.3)**	**80 (5.1)**	**79 (4.5)**	**78 (2.5)**	75
SB-5-076	residential	1st row Candella Dr	214	75	**75 (0.4)**	**80 (5.2)**	**80 (4.6)**	**78 (2.6)**	75
SB-5-077	residential	1st row Candella Dr	179	75	**75 (0.4)**	**80 (5.2)**	**80 (4.6)**	**78 (2.6)**	75
SB-5-078	residential	21425 Soledad Canyon Rd	276	75	73	**78 (2.9)**	**77 (2.3)**	**75 (0.4)**	73
SB-5-02c[b]	commercial	22840 Soledad Canyon Rd	155	85	**86 (1.5)**	**91 (6.2)**	**91 (5.6)**	**89 (3.6)**	**86 (0.8)**

Receiver ID	Land Use Type	Address	Distance to Near Track (ft)	Noise Limit [a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
Terminal Improvements, City of Lancaster									
NB-7-047	residential	44611 Yucca Ave	85	75	**83 (8.4)**	**88 (13.2)**	**88 (12.6)**	**86 (10.6)**	**83 (7.8)**
SB-7-01c[b]	commercial	44738 Sierra Hwy	17	85	**97 (12.4)**	**102 (17.2)**	**102 (16.6)**	**100 (14.6)**	**97 (11.8)**

All noise levels are dBA. Predicted impacts are shown in red with the exceedance amount in parentheses.

[a] Residential receiver for the city of Los Angeles uses LT-12 measurement +5 dBA. For the City of Santa Clarita and City of Lancaster, the single-family residential limit is 75 dBA and multi-family is 80 dBA. The commercial limit is 85 dBA.

[b] Indicates a receiver that has been added for the construction analysis only.

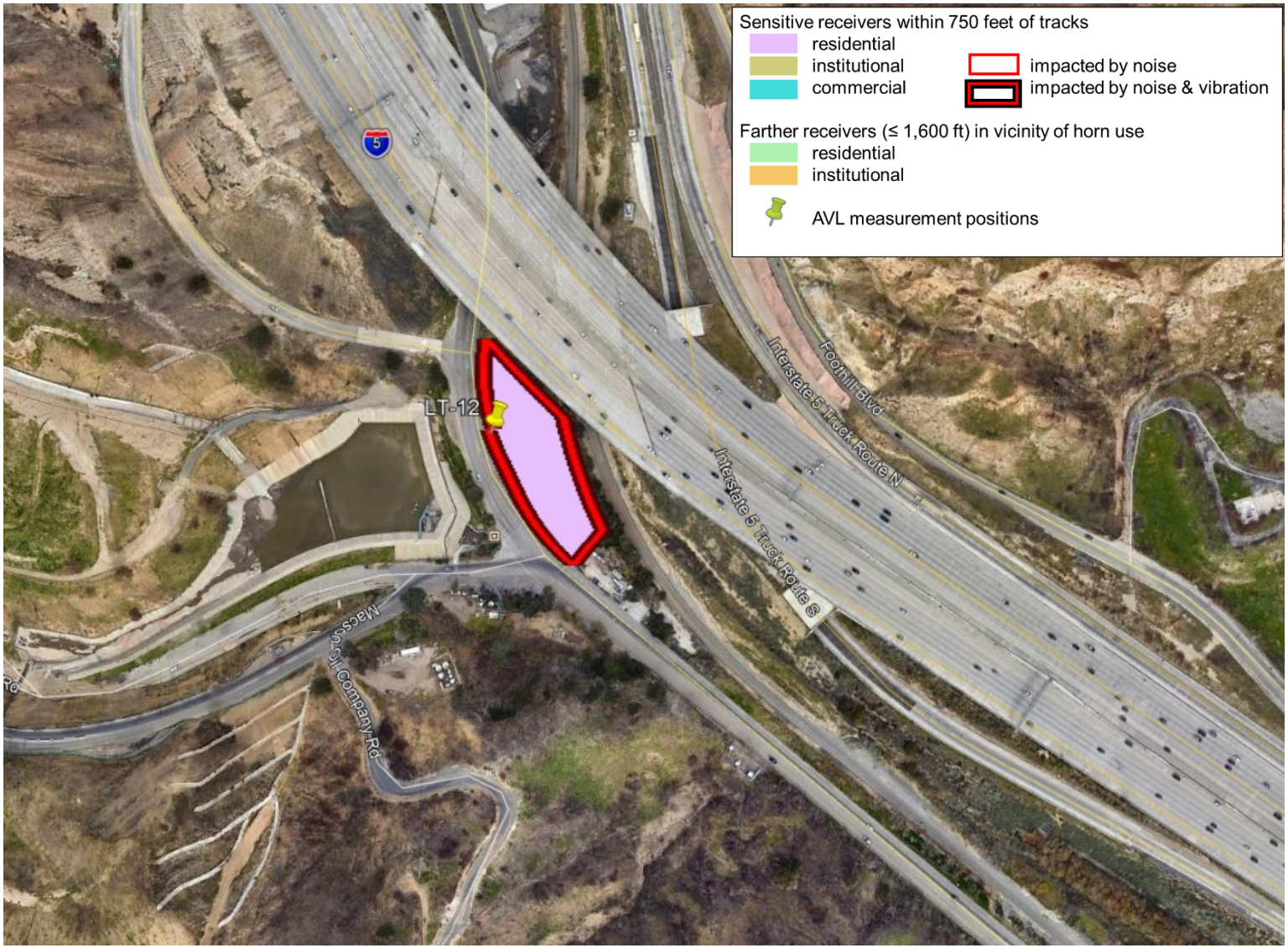


Figure 8: Construction Noise and Vibration Impacts in Vicinity of Balboa Double Track Extension in the City of Los Angeles

Figure 9: Construction Noise and Vibration Impacts in Vicinity of Canyon Siding Extension in the City of Santa Clarita

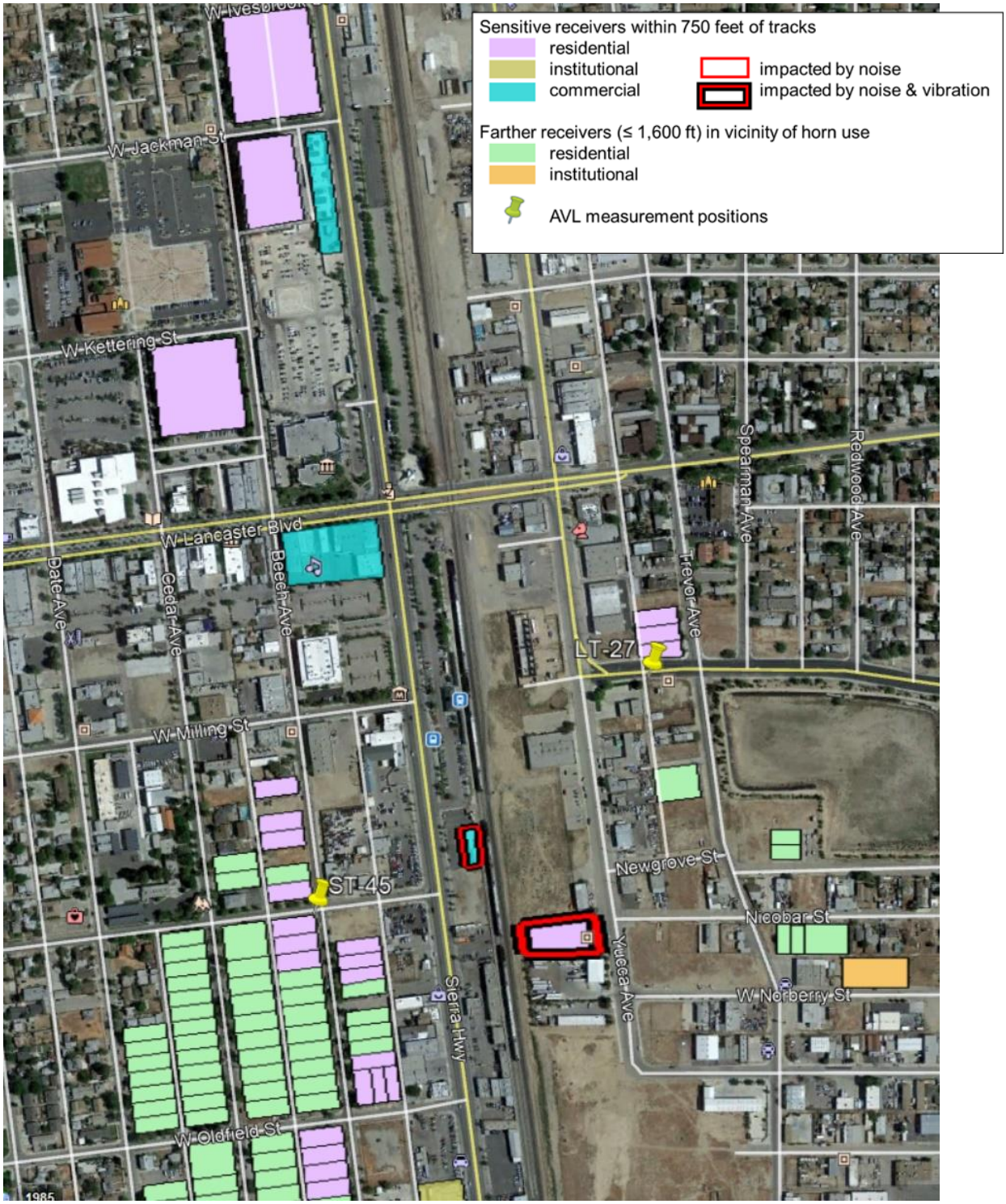


Figure 10: Construction Noise and Vibration Impacts in Vicinity of Lancaster Terminal improvements in the City of Lancaster

Construction noise predictions for the receiver near construction activities associated with the Balboa double track extension in the City of Los Angeles show there is only one sensitive receiver potentially impacted in the area at 14748 San Fernando Rd, but that receiver is located very close to the construction site: with only 61 feet between the receiver and the track centerline. This results in predicted exceedances of the noise limit during all 5 construction activities, by up to 13 dBA during Activity 2. Mitigation of such significant exceedances may require the contractor to use less conventional measures such as temporarily relocating residents to a hotel during the most loud and intrusive construction activities.

Construction noise predictions for receivers near construction activities associated with the Canyon Siding Extension in the City of Santa Clarita show several sensitive receivers potentially impacted. The commercial building at SB-5-02c (22840 Soledad Canyon Rd), near the westernmost edge of the construction area, is the closest sensitive receiver to construction of the Canyon Siding Extension in the City of Santa Clarita. The analysis predicts exceedances of the noise limit during all five construction activities at this location. On the eastern side of the construction area, exceedances are expected at several residential receivers north and one south of Soledad Canyon Rd, particularly during Activities 2 – 4. The drill rigs used in Activities 2 & 3 are the loudest equipment identified for use during construction, and are the cause of a majority of the predicted exceedances of the noise limits in the area.

Construction noise predictions for receivers near construction activities associated with the Lancaster Terminal Improvements in the City of Lancaster show two sensitive receivers potentially impacted. The commercial building at SB-7-01c (44738 Sierra Hwy) and the homeless shelter at NB-7-047 (44611 Yucca Ave) are the closest sensitive receivers to construction in the City of Lancaster. These receivers are within 300 feet of each other on opposite sides of the track and are the only receivers in the City of Lancaster where a construction noise impact is predicted. Both receivers are within 100 feet of the near track centerline, which results in predicted exceedances of the noise limit during all 5 construction activities at both receivers. The predicted exceedances range from 8 dBA to 17 dBA. Mitigation of such significant exceedances may require less conventional measures (described in Section 6.1.2.2).

6.1.2.2 Recommended Mitigation

Listed below are some typical approaches to reducing noise levels associated with the construction phase of major projects. Requiring the contractor to employ these methods are likely to leave the contractor with enough flexibility to perform the work without undue financial or logistical burdens while protecting adjacent noise-sensitive receivers from excessive construction noise levels.

- Use specialty equipment with enclosed engines, acoustically attenuating shields, and/or high-performance mufflers.
- Locate equipment and staging areas away from noise-sensitive receivers.
- Limit unnecessary idling of equipment.
- Install temporary noise barriers, noise control curtains, and/or noise enclosures. This approach can be particularly effective for stationary noise sources such as compressors

and generators. These methods may not be effective for elevated receivers; blocking line-of-sight is necessary.

- Reroute construction-related truck traffic away from local residential streets and/or sensitive receivers.
- Avoid impact pile driving where possible. Where geological conditions permit, the use of drilled piles or a vibratory pile driver is generally quieter.
- Use electric instead of diesel powered equipment and hydraulic instead of pneumatic tools.
- Where possible, minimize the use of impact devices such as jackhammers and hoe rams, using concrete crushers and pavement saws instead.

Other less conventional techniques could be employed when the options above will not suffice, particularly when loud, necessary construction operations must take place extremely close to a sensitive receiver. For instance, residents could be temporarily relocated to a hotel during construction times when the noise will be the loudest and most intrusive.

Specific measures to be employed to mitigate construction noise impacts should be developed by the contractor and presented in the form of the Noise Control Plan. Impacts may be significant and unavoidable, even with mitigation measures applied. If nighttime construction is necessary, consider nighttime noise limits, the need for a variance or permit, and potential mitigation measures.

Comments on specific receivers

The proximity of the only sensitive receiver in the City of Los Angeles (SB-5-001, 14748 San Fernando Rd, Sylmar area) to the construction makes it is unlikely that any typical mitigation measures would fully eliminate the intrusion caused by construction noise. At this location less conventional mitigation measures may be called for, such as temporarily relocating residents to a hotel during the loudest and most intrusive construction operations – particularly if the drill rig must be used near the receiver.

The commercial building at SB-5-02c (22840 Soledad Canyon Rd), near the westernmost edge of the Santa Clarita construction area, is the closest sensitive receiver to construction in that city. Predictions identify noise limit exceedances during all construction activities if no mitigation is implemented. Noise limit exceedances are also predicted on the eastern side of the construction area, at several residential receivers north of Soledad Canyon Rd, particularly during Activities 2 – 4. Proper implementation of the mitigation measures as listed in this section should allow the contractor to reduce noise to acceptable levels in the area.

In the City of Lancaster, the commercial building at SB-7-01c (44738 Sierra Hwy) and the homeless shelter at NB-7-047 (44611 Yucca Ave) are the closest sensitive receivers to construction and are within 300 feet of each other on opposite sides of the track. Predictions identify exceedances of the noise limit during all five construction activities at both receivers that range from 8 dBA to 17 dBA. Mitigation of such significant exceedances may require the contractor to use less conventional mitigation measures during the loudest and most intrusive operations near the sensitive receivers.

Noise Control Plan

For Metro projects, a Construction Noise and Vibration Specification (Section 01 56 19) is generated to define the requirements that a contractor should meet to limit intrusive noise and vibration from the construction site. The Metro Specification Table 1 defines the "allowable sound levels of total construction site noise," and **Table 10** (in this Proposed Project Noise and Vibration Technical Report) can be used in the Metro Specification for the Proposed Project. Allowable levels for short-term construction equipment are less conservative than overall construction site noise, so this analysis considers the overall construction noise.

The Metro Specification also requires the completion of a Noise Control Plan, which outlines procedures to reduce the impact that construction noise will have on areas near the construction site. Within 180 days prior to the start of construction, the contractor must submit the name and qualifications of the Acoustical Engineer responsible for preparing and overseeing the implementation of the Noise Control Plan to Metro or its designee. The minimum requirements for the acoustical engineer are available in Section 3.02 of sample Metro Specifications.

A Noise Control Plan must be submitted to Metro no later than 100 days prior to the start of construction. The Noise Control Plan must include the following information if nighttime construction activities take place at the construction site: a site drawing, an inventory of equipment including estimated noise levels, and calculations of the L_{max} and one-hour L_{eq} noise levels expected at the nearest receiver. Tables 4 and 5 and Figures 1 through 4 of the Metro Specifications provide forms that may be used to compile and present the data in the Noise Control Plan. An updated Noise Control Plan must be completed and submitted within 10 days of the start of each quarterly period, or whenever there is a major change in work schedule, construction methods, or equipment operations that was not included in the most recent plan. These requirements for nighttime work are in addition to, not in place of, any permits required by the city in which the construction takes place.

In addition to the Noise Control Plan, the contractor's Acoustical Engineer must submit a Noise Monitoring Plan to Metro within 45 days of the notice to proceed. The Noise Monitoring Plan must include the following information for all daytime and nighttime construction activities that may take place at the construction site: planned construction activities, noise monitoring locations, equipment, procedures, schedule of measurements, and reporting methods to be used. Results from the measurements must be submitted to Metro on a weekly basis, or any time the measured noise levels exceed the allowable limits. Figure 2 of the Metro Specifications is the form that should be used when presenting the results of noise measurements.

6.2 VIBRATION IMPACTS AND MITIGATION (CEQA CRITERION B)

CEQA Criterion (b):

Would the project result in excessive ground-borne vibration or ground-borne noise levels?

Answer: Yes, although the potential exceedances are for construction activities, not for Metrolink operations.

increase in noise levels (from construction). No, for a permanent increase (from operations).

6.2.1 Operations Vibration

Summary of results (details in Sections 6.2.1.1 and 6.2.1.2):

Potential impacts

None. Applying the FTA screening and thresholds, maximum vibration is not predicted to increase or result in an impact.

Recommended mitigation measures

None required.

Significance of impacts with mitigation applied

Not applicable.

6.2.1.1 Impact Assessment

The project will implement infrastructure improvements at three locations along the AVL rail corridor: Balboa Double Track Extension, where the tracks travel under the I-5 freeway north of the Sylmar/San Fernando Station; Canyon Siding Extension near the Santa Clarita Station; and Lancaster Terminal Improvements near the Lancaster Station. The new track for the Balboa Double Track Extension will be located farther from sensitive receivers compared to the existing track. For the Canyon Siding Extension, a new track will be located closer to one cluster of residential sensitive receivers (ID NB-5-117) and one pre-school (ID NB-5-A). There are no sensitive receivers within 400 feet of the Lancaster Terminal Improvements.

For the remainder of the alignment, although additional train movements would occur, there would be no changes to train speeds or track alignment. The maximum vibration level from a single train event would remain the same as a result of the Proposed Project.

The predicted vibration levels at the sensitive receivers near the Canyon Siding Extension improvement are presented in **Table 18**. Although the future track will be located closer to the sensitive receivers, the increase in vibration levels as a result of the Proposed Project is less than 3 decibels.

Table 18: Predicted Vibration Levels at Sensitive Receivers near the Canyon Siding Extension

Sensitive Receiver	Speed, mph	Distance to Existing Track, feet	Distance to Future Track	Existing Vibration Level, VdB	Future Vibration Level, VdB	Difference
NB-5-117	39	385	369	58	59	1 dB
NB-5-A	39	267	251	62	63	1 dB

Operational vibration impact for sensitive receivers was assessed using the FTA existing vibration criteria flow chart (from the FTA Guidance manual and shown in **Figure 6)**. This flow chart is also presented in **Figure 11**,with the highlighted path applicable to the Proposed Project, which concludes there is no vibration impact.

Following is the justification for the flow-chart path concluding no vibration impact:

1. Project vibration 5 dB above existing? No.
   Near the Canyon Siding Extension, **Table 18** shows that the future project vibration will be less than 5 dB above existing. The Lancaster Terminal Improvements do not have any sensitive receivers within the screening distance. The Balboa Double Track Extension would add track farther from sensitive receivers. Throughout the rest of the Study Area, there would be no changes to train speeds or track alignment. Therefore the project vibration would be equivalent to the existing vibration.
2. Existing vibration exceed criteria? Yes.
   Based on reference vibration levels shown in **Figure 7**, the vibration from Metrolink trains exceed the criteria of 65 VdB at Category 1 (highly-vibration sensitive) land uses within 200 feet of the tracks. The vibration would exceed the criteria of 75 VdB at Category 2 (Residential) sensitive receivers within 75 feet of the tracks. The criteria of 75 VdB applies to train corridors with between 30 to 70 events per day. Note that the number of existing train events is 30 or more for each segment of the AVL rail corridor, as shown in **Table 19**. For more than 70 events per day, the criteria are lower and would also be exceeded.
3. Significant increase in number of events? No.
   As described in Section 3.2, “approximately doubling” is considered to be increasing the number of events such that there is a 2.5 decibel or greater increase in vibration exposure. The number of events is the total number of train vibration events at a sensitive receiver, including Metrolink Antelope Valley Line, Metrolink Ventura Line, Amtrak, and Freight (total numbers account for trains travelling in both directions). **Table 19** presents the current and future number of events throughout the study area, and the anticipated increase in vibration exposure in decibels. Through all segments of the Proposed Project, the increase in vibration exposure is less than 2.5 decibels when taking into account all train events in the corridor.

Table 19: Existing and Proposed Additional Train Vibration Events and Predicted Vibration Increase.

Segment	Existing Metrolink	Existing Amtrak	Existing Freight	Additional AVL	Increase in Vibration Exposure, dB
Los Angeles Union Station to Burbank	63[a]	11	0[b]	30	1.5
Burbank to Santa Clarita	30	0	5x2=10[c]	30	2.4
Santa Clarita to Palmdale	20	0	5x2=10[c]	20	2.2
Palmdale to Lancaster	18	0	6x2=12[c]	18	2.0

[a] Includes trains on Antelope Valley Line and Ventura Line

[b] Number of freight train events could not be verified. 0 train events is conservatively assumed.

[c] Each freight train considered as 2 events due to longer train lengths compared to Metrolink. Number of freight trains from Burbank to Palmdale confirmed in conversation with UPRR.

4. Project vibration 3 dB above existing? No.
   Near the Canyon Siding Extension, **Table 18** shows that the future project vibration would be less than 3 dB above existing. The Lancaster Terminal Improvements would not have any sensitive receivers within the screening distance. The Balboa Double Track Extension would add track farther from sensitive receivers. Throughout the rest of the Study Area, there would be no changes to train speeds or track alignment. Therefore, the project vibration would be equivalent to the existing vibration.
5. No Impact (for groundborne vibration and groundborne noise).

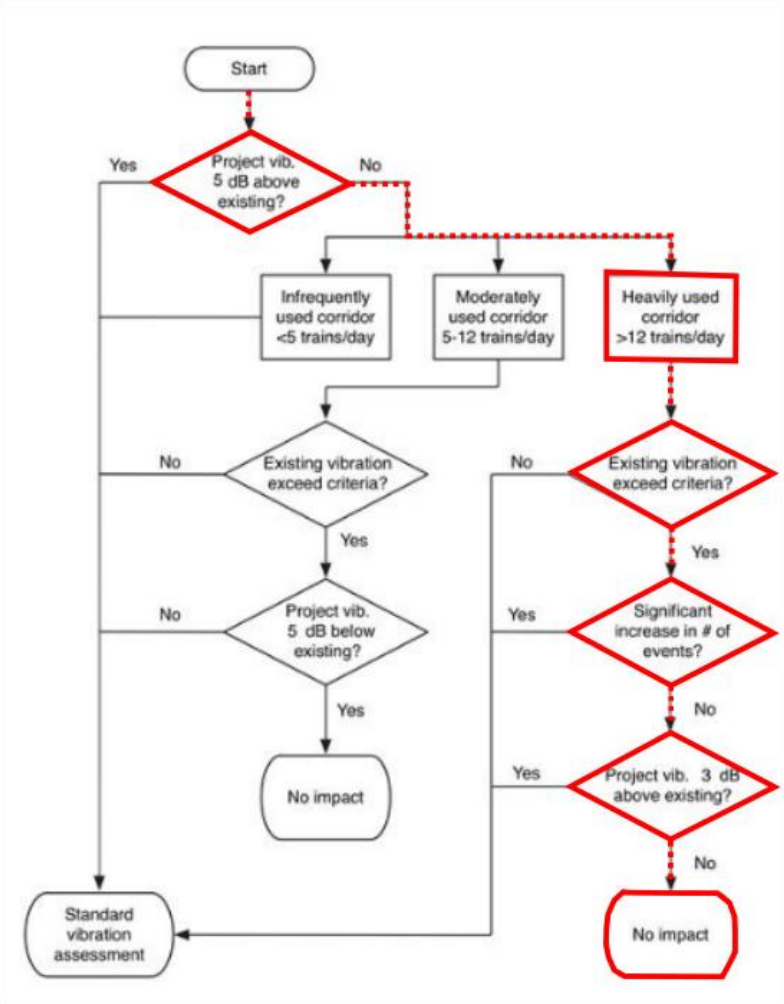


Figure 11: Existing Vibration Criteria Flow Chart Applied to Antelope Valley Line Improvements Project

6.2.1.2 Recommended Mitigation

No operational vibration impacts have been identified. Therefore, no mitigation is required.

6.2.2 Construction Vibration

Summary of results (details in Sections 6.2.2.1 and 6.2.2.2):

Potential impacts

Potential impacts have been identified in the vicinity of each of the three areas where construction activities are proposed. Applying the FTA criteria (from FTA Guidance Manual), as described in previous sections, sensitive receivers are predicted to be exposed to construction vibration exceeding allowable limits. The receivers potentially impacted are as follows (shown graphically in **Figure 8** through **Figure 10**):

1. In the vicinity of the Balboa Double Track Extension in the City of Los Angeles, only one sensitive receiver is potentially impacted in the area at 14748 San Fernando Rd. The predicted vibration does not reach levels that risk damage, but it does exceed the annoyance threshold.
2. In the vicinity of the Canyon Siding Extension in the City of Santa Clarita, only one sensitive receiver is potentially impacted in the area at 22840 Soledad Canyon Rd, near the westernmost edge of planned construction activities. The predicted vibration does not reach levels that risk damage, but it does exceed the annoyance threshold.
3. In the vicinity of the Lancaster Terminal Improvements in the City of Lancaster, two sensitive receivers are potentially impacted. The first is a commercial building at 44738 Sierra Hwy, and the second is a homeless shelter at 44611 Yucca Ave. The predicted vibration does not reach levels that risk damage, but it does exceed the annoyance threshold.

Recommended mitigation measures

All vibration-producing construction or demolition activities shall be limited to 72 VdB (or 0.016 inches/second Peak Particle Velocity) for residential structures and 75 VdB (or 0.022 inches/second Peak Particle Velocity) for institutional structures to avoid annoyance for occupants of potentially impacted sensitive receivers. Measures to reduce vibration may include but are not limited to use of alternative construction procedures, such as use of non-vibratory compaction and a concrete saw in place of a hoe ram to break up pavement. Metro's construction contractor shall develop a Vibration Control Plan as part of the Noise Control Plan demonstrating how vibration criteria will be achieved during construction. If equipment other than that assessed as part of the environmental analysis is planned for use by the construction contractor or if assessed equipment will be operated within the risk distances listed below, risk for damage will need to be assessed, and damage limits shall apply. To avoid risking damage to structures, the Peak Particle Velocity must not exceed 0.5 inches/second for a reinforced-concrete, steel or timber (no plaster) structure, 0.3 inches/second for an engineered concrete and masonry (no plaster) structure, 0.2 inches/second for a non-engineered timber or masonry structure, and 0.12 inches/second for structures extremely susceptible to vibration damage. Assuming an engineered concrete and masonry structure, the risk of damage is possible if equipment operates within these distances: impact pile driver within 42 ft; vibratory roller within 20 ft; hoe ram, large bulldozer, or caisson drilling within 11 ft; loaded truck within 10 ft; jackhammer within 6 ft; and small bulldozer with 1 ft, which are all closer than the distances assumed in the environmental assessment.

Significance of impacts with mitigation applied

Where vibration exceedances are predicted, mitigation may not reduce vibration below impact thresholds, and annoyance impacts may be significant and unavoidable. Proper implementation of mitigation should eliminate the risk of damage to buildings near the construction area (if such risk is predicted in development of the Vibration Control Plan).

6.2.2.1 Impact Assessment

Table 20 presents assessment results for impacted sensitive receivers. Potential impacts are shown graphically in **Figure 8** through **Figure 10**. Appendix D presents construction vibration predictions at all potentially affected receivers.

Construction vibration predictions for the receiver near construction activities associated with the Balboa Double Track Extension in the City of Los Angeles show there is only one sensitive receiver potentially impacted in the area at 14748 San Fernando Rd, but that receiver is located very close to the construction site: with only 61 feet between the receiver and the track centerline. While the predicted vibration does not reach levels that risk damage to the structure (0.2 inch/sec), the levels do exceed the annoyance threshold during all five construction activities. In particular – the use of the vibratory roller drives the largest exceedances during Activity 4 and Activity 5.

Construction vibration predictions for receivers near construction activities associated with the Canyon Siding Extension in the City of Santa Clarita show there is only one sensitive receiver potentially impacted in the area. The commercial building at SB-5-02c (22840 Soledad Canyon Rd), near the westernmost edge of the construction area, is the closest sensitive receiver to construction in the City of Santa Clarita and the only building in this area potentially effected by construction vibrations. The analysis predicts exceedances of the vibration annoyance limit during Activities 4 and 5, driven by the use of the vibratory roller.

Construction vibration predictions for receivers near construction activities associated with the Lancaster Terminal Improvements in the City of Lancaster show two sensitive receivers potentially impacted. The commercial building at SB-7-01c (44738 Sierra Hwy) and the homeless shelter at NB-7-047 (44611 Yucca Ave) are the closest sensitive receivers to construction in the City of Lancaster. These receivers are within 300 feet of each other on opposite sides of the track and are the only receivers in the City of Lancaster where a construction vibration impact is predicted. Both receivers are within 100 feet of the near track centerline, which results in predicted exceedances of the vibration annoyance limits during the use of vibratory rollers in Activities 4 and 5. Annoyance limits are also exceeded during the other 3 construction activities at SB-7-01c.

For each of the three construction areas, the predicted construction vibration does not reach levels that risk damage. If there are any updates to equipment use from what was assumed in this assessment, new predictions are required to assess damage risk. Assuming an engineered concrete and masonry structure, the risk of damage is possible if equipment operates within the following distances: impact pile driver within 42 ft; vibratory roller within 20 ft; hoe ram, large bulldozer, or caisson drilling within 11 ft; loaded truck within 10 ft; jackhammer within 6 ft; and small bulldozer with 1 ft, which are all closer than the distances assumed in the environmental assessment.

Table 20: Construction Vibration Predictions

Receiver ID	Land Use Type	Address	Distance to Near Track (ft)	PPV Limit[a]	Activity 1 Vibration Predictions	Activity 2 Vibration Predictions	Activity 3 Vibration Predictions	Activity 4 Vibration Predictions	Activity 5 Vibration Predictions
Balboa Double Track Addition, City of Los Angeles									
SB-5-001	residential	14748 San Fernando Rd	61	0.016	**0.023 (0.008)**	**0.023 (0.008)**	**0.023 (0.008)**	**0.055 (0.039)**	**0.055 (0.039)**
Siding Track Extension, City of Santa Clarita									
SB-5-02c[b]	commercial	22840 Soledad Canyon Rd	155	0.022	0.017	0.017	0.017	**0.04 (0.018)**	**0.04 (0.018)**
Terminal Improvements, City of Lancaster									
NB-7-047	residential	44611 Yucca Ave	85	0.016	0.014	0.014	0.014	**0.033 (0.018)**	**0.033 (0.018)**
SB-7-01c[b]	commercial	44738 Sierra Hwy	117	0.022	**0.159 (0.136)**	**0.159 (0.136)**	**0.159 (0.136)**	**0.375 (0.352)**	**0.375 (0.352)**

All vibration levels are PPV in inches/second. Predicted impacts are shown in red with the exceedance amount (above annoyance thresholds) in parentheses. Vibration criteria are listed in Table 11. Damage criteria are not predicted to be exceeded; the construction contractor's Vibration Control Plan, however, should include refined predictions based on planned equipment use.

[a] For Los Angeles, FTA Manual annoyance criteria (72 VdB residential) converted to PPV using a crest factor of 4. For Santa Clarita and Lancaster, FTA Manual annoyance criteria (72 VdB residential/75 VdB institutional) converted to PPV using a crest factor of 4.

[b] Indicates a receiver that has been added for the construction analysis only.

6.2.2.2 Recommended Mitigation

Construction operations that occur immediately adjacent to sensitive receivers are likely to exceed the vibration annoyance thresholds, particularly during the use of vibratory rollers. The following precautionary vibration mitigation strategies should be implemented to minimize the potential for damage to any structures and annoyance to occupants in the project area:

- **Preconstruction Survey**: The survey should include inspecting building foundations and taking photographs of preexisting conditions for buildings where there is a concern for a risk of damage. The survey can be limited to buildings in the project area within 25 feet of high-vibration-generating construction activities. The only exception is if an important and potentially fragile historic resource is located within approximately 200 feet of construction, in which case it should be included in the survey. For this Proposed Project, no known buildings fall into that category.
- **Vibration Limits**: The FTA Guidance Manual suggests vibration limits in terms of PPV, ranging from 0.12 inches/second for "buildings extremely susceptible to vibration damage" to 0.5 inches/second for "Reinforced-concrete, steel or timber" buildings. The contract specifications should limit construction vibration to a maximum of 0.2 inches/second for all buildings in the project area (this PPV limit applies to all equipment).
- **Vibration Monitoring**: The contractor should be required to monitor vibration at any building where vibratory rollers or similar high-vibration-generating equipment would be operated within 25 feet of buildings and at any location where complaints about vibration are received from building occupants.
- **Alternative Construction Procedures**: If high-vibration construction activities must be performed close to structures, it may be necessary for the contractor to use an alternative procedure that produces lower vibration levels. Examples of high-vibration construction activities include the use of vibratory compaction or hoe rams next to sensitive buildings. Alternative procedures include use of non-vibratory compaction in limited areas and a concrete saw in place of a hoe ram to break up pavement.

When construction or demolition operations must occur very close to the receiver, other less conventional techniques could be employed. Residents could be temporarily relocated to a hotel during construction times when the vibration will be the greatest and most intrusive, or operations could be scheduled during the nighttime in non-residential areas.

<u>Comments on specific receivers</u>

The proximity of the only sensitive receiver in the City of Los Angeles (SB-5-001, 14748 San Fernando Rd, Sylmar area) to the construction area makes it unlikely that any typical mitigation measures would fully eliminate the intrusion caused by construction vibration. At this location, less conventional mitigation measures may be called for, such as temporarily relocating residents to a hotel during the most intrusive construction operations (likely to cause annoyance) – particularly if the drill rig must be used near the receiver.

The commercial building at SB-5-02c (22840 Soledad Canyon Rd), near the westernmost edge of the Canyon Siding Extension construction area in the City of Santa Clarita, is the closest

sensitive receiver to construction in that city. Predictions identify vibration annoyance exceedances during the use of the vibratory roller. Proper implementation of the mitigation measures as listed in this section (6.2.2.2) should allow the contractor to minimize vibration.

In the City of Lancaster, the commercial building at SB-7-01c (44738 Sierra Hwy) and the homeless shelter at NB-7-047 (44611 Yucca Ave) are the closest sensitive receivers to construction of the Lancaster Terminal Improvements and are within 300 feet of each other on opposite sides of the track. The close-proximity of the receivers to construction results in predicted vibration annoyance exceedances, particularly during the use of vibratory rollers. Mitigation of exceedances may require the contractor to use less conventional mitigation measures during the most intrusive operations near the sensitive receivers.

Vibration Control Plan

As part of the Noise Control Plan, the contractor should include predicted vibration exceedances and identify mitigation measures to reduce levels below the applicable limit. Examples of typical construction vibration mitigation measures are presented in earlier this section (Section 6.2.2.2).

Specific measures to be employed to reduce or mitigate construction vibration impacts should be developed by the contractor and presented in the form of a Vibration Monitoring Plan as part of the Noise Control Plan. Annoyance impacts may be unavoidable, even with mitigation measures applied, but proper implementation of mitigation should eliminate the risk of damage to buildings near the construction. Previous Metro projects have required that vibration measurements be conducted on a weekly basis or as often as the construction setup changes. Measurements should be taken during peak vibration generating construction activities, and the results must be submitted to Metro on a weekly basis.

6.3 NOISE IMPACTS NEAR AIRSTRIPS AND MITIGATION (CEQA CRITERION C)

CEQA Criterion (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?

Answer: No.

The only predicted impacts are for construction noise, and there are no known private airstrips or airports within 2 miles of the three areas where construction activities are planned (in the City of Los Angeles, City of Santa Clarita, and City of Lancaster). In addition, the construction areas are not within contours for airport land use plans.

6.4 CUMULATIVE IMPACTS AND MITIGATION (CEQA CRITERION)

CEQA Cumulative Criterion:

Does the project have impacts that are individually limited, but cumulatively considerable?

Answer: None at this time.

The project impact assessment includes existing noise, which encompasses any noise increases previously experienced. Future rail projects may increase noise within the Proposed Project's Study Area, by adding noise sources and increasing the number of noise events. There are several rail projects that could potentially add noise to portions of the AVL rail corridor. These include: East San Fernando Valley (ESFV) Light Rail, California High Speed Rail, Brightline West, and Union Pacific Railroad (UPRR) Unified Plan. Several of the projects have not finalized the routes or operations, so the associated noise for the final design/plans is not available. Final designs/decisions for these projects should consider cumulative effects. The ESFV Light Rail is currently being constructed (expected to open in 2028) and would be adjacent to the AVL rail corridor from Van Nuys Blvd to San Fernando Station, about 2.5 miles in the City of Los Angeles (Pacoima area) and City of San Fernando. There are only two sensitive receivers close to the tracks in that section, San Fernando Middle School and the adjacent residence along Robert F. Kennedy Dr. At the environmental stage, ESFV Light Rail was predicted to produce noise from operations at about 60 dBA, 10 dBA or more below the existing noise measured in the general area as part of AVL rail corridor. As such, the light rail noise will contribute little to cumulative noise, including existing noise and the Proposed Project's operational noise.

Highway/road projects could potentially combine with the Proposed Project's operational noise in areas where the highways or roads are close to the AVL rail corridor. When more information is available for the applicable planned projects, cumulative effects should be considered.

For vibration, the Proposed Project does not change the maximum vibration levels, on which impacts are assessed. Other rail projects may increase the maximum vibration in the project area if different vehicle types are used, and the vibration is greater for the added vehicles. Also, a rail project may increase the number of occurrences of vibration events, which is also included in a vibration assessment. When more information is available for projects with the potential to affect vibration assessments, such as the California High Speed Rail, Brightline West, or UPRR Unified Plan, cumulative effects should be considered. Any highway projects, current or future, are not expected to increase vibration in the Proposed Project Study Area.

Note that the Proposed Project is predicted to cause temporary annoyance due to construction noise and vibration. The Noise Control Plan considers existing conditions and thus accounts for other noise sources in the area at the time of construction.

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8. List of Preparers

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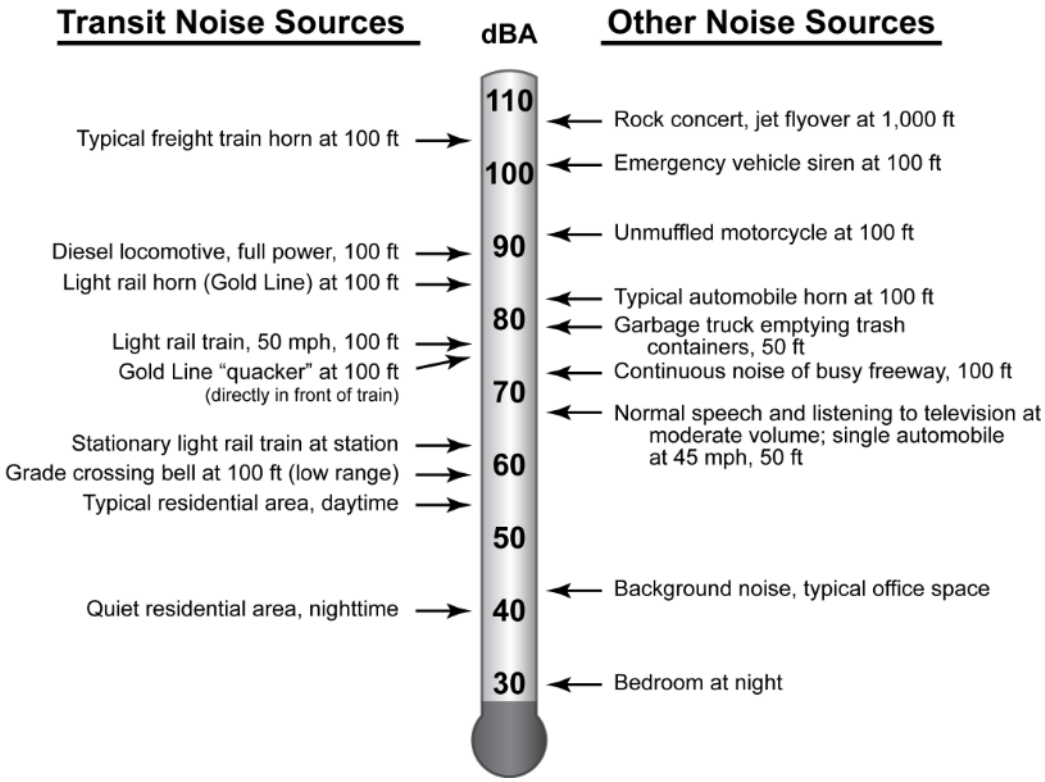
Appendix A – Fundamentals and Noise and Vibration

NOISE

Sound is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale has been developed. A-weighted decibels are abbreviated as "dBA." On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA. As a point of reference, **Figure 12** includes examples of A-weighted sound levels from common indoor and outdoor sounds.

Figure 12: Typical Outdoor and Indoor Noise Levels



Using the decibel scale, sound levels from two or more sources cannot be directly added together to determine the overall sound level. Rather, the combination of two sounds at the same level yields an increase of 3 dB. The smallest recognizable change in sound level is approximately 1 dB. A 3-dB increase in the A-Weighted sound level is generally considered perceptible, whereas a 5-dB increase is readily perceptible. A 10-dB increase is judged by most people as an approximate doubling of the perceived loudness.

Noise Terminology

Following are brief definitions of the measures of environmental noise used in this study:

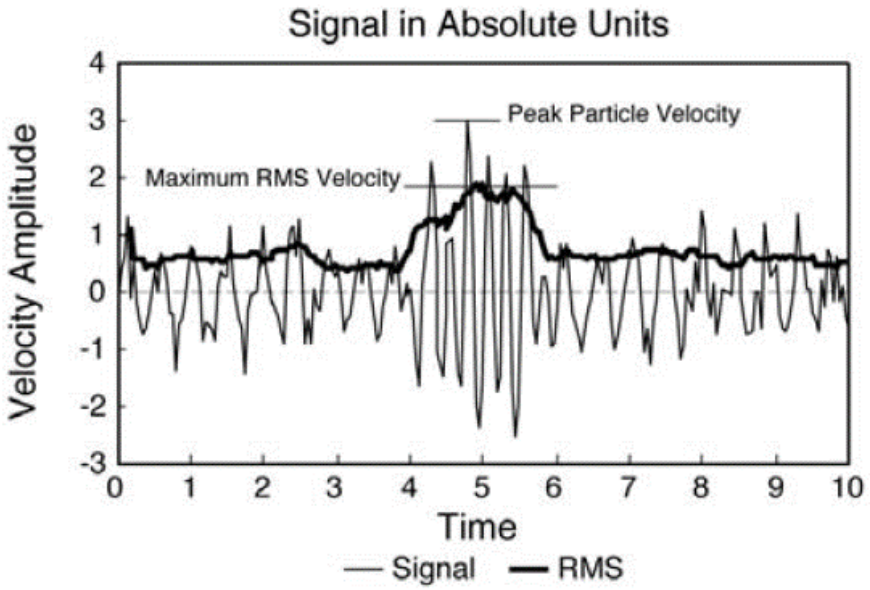
- ***Maximum Sound Level (L_{max}):*** L_{max} is the maximum sound level that occurs during an event such as a train passing.
- ***Equivalent Sound Level (L_{eq}):*** Environment sound fluctuates constantly. The equivalent sound level (L_{eq}) is the most common means of characterizing community noise. L_{eq} represents a constant sound that, over a specified period of time, has the same sound energy as the time-varying sound. L_{eq} is used by the Federal Transit Administration (FTA) to evaluate noise effects at institutional land uses, such as schools, churches, and libraries, from proposed transit projects.
- ***Day-Night Average Sound Level (L_{dn}):*** L_{dn} is a 24-hour L_{eq} with an adjustment to reflect the greater sensitivity of most people to nighttime noise. The adjustment is a 10 dB penalty for all sound that occurs between the hours of 10:00 p.m. to 7:00 a.m. The effect of the penalty is that, when calculating L_{dn}, any event that occurs during the nighttime is equivalent to ten occurrences of the same event during the daytime. L_{dn} is the most common measure of total community noise over a 24-hour period and is used by the FTA to evaluate residential noise effects from proposed transit projects.
- ***Community Noise Equivalent Level (CNEL or L_{den}):*** CNEL is a 24-hour L_{eq} with the same nighttime penalty as Ldn, and with an additional adjustment for evening hours. A penalty of 5 dB is applied to all sound that occurs between the hours of 7 p.m. and 10 p.m., typical relaxation and conversation time.
- ***Exceedance Level (L_{XX}):*** This is the percent of time a sound level is exceeded during the measurement period. For example, the L_{99} is the sound level exceeded 99 percent of the measurement period. For a-1 hour period, L_{99} is the sound level exceeded for all except 36 seconds of the hour. L_1 represents typical maximum sound levels, L_{33} is approximately equal to L_{eq} when free-flowing traffic is the dominant noise source, L_{50} is the median sound level, and L_{99} is close to the minimum sound level.
- ***Sound Exposure Level (SEL):*** SEL is a measure of the acoustic energy of an event such as a train passing. In essence, the acoustic energy of the event is compressed into a 1-second period. SEL increases as the sound level of the event increases and as the duration of the event increases. It is often used as an intermediate value in calculating overall metrics such as L_{eq} and L_{dn}.

VIBRATION

One potential community effect from the proposed project is vibration that is transmitted from the tracks through the ground into adjacent houses. This is referred to as groundborne vibration. When evaluating human response, groundborne vibration is usually expressed in terms of decibels using the RMS vibration velocity. Some limits are also presented in terms of the peak particle velocity (PPV). RMS is defined as the average of the squared amplitude of the vibration signal. To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. All vibration decibels in this report use a decibel reference of 1 micro-inch/second (µin/sec.). PPV is the maximum instantaneous positive or negative peak of an oscillating vibration

signal, in this report using velocity in inches/second (in/sec). The RMS amplitude is always positive, and always less than the PPV. **Figure 13** shows a sample vibration signal, where the bold line is the RMS velocity and the lighter-weight line is the raw signal.

Figure 13: Comparing PPV and RMS Values of a Sample Vibration Signal



Source: Federal Transit Administration, *Transit Noise and Vibration Assessment Manual*, 2018

The potential adverse effects of rail transit groundborne vibration are as follows:

- **Perceptible Building Vibration**: This is when building occupants feel the vibration of the floor or other building surfaces. Experience has shown that the threshold of human perception is around 65 VdB and that vibration that exceeds 75 to 80 VdB may be intrusive and annoying to building occupants.
- **Rattle**: The building vibration can cause rattling of items on shelves and hanging on walls, and various different rattle and buzzing noises from windows and doors.
- **Reradiated Noise**: The vibration of room surfaces radiates sound waves that may be audible to humans. This is referred to as groundborne noise. When audible groundborne noise occurs, it sounds like a low-frequency rumble. For a surface rail system such as the proposed project, the groundborne noise is usually masked by the normal airborne noise radiated from the transit vehicle and the rails.
- **Damage to Building Structures**: Although it is conceivable that vibration from a light rail system could cause damage to fragile buildings, the vibration from rail transit systems is usually one to two orders of magnitude below the most restrictive thresholds for preventing building damage. Hence the vibration impact criteria focus on human annoyance, which occurs at much lower amplitudes than does building damage.

Often it is necessary to determine the contribution at different frequencies when evaluating vibration or noise signals. The 1/3-octave band spectrum is the most common procedure used to evaluate frequency components of acoustic signals. The term “octave” has been borrowed from music where it refers to a span of eight notes. The ratio of the highest frequency to the lowest

frequency in an octave is 2:1. For a 1/3-octave band spectrum, each octave is divided into three bands where the ratio of the lowest frequency to the highest frequency in each 1/3-octave band is $2^{1/3}$:1 (1.26:1). An octave consists of three 1/3 octaves.

The 1/3-octave band spectrum of a signal is obtained by passing the signal through a bank of filters. Each filter excludes all components except those that are between the upper and lower range of one 1/3-octave band. The FTA Guidance Manual is a good reference for additional information on transit noise and vibration and the technical terms used in this section.

Vibration Terminology

Most noise terms have a vibration equivalent by replacing the noise level with a vibration level. Following are three vibration terms used in this report for quantifying vibration energy:

- ***Equivalent Vibration Level (L_{eq} or L_v):*** The equivalent vibration level (L_{eq} or L_v) represents a constant vibration that, over a specified period of time, has the same sound energy as the time-varying vibration.
- ***Peak Particle Velocity (PPV):*** the maximum, instantaneous positive or negative peak of an oscillating vibration signal.
- ***Exceedance Level (L_{XX}):*** see definition in noise section above and replace noise with vibration.
- ***Maximum Sound Level (L_{max}):*** see definition in noise section above and replace noise with vibration.

Following are some terms related to predicting vibration energy:

- ***Force Density Level (FDL):*** The amount of vibration energy that is generated by the train into the ground under the rail.
- ***Line Source Transfer Mobility (LSTM):*** This is a measure of much vibration energy is absorbed by the ground as on moves away from the source. It is similar to a Point Source Transfer Mobility (PSTM) but uses a line-source such as a rail instead of a point-source.
- ***Vibration Propagation Test:*** This is a non-destructive vibration test performed on the ground to estimate the LSTM of the soil. With the LSTM and measured train levels (L_v) one can estimate the train's FDL.

Appendix B – Existing Noise Measurements and Maps

This appendix provides information on the existing noise measurement data. This includes data collected at/near the receivers for purposes of establishing existing noise, as well as measurements taken to help determine the horn noise levels in the region. Class 1 sound level meters were used to collect 1-second A-weighted L_{eq} data during each measurement period. Data were then processed to determine sound levels for the following metrics: loudest hour L_{eq}, L_{dn}, and CNEL.

Existing noise data applied to the project also incudes data collected along the AVL rail corridor for other projects. This includes:

- California High Speed Rail (HSR)
- Metrolink Central Maintenance Facility (CMF)
- LA Metro Link Union Station (LUS)

Measurement locations are shown in **Figure 14** to **Figure 66**, along with nearby sensitive receivers. Below is a reminder of the sections to help navigate the figures.

Number	Study Area Section	Associated City/Jurisdiction
1	LA Union Station to Highway	Los Angeles
2	Highway 2 to Highway 134	Los Angeles - Glendale
3	Highway 134 to I-5	Glendale - Burbank
4	I-5 to 210	Burbank - Sylmar
5	SW mountains: 210 to Capra Rd)	Sylmar - Santa Clarita
6	NE mountains: Capra Rd to Pearblossom Hwy)	Santa Clarita - Palmdale
7	Pearblossom Hwy to Lancaster Station)	Palmdale - Lancaster

Note that all AVL measurements and sensitive receivers are numbered south to north along the corridor, with only a couple exceptions, where additional measurement locations were added. Residential sensitive receivers are colored purple within 750 feet of the alignment (and labeled with numbers) and green farther out (receivers out to 1,600 feet). Other sensitive receivers: institutional (schools, churches, etc.) are colored yellow close in (labeled with letters) and orange farther out, and theaters/studios are colored blue close in (labeled with letters) and none farther out. Each figure shows a key for receiver types, as well as ranges of purple and yellow (out to 750 feet) receiver numbers shown on the map. Receiver IDs read as “operational

direction – section number – receiver number or letter," for example NB-1-006 is a residential receiver on the northbound side in Section 1, receiver #6.

A summary of the measurements is shown in **Table 21**. Also included in the table are the data used from other projects; these data are designated as HSR, CMF, and LUS in the Site ID. Following the table, photos and sound level time histories are shown for the Antelope Valley Line March 2021 measurement positions.

Figure 14: Measurement Locations: Section 1
Receivers: NB-1-001 to NB-1-002, SB-1-001 to SB-1-002; Measurements: LUS ML1,2,3

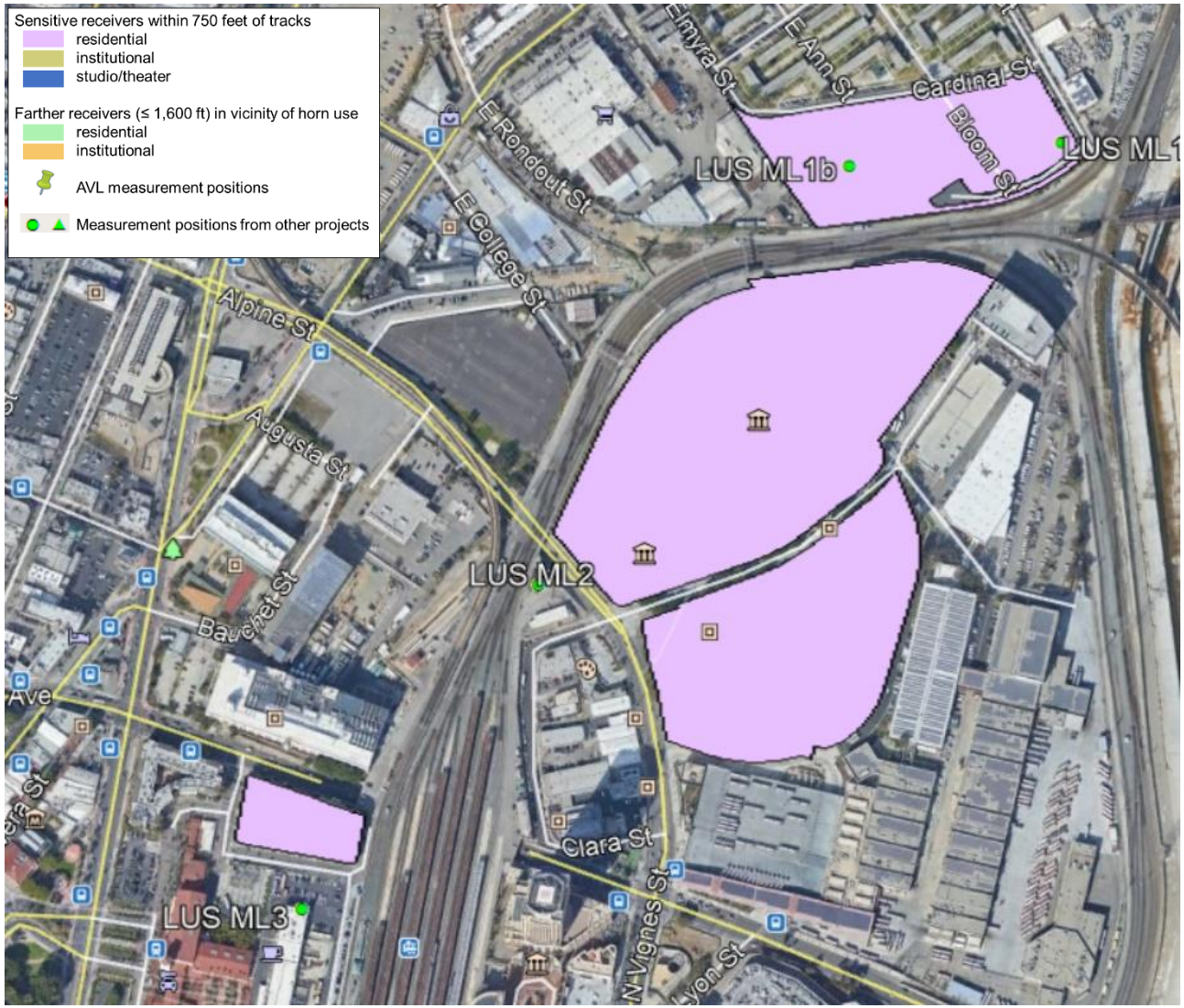


Figure 15: Measurement Locations: Section 1
Receivers: NB-1-003 to NB-1-006, NB-1-A; Measurements: LT-01, ST-01,02

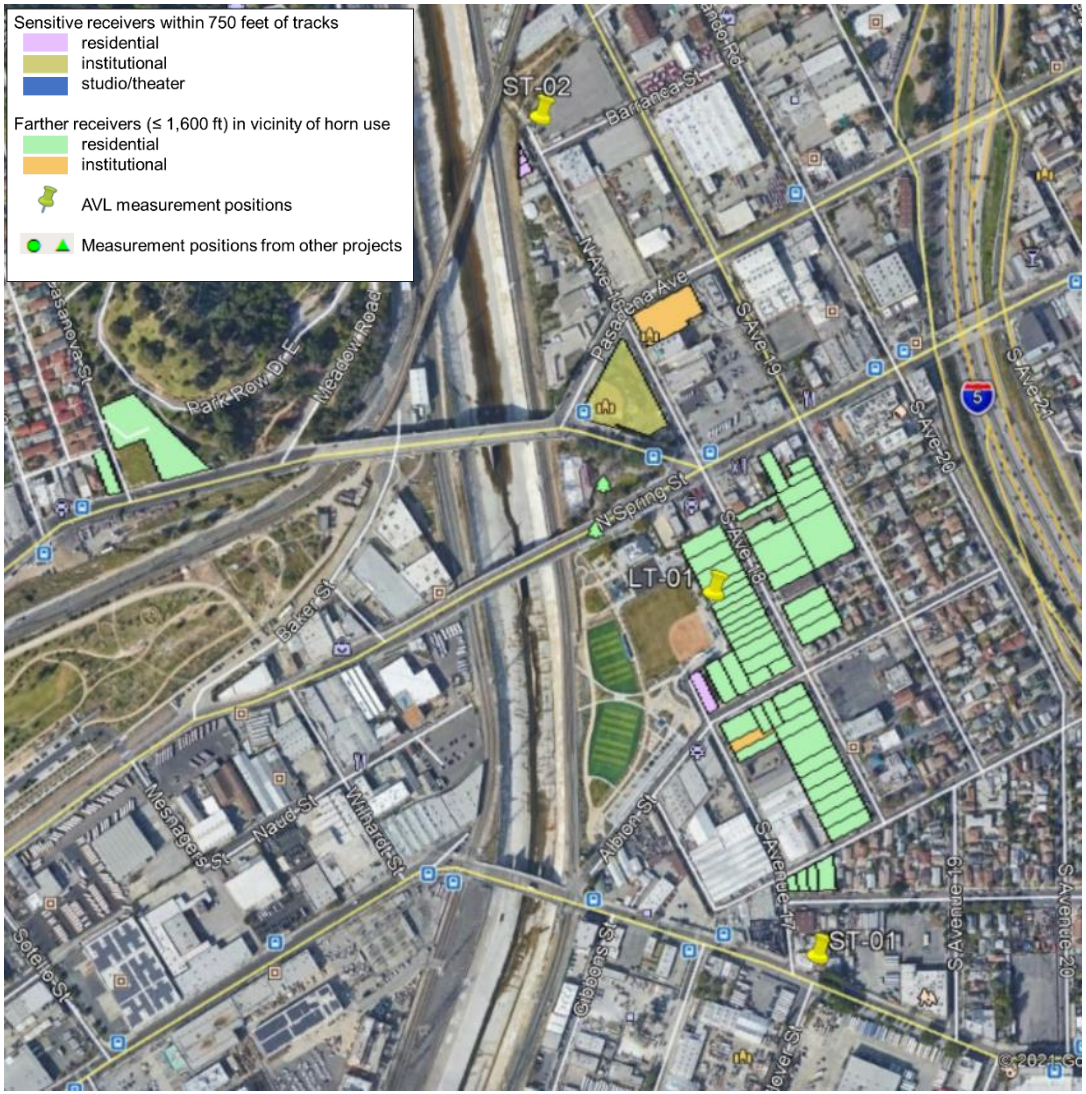


Figure 16: Measurement Locations: Section 1
Receivers: NB-1-007 to NB-1-054, SB-1-003 to SB-1-023; Measurements: CMF (all), LT-02, ST-03,04

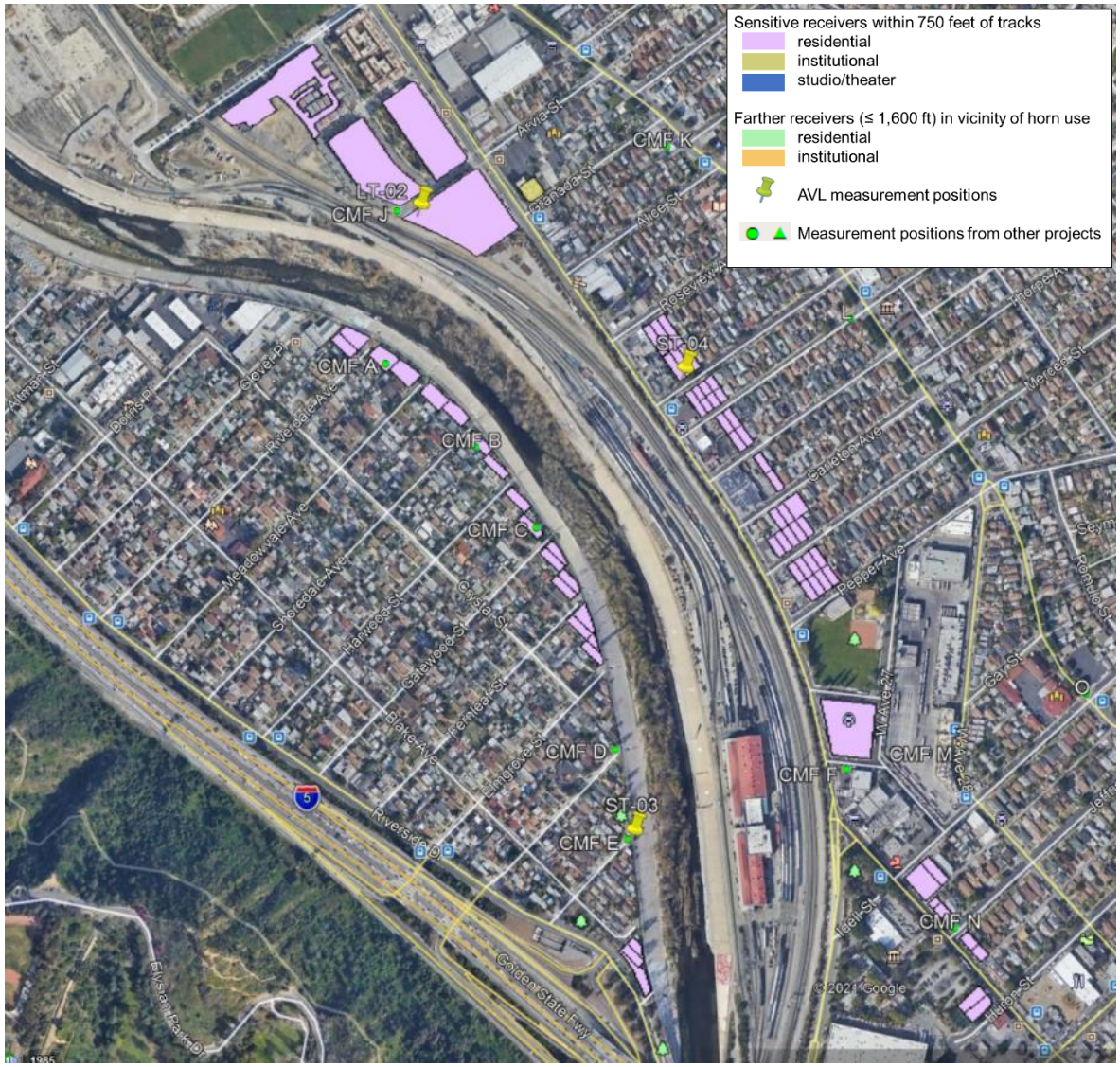
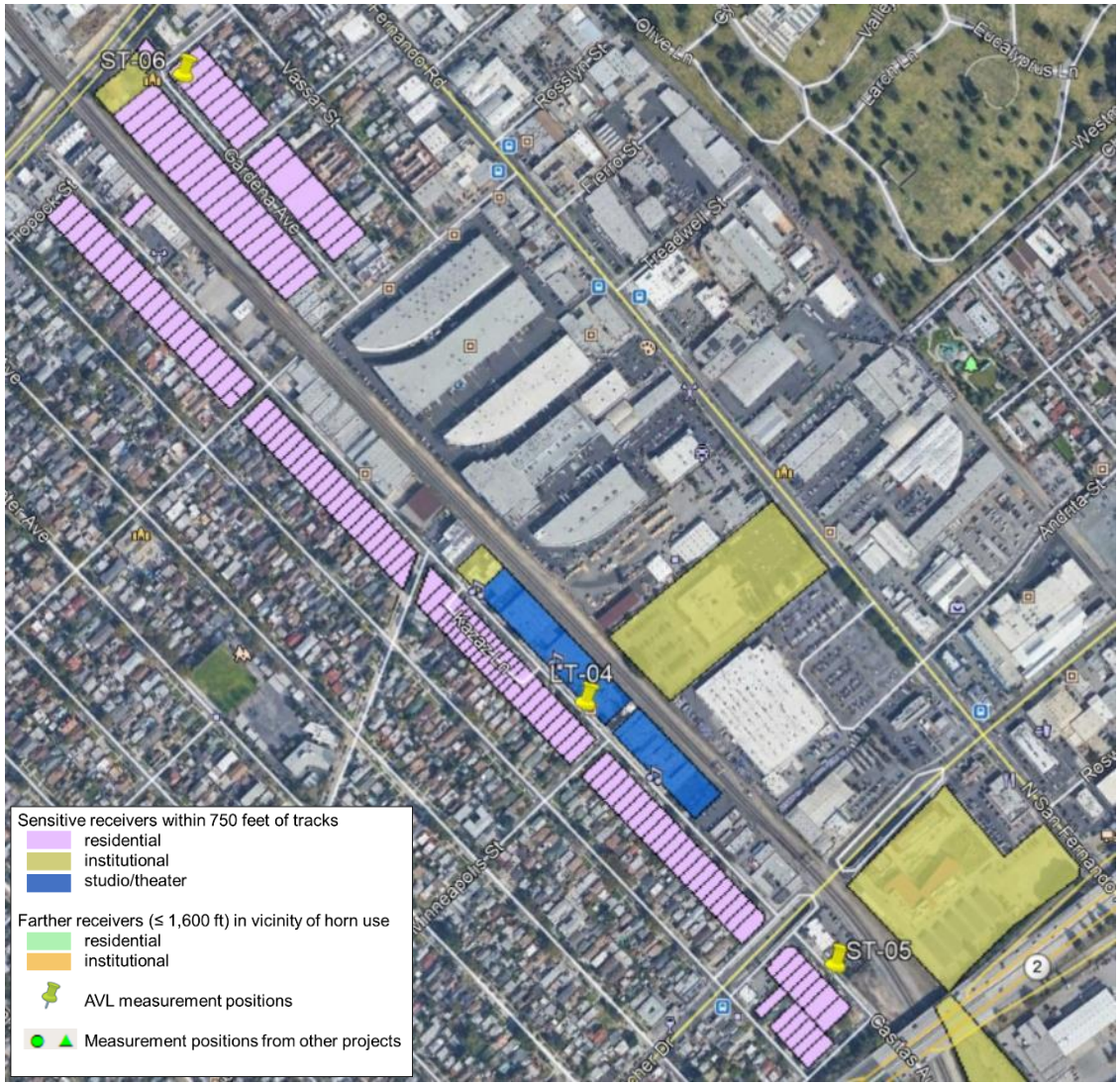


Figure 17: Measurement Locations: Section 1
Receivers: SB-1-024 to SB-1-026 and NB-1-C,D,E; Measurements: LT-03

Figure 18: Measurement Locations: Section 2
Receivers: NB-2-001 to NB-2-036, SB-2-001 to SB-2-114, NB-2-A,B,C, SB-2-A,B,C; Measurements: LT-04, ST-05,06



Metro

Figure 19: Measurement Locations: Section 2
Receivers: NB-2-037 to NB-2-040, SB-2-115 to SB-2-163; Measurements: ST-07

Figure 20: Measurement Locations: Section 2
Receivers: NB-2-041, SB-2-164 to SB-2-187, NB-2-D; Measurements: ST-08,9

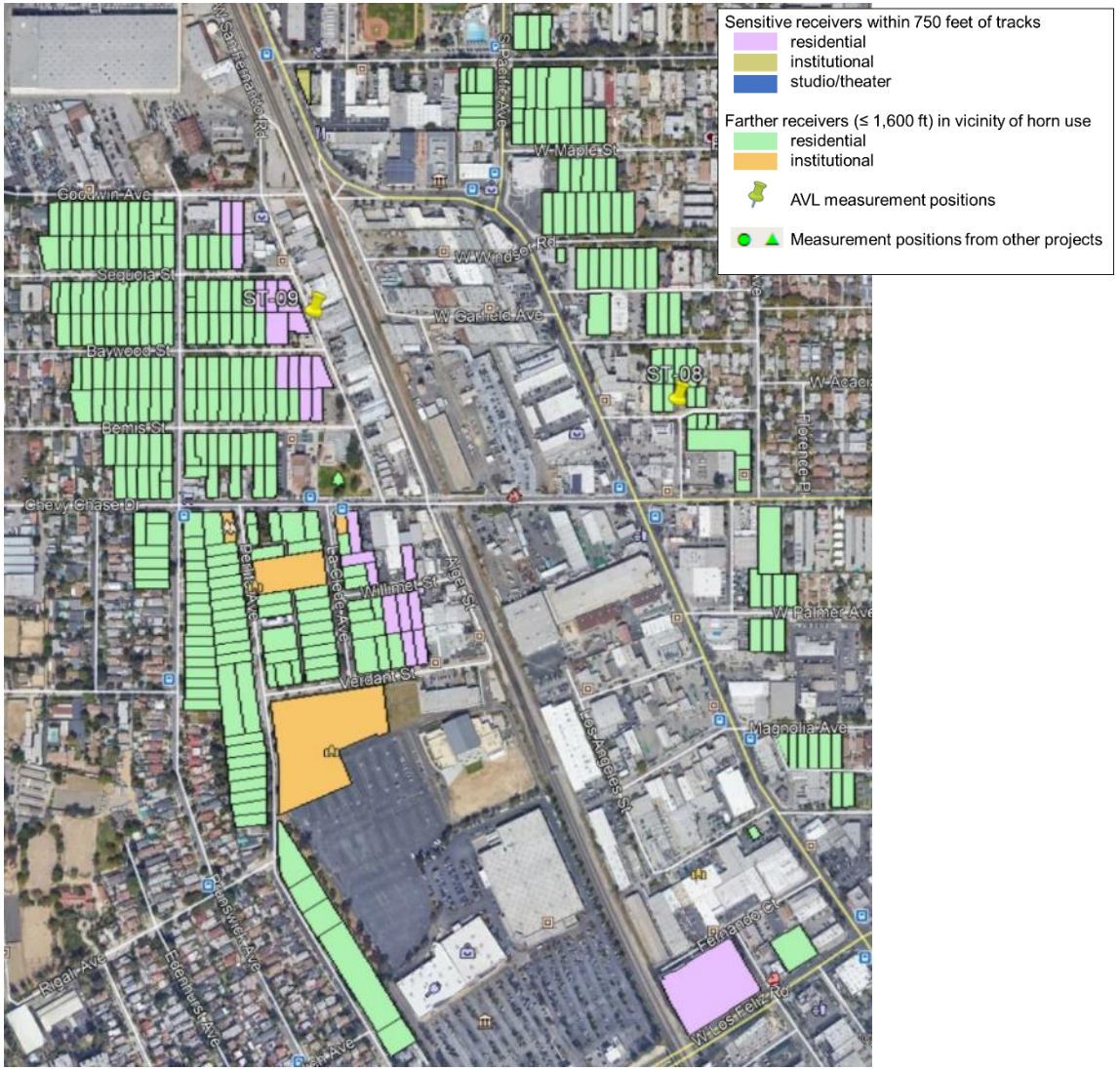


Figure 21: Measurement Locations: Section 2
Receivers: NB-1-042 to NB-1-047, SB-2-D,E; Measurements: LT-05, ST-10

Figure 22: Measurement Locations: Section 3
Receivers: NB-3-001 to NB-3-060, NB-3-A; Measurements: LT-06, ST-11

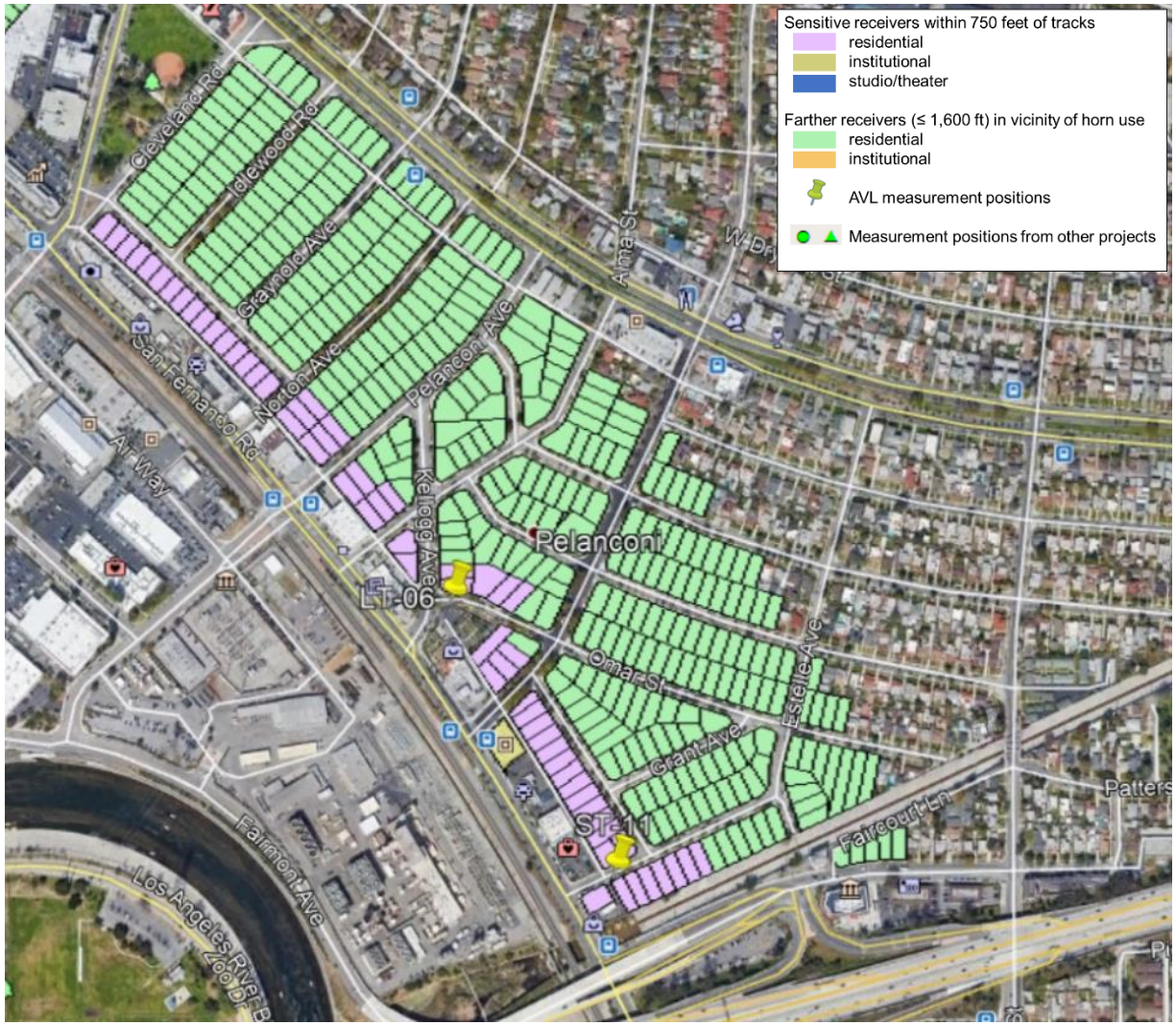


Figure 23: Measurement Locations: Section 3
Receivers: NB-3-061 to NB-3-062, NB-3-B,C, SB-3-A; Measurements: ST-12

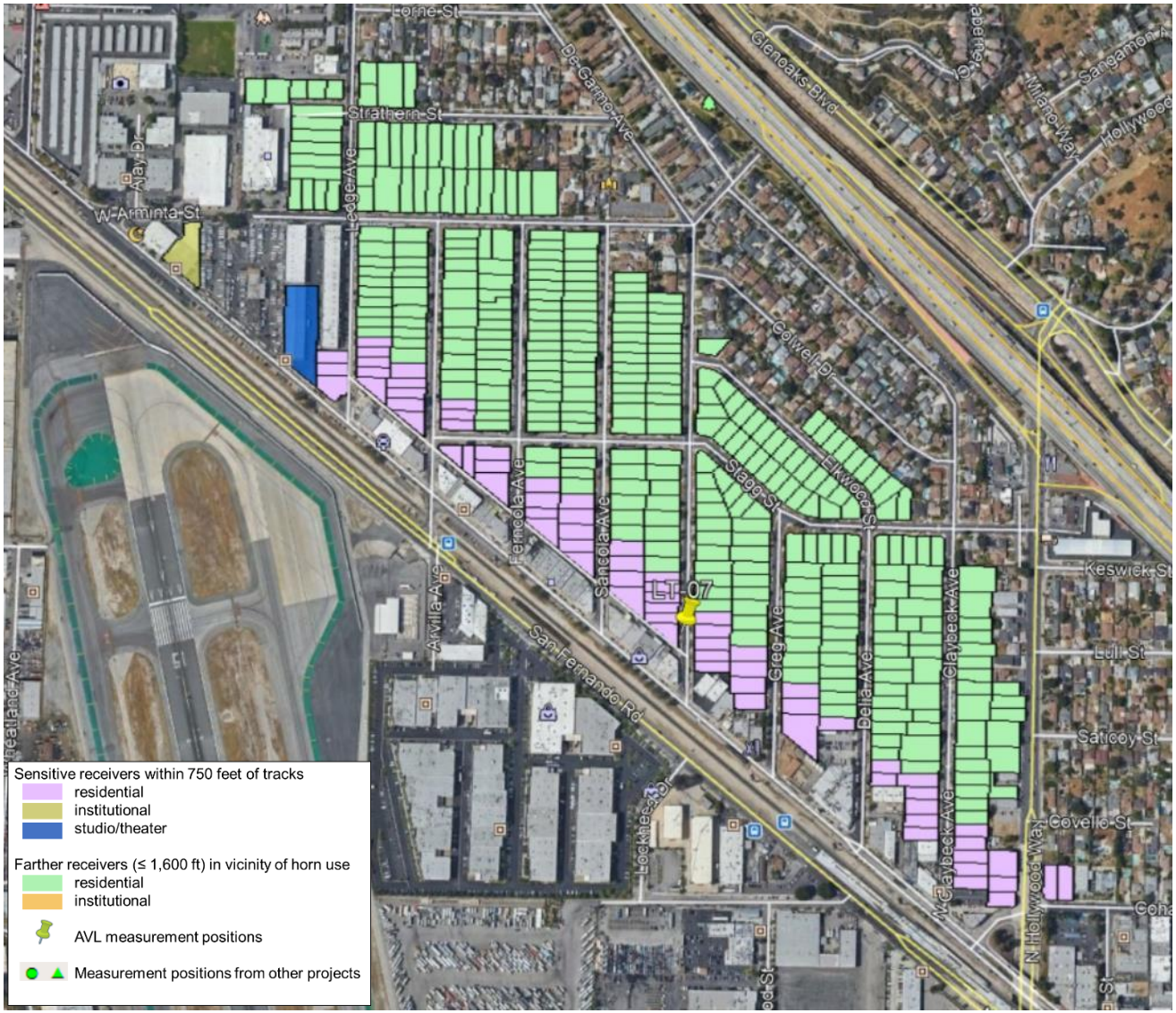
Figure 24: Measurement Locations: Section 3
Receivers: NB-3-063, NB-3-D, SB-3-B,C; Measurements: HSR-LT-30

Figure 25: Measurement Locations: Section 3
Receivers: NB-3-064 to NB-3-107, SB-3-D; Measurements: HSR-LT-28, ST-13

Figure 26: Measurement Locations: Section 3
Receivers: NB-3-108 to NB-3-180, SB-1-001 to SB-1-022, NB-3-E,F, SB-3-E; Measurements: HSR-LT-26,27

Metro

Figure 27: Measurement Locations: Section 3
Receivers: NB-3-181 to NB-3-250, NB-3-G,H; Measurements: LT-07



Metro

Figure 28: Measurement Locations: Section 3
Receivers: NB-3-251 to NB-3-267, SB-3-023 to SB-3-063, NB-3-I, SB-3-F,G; Measurements: HSR-LT-23

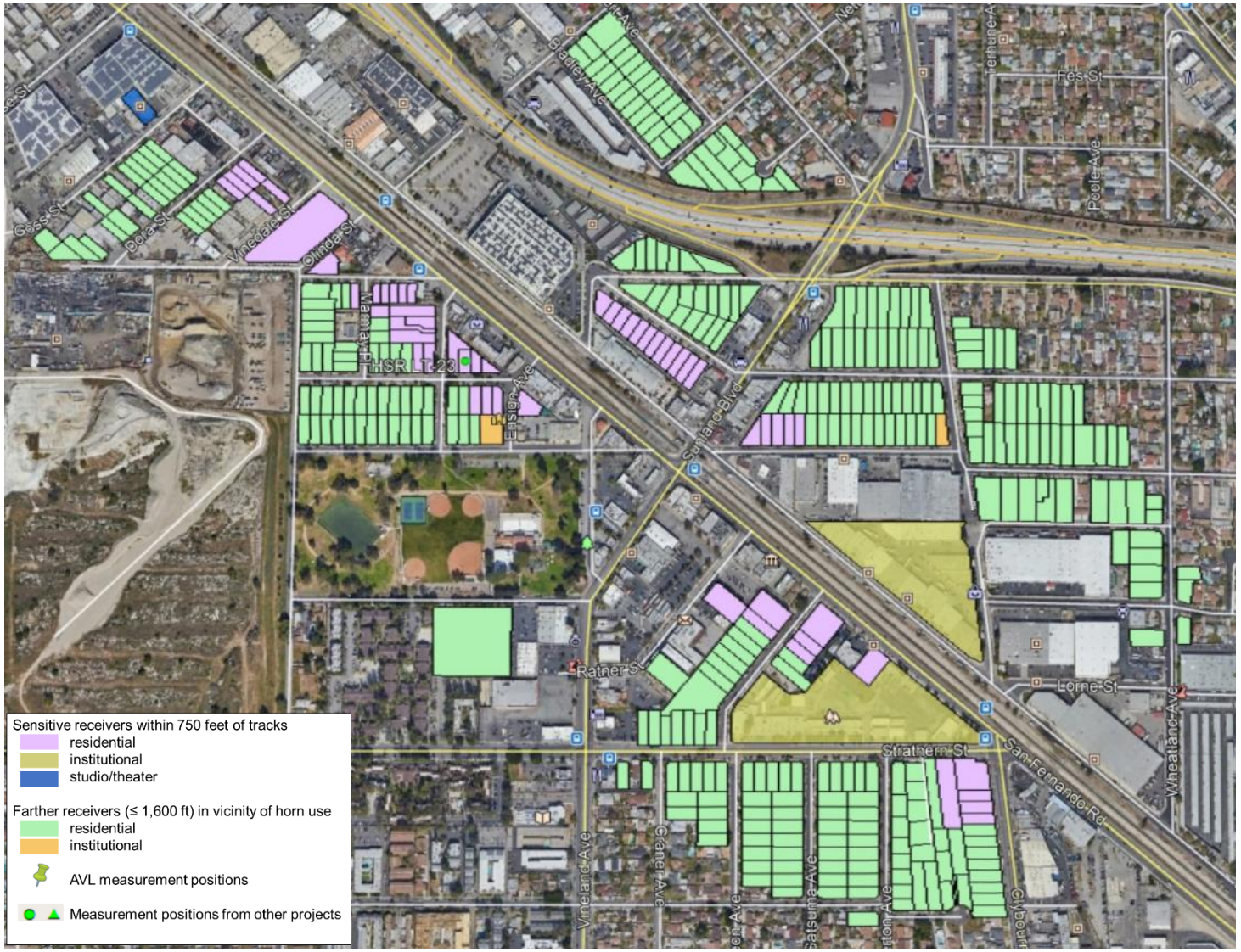
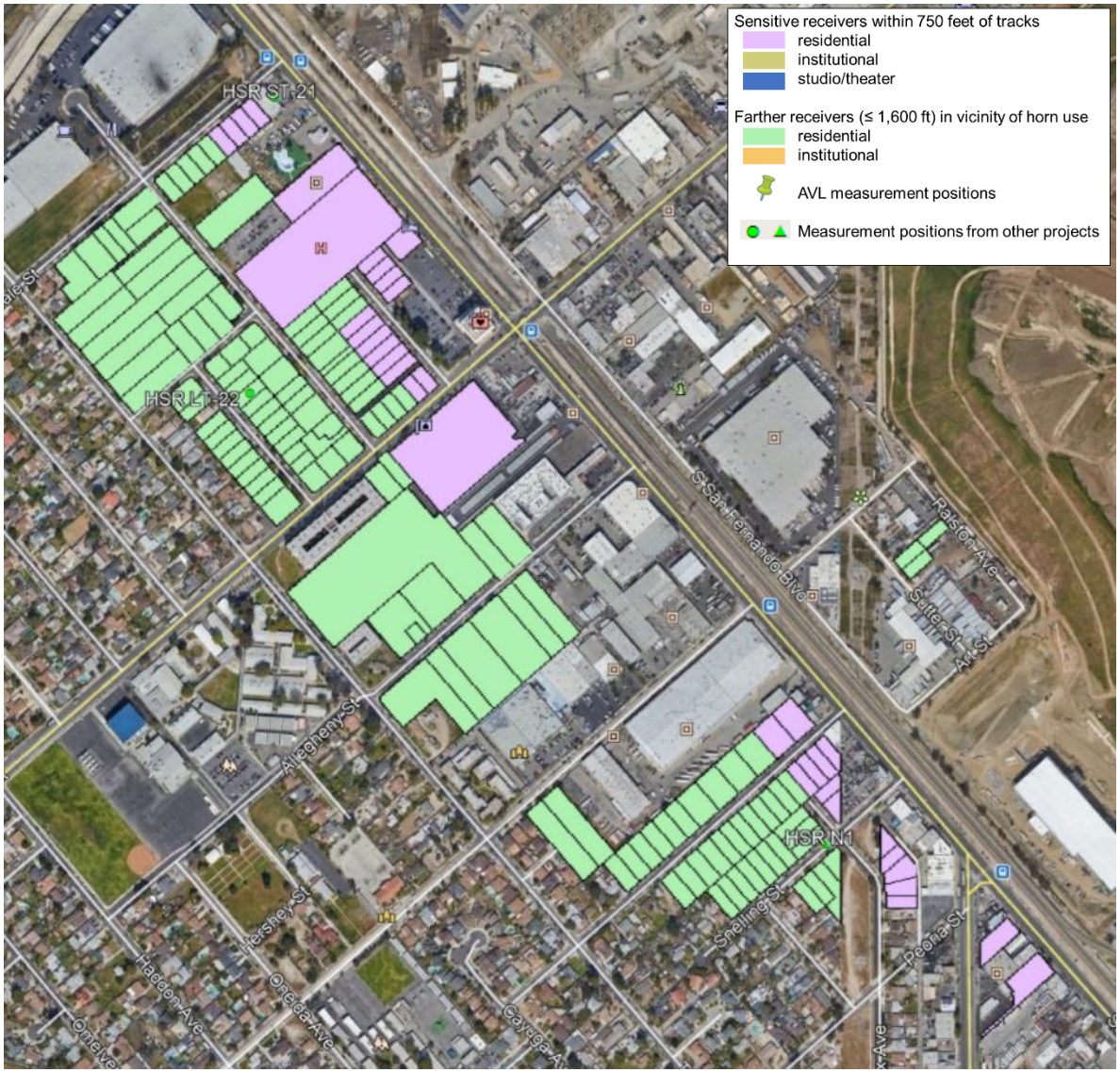


Figure 29: Measurement Locations: Section 4
Receivers: SB-4-001 to SB-4-035; Measurements: HSR-LT-22, HSR-ST-24, HSR-N1



Metro

Figure 30: Measurement Locations: Section 3
Receivers: NB-4-001 to NB-4-024, SB-4-036 to SB-4-089, NB-4-A; Measurements: HSR-LT-21, LT-08, ST-14

Metro

Figure 31: Measurement Locations: Section 4
Receivers: NB-4-025 to NB-4-050, SB-4-090 to SB-4-131; Measurements: ST-15

Metro

Figure 32: Measurement Locations: Section 4
Receivers: NB-4-051 to NB-4-081, SB-4-132 to SB-4-152; Measurements: LT-09, ST-16

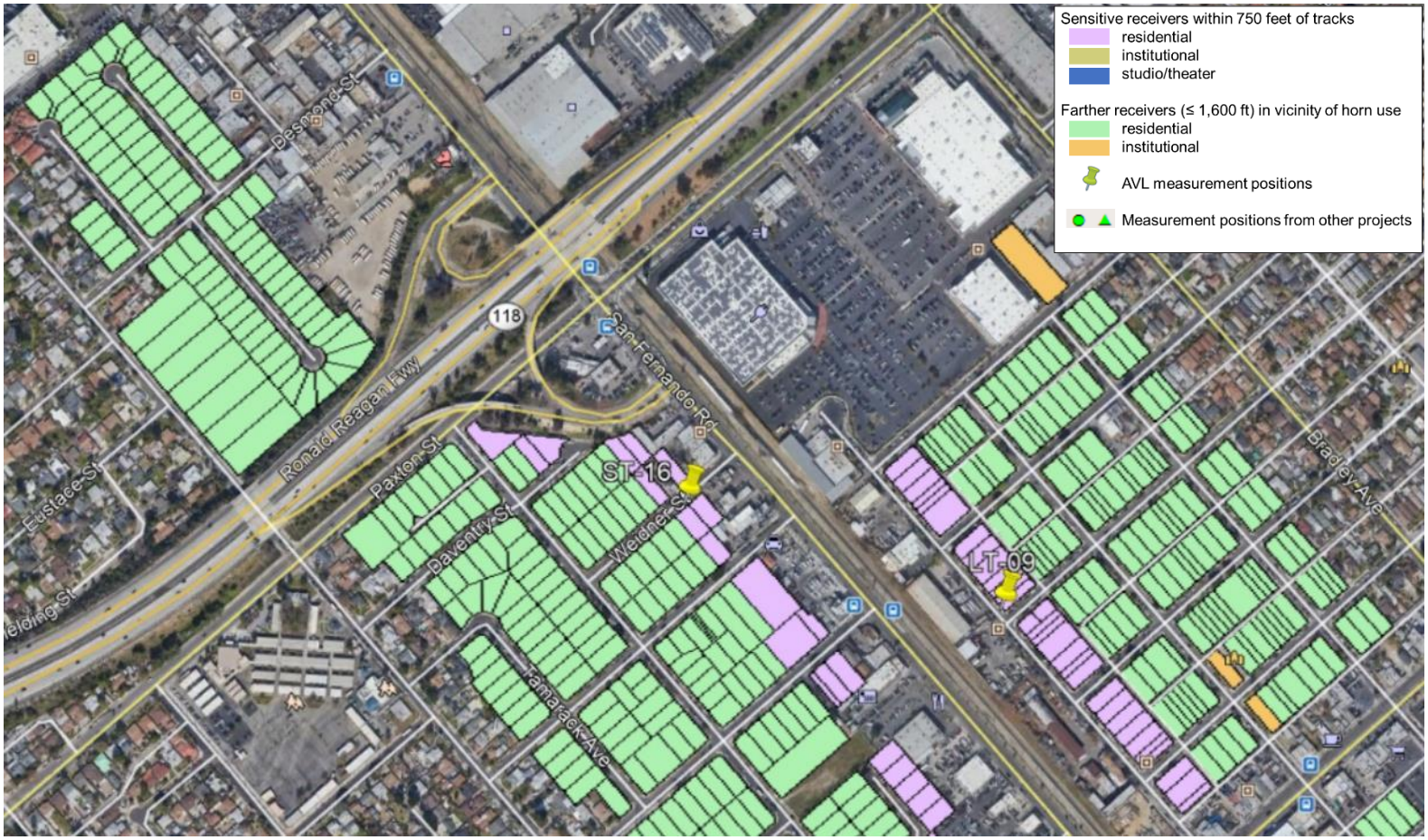


Figure 33: Measurement Locations: Section 4
Receivers: NB-4-082 to NB-4-087, NB-4-B; Measurements: ST-17

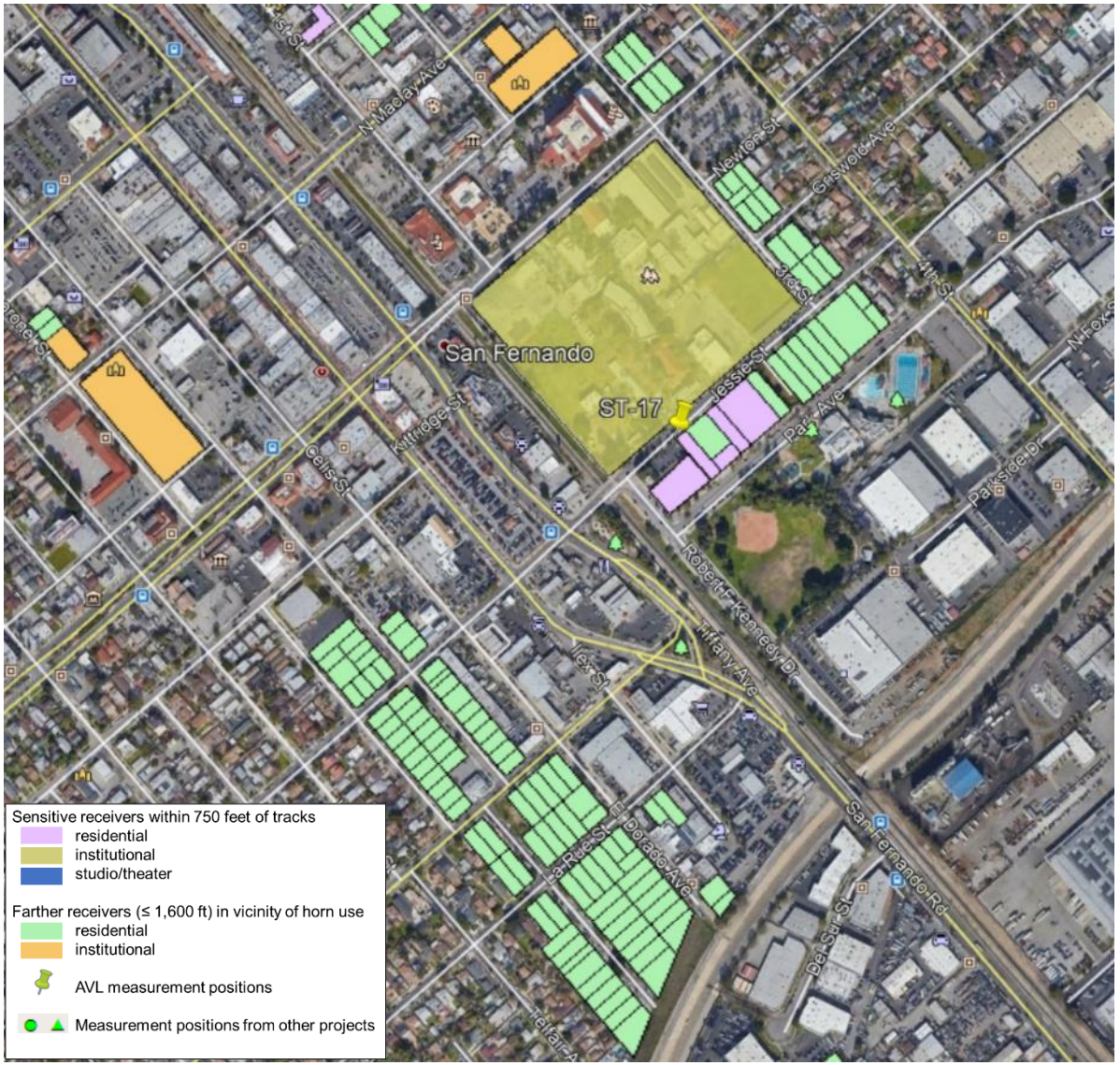


Figure 34: Measurement Locations: Section 4
Receivers: NB-4-088 to NB-4-094, SB-4-153 to SB-4-160, NB-4-C; Measurements: none – measurement locations from adjacent sections applied

Figure 35: Measurement Locations: Section 4
Receivers: NB-4-095 to NB-4-165, SB-4-161 to SB-4-228; Measurements: LT-10, ST-18

Metro

Figure 36: Measurement Locations: Section 4
Receivers: NB-4-166, SB-4-229 to SB-4-276; Measurements: ST-19

Figure 37: Measurement Locations: Section 4
Receivers: NB-4-167 to NB-4-169; Measurements: LT-11, ST-20

Metro

Figure 38: Measurement Locations: Section 5
Receivers: SB-5-001; Measurements: LT-12

Metro

Figure 39: Measurement Locations: Section 5
Receivers: NB-5-001 to NB-5-008; Measurements: ST-21

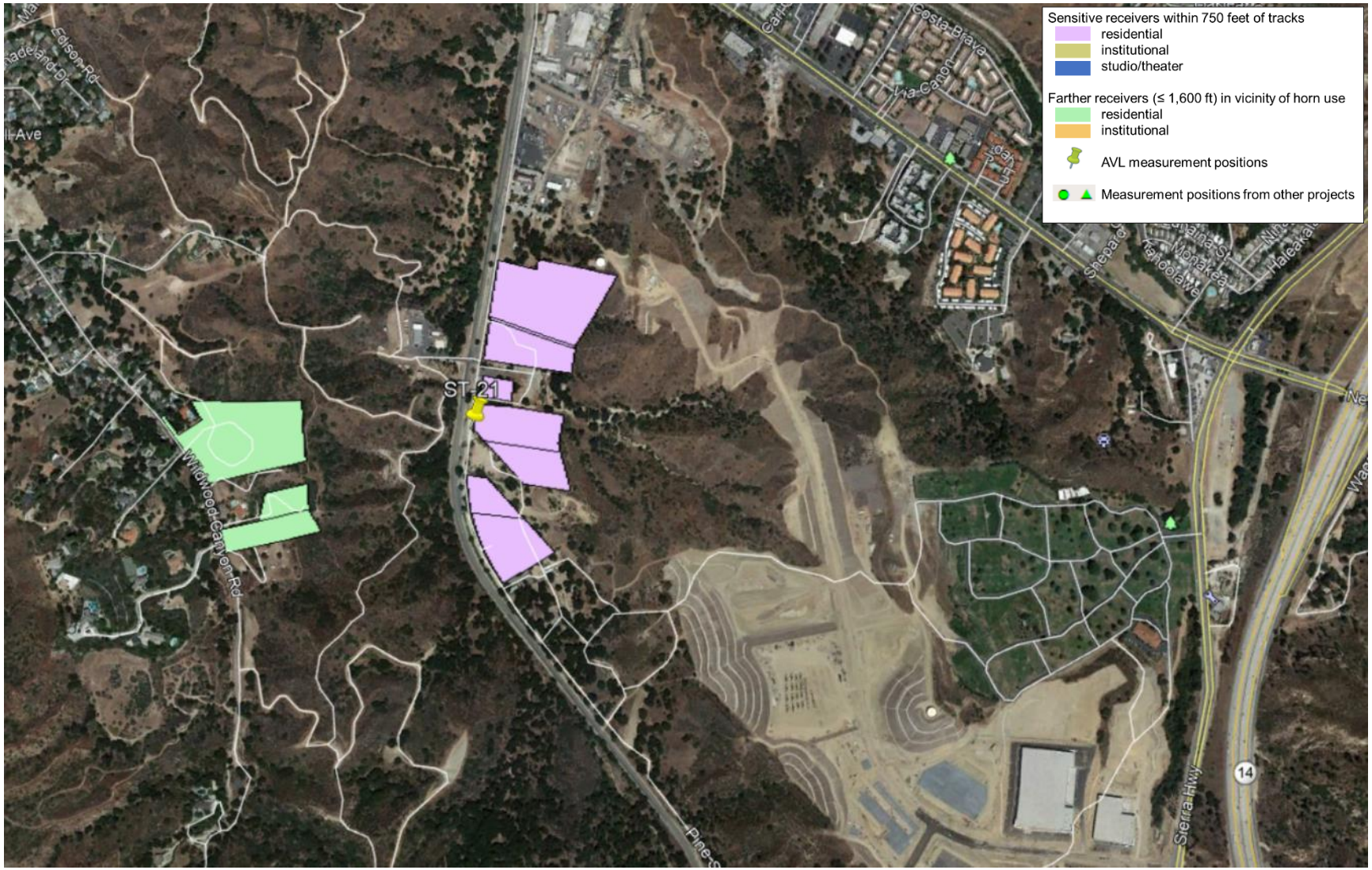
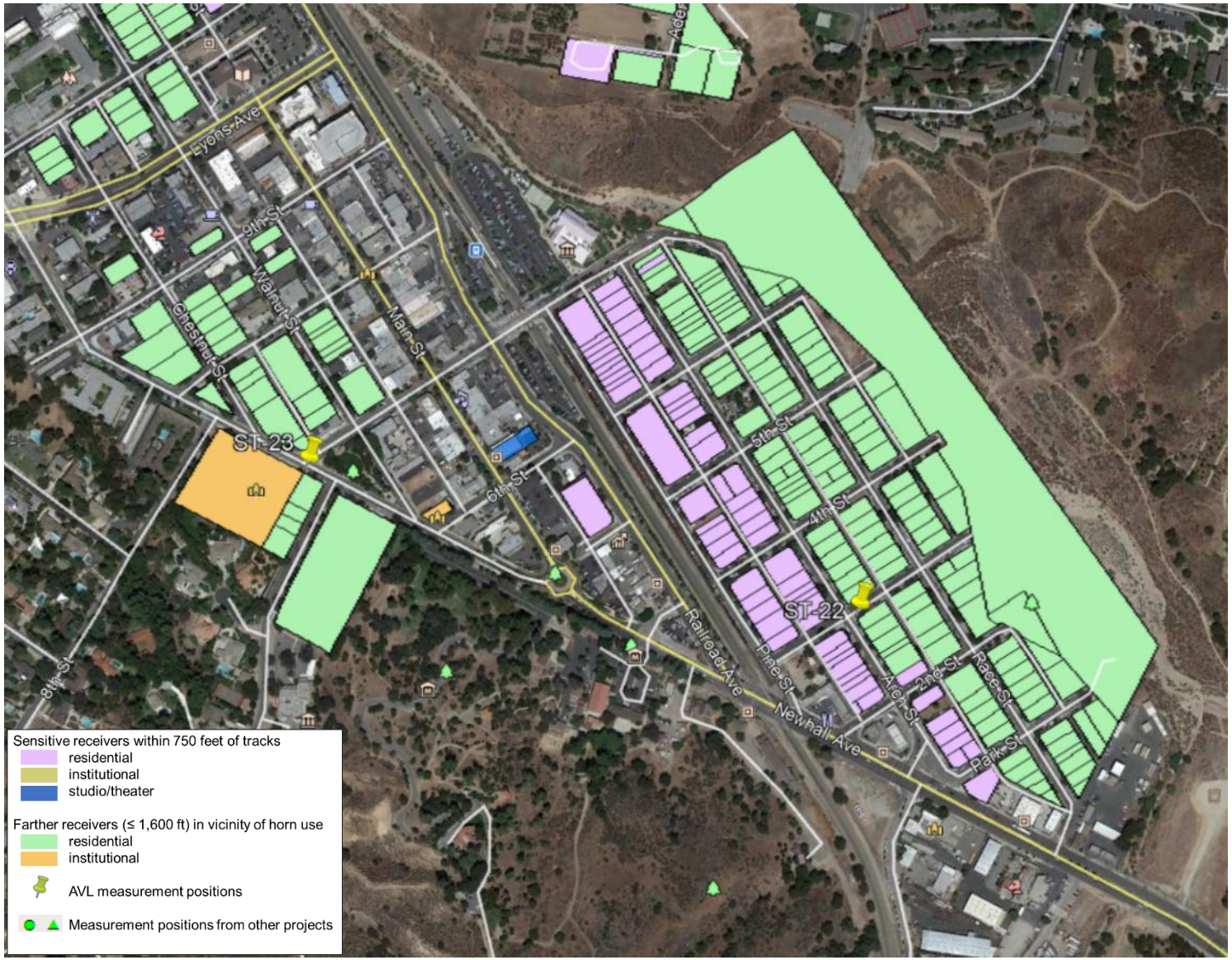
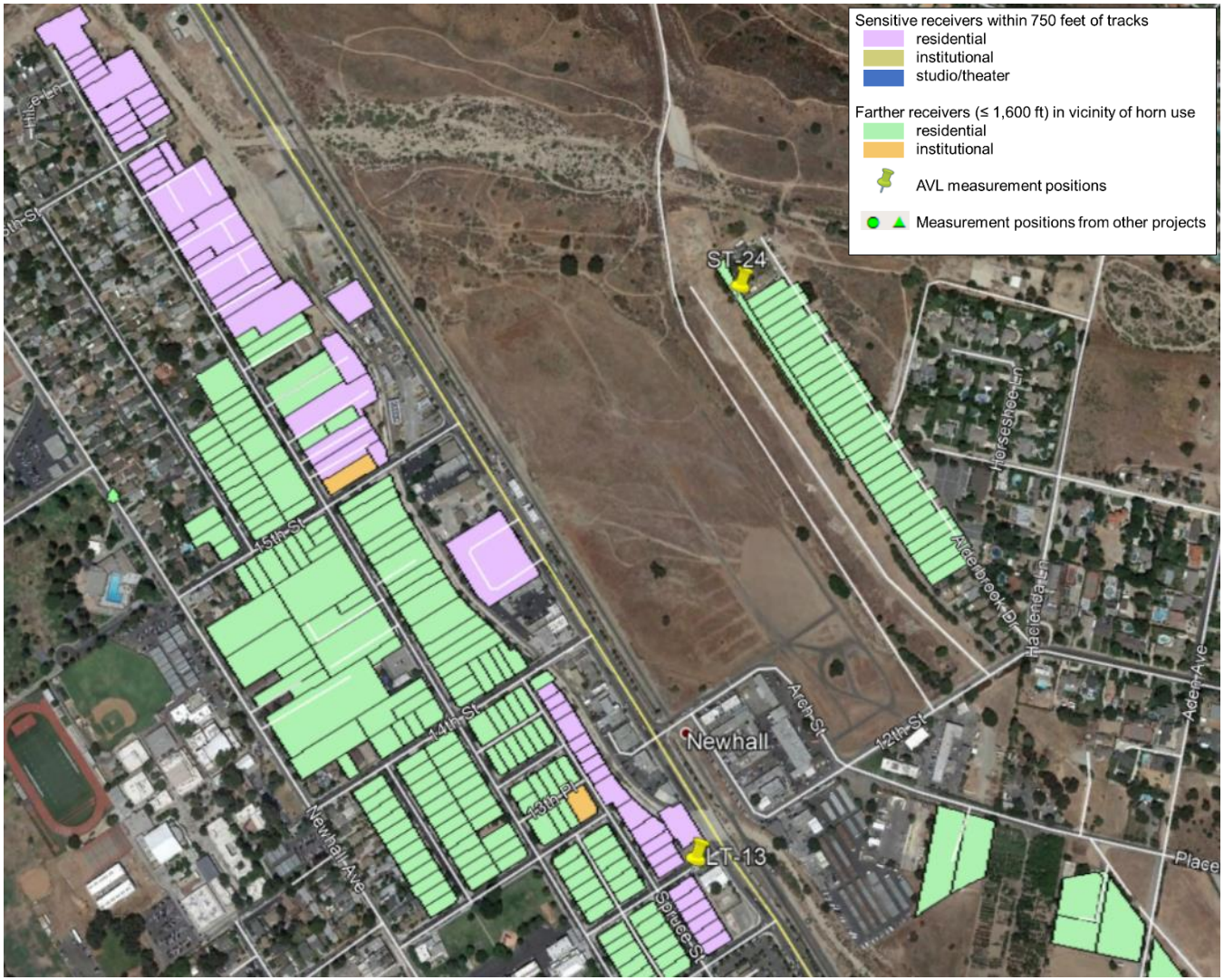


Figure 40: Measurement Locations: Section 5
Receivers: NB-5-009 to NB-5-074, SB-5-002, SB-5-A; Measurements: ST-22,23



Metro

Figure 41: Measurement Locations: Section 5
Receivers: SB-5-003 to SB-5-054; Measurements: LT-13, ST-24



Metro

Figure 42: Measurement Locations: Section 5
Receivers: NB-5-075 to NB-5-115; Measurements: LT-14, ST-25

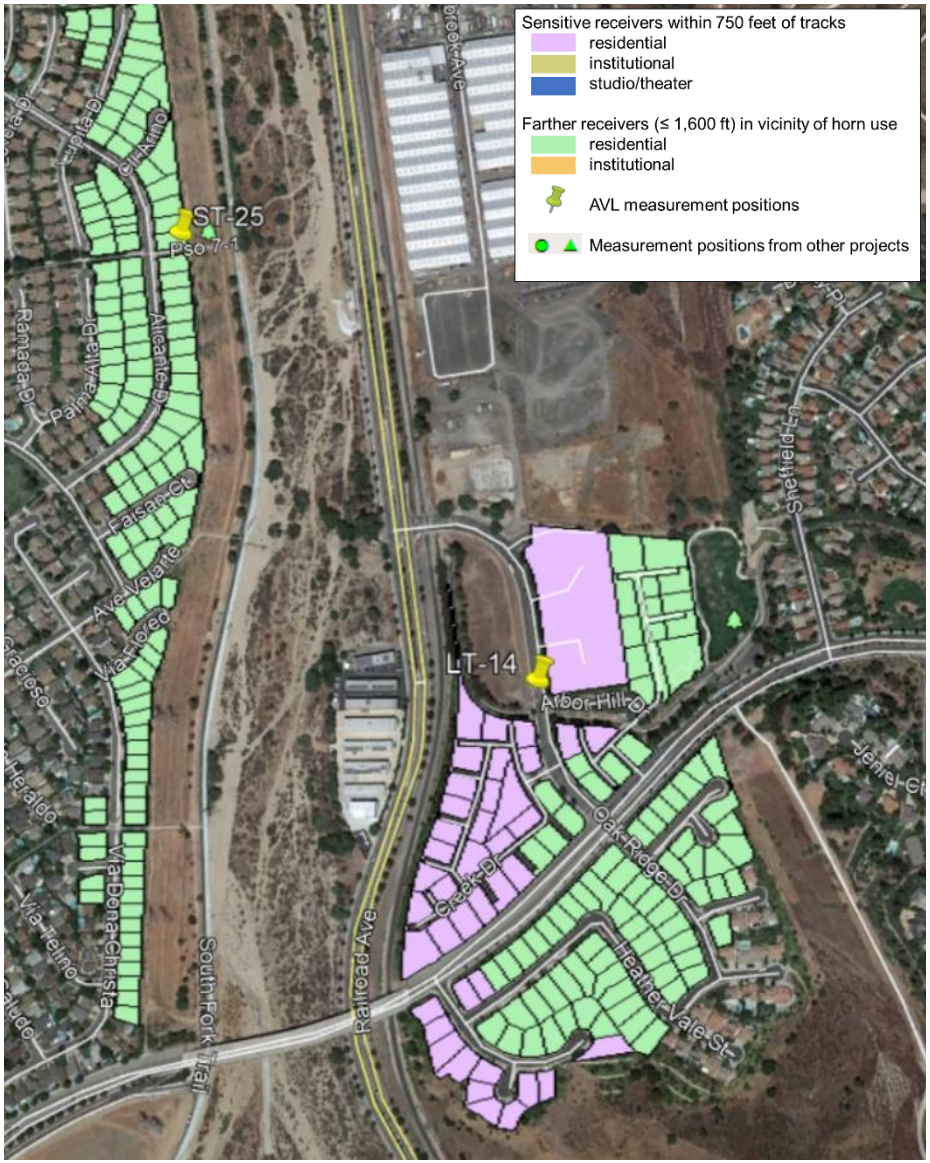
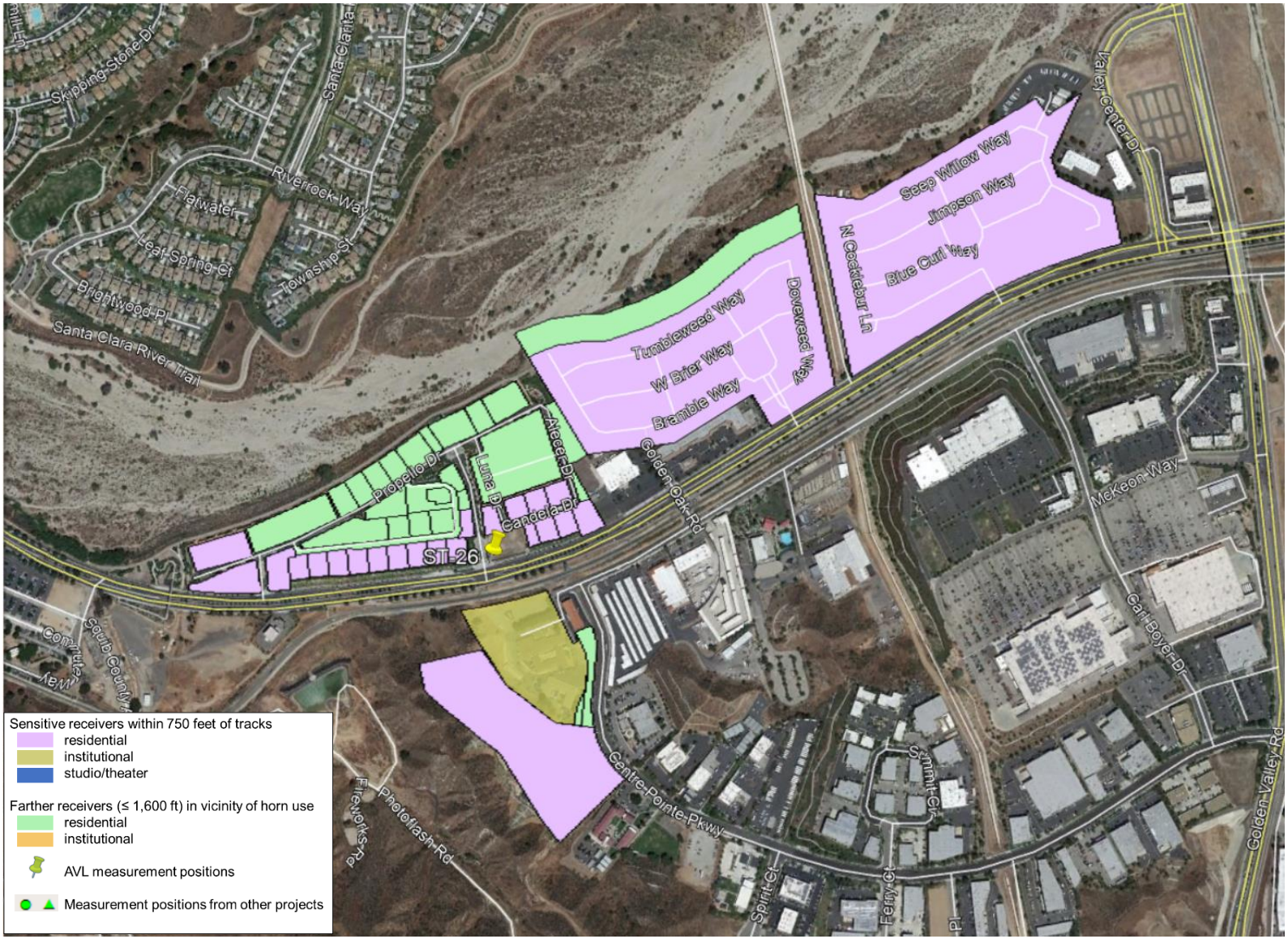


Figure 43: Measurement Locations: Section 5
Receivers: NB-5-116, SB-5-055 to SB-5-056; Measurements: LT-15

Metro

Figure 44: Measurement Locations: Section 5
Receivers: NB-5-117, SB-5-057 to SB-5-079, NB-5-A; Measurements: ST-26



Metro

Figure 45: Measurement Locations: Section 5
Receivers: NB-5-118 to NB-5-143, SB-5-080 to SB-5-086; Measurements: LT-16, ST-27

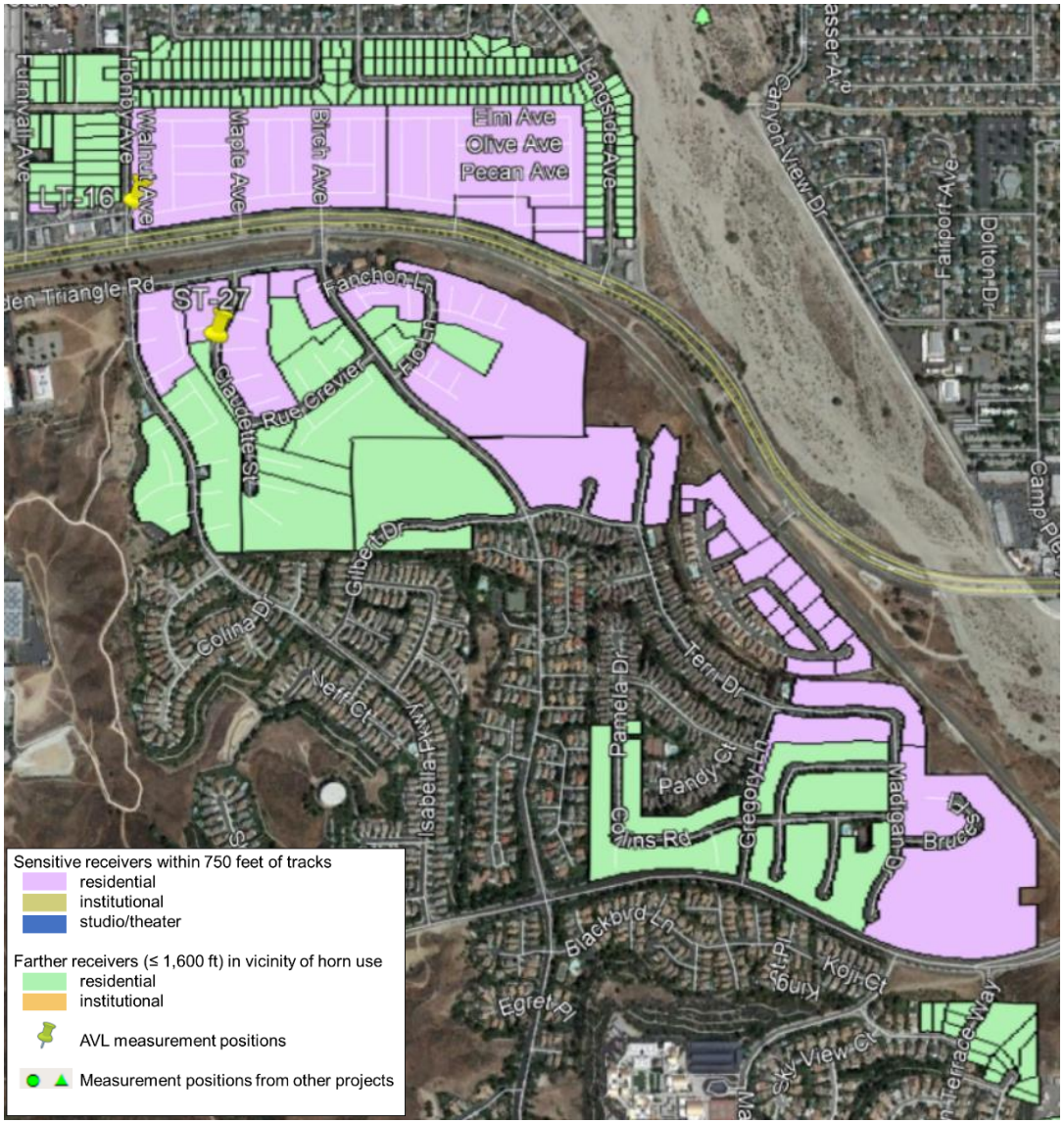


Figure 46: Measurement Locations: Section 5
Receivers: NB-5-144 to NB-5-165, SB-5-087 to SB-5-098; Measurements: LT-17, ST-28,29

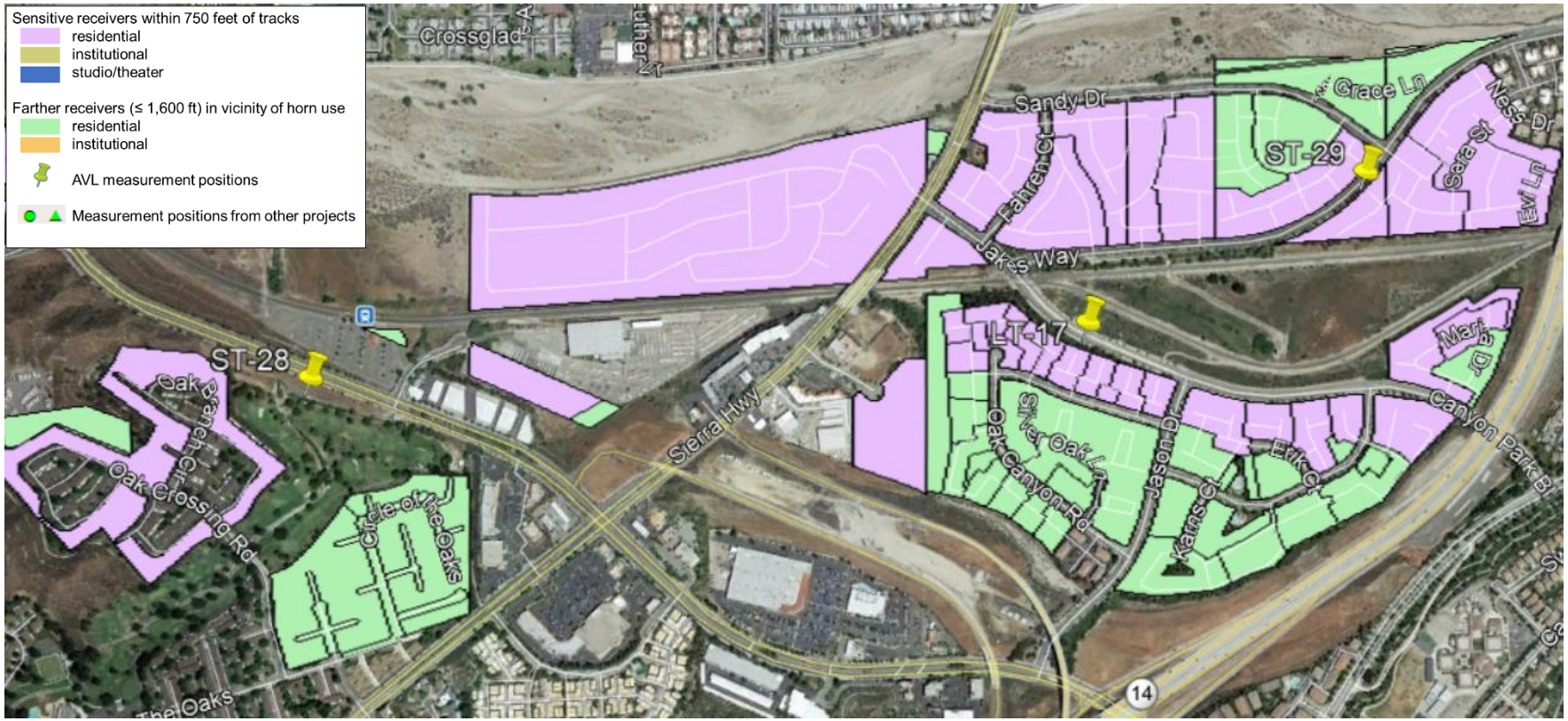


Figure 47: Measurement Locations: Section 5
Receivers: NB-5-166 to NB-5-204, SB-5-099 to SB-5-107; Measurements: ST-30

Metro

Figure 48: Measurement Locations: Section 5
Receivers: NB-5-205 to NB-5-225, SB-5-108 to SB-5-146; Measurements: LT-18

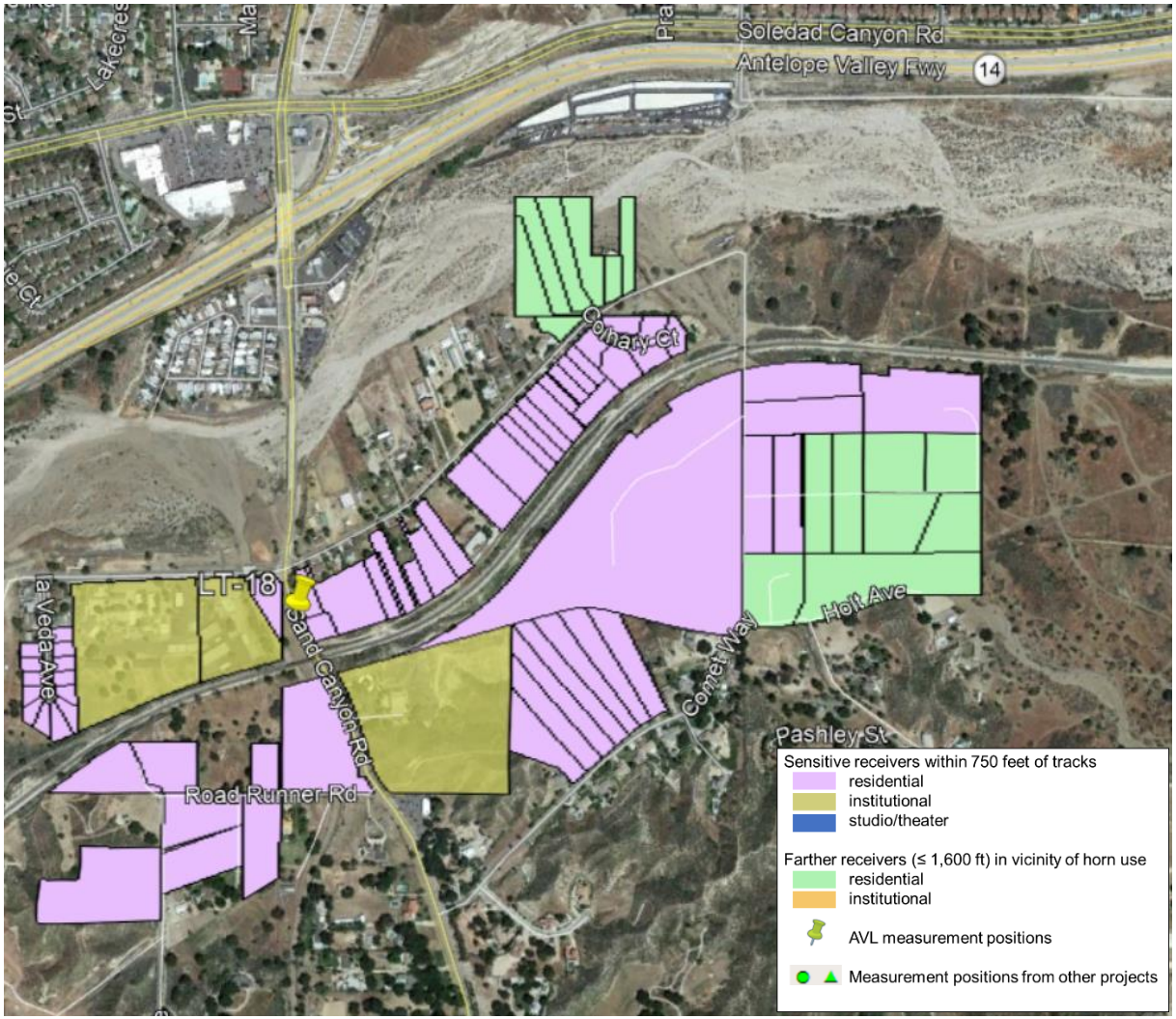
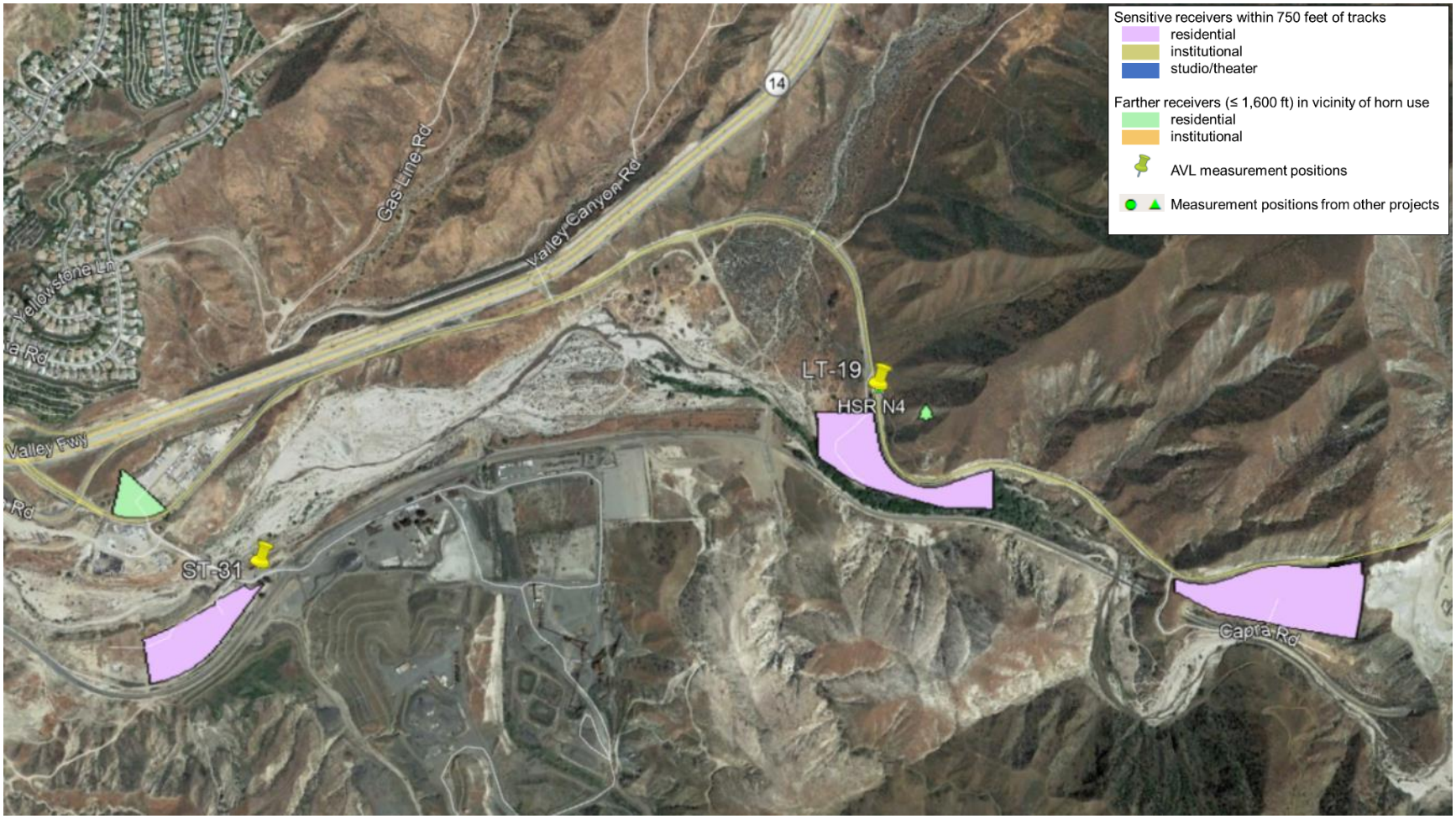


Figure 49: Measurement Locations: Section 5
Receivers: SB-5-147 to SB-5-149; Measurements: LT-19, ST-31



Metro

Figure 50: Measurement Locations: Section 6
Receivers: NB-6-001 to NB-6-012, SB-6-001; Measurements: ST-32

Figure 51: Measurement Locations: Section 6
Receivers: NB-6-013 to NB-6-021, SB-6-002 to SB-6-008; Measurements: LT-EH (extra horn), ST-33

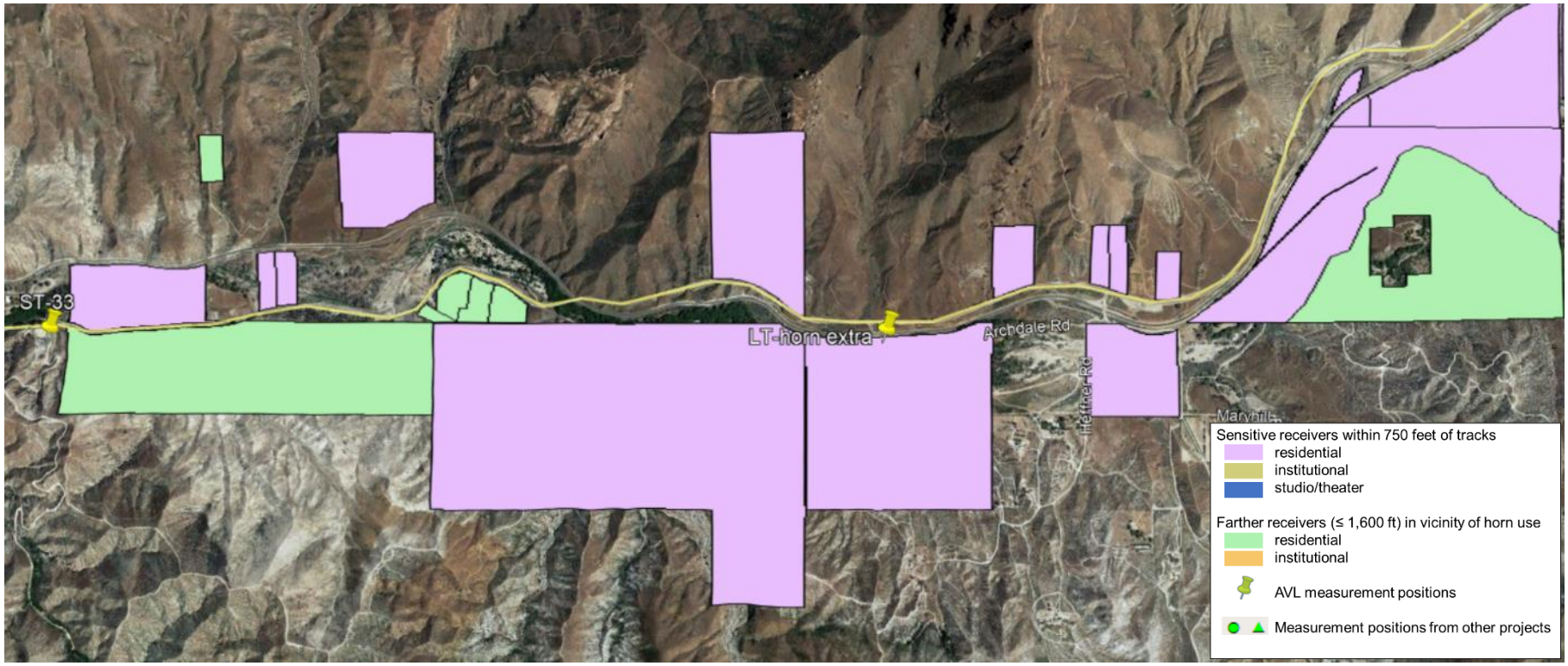
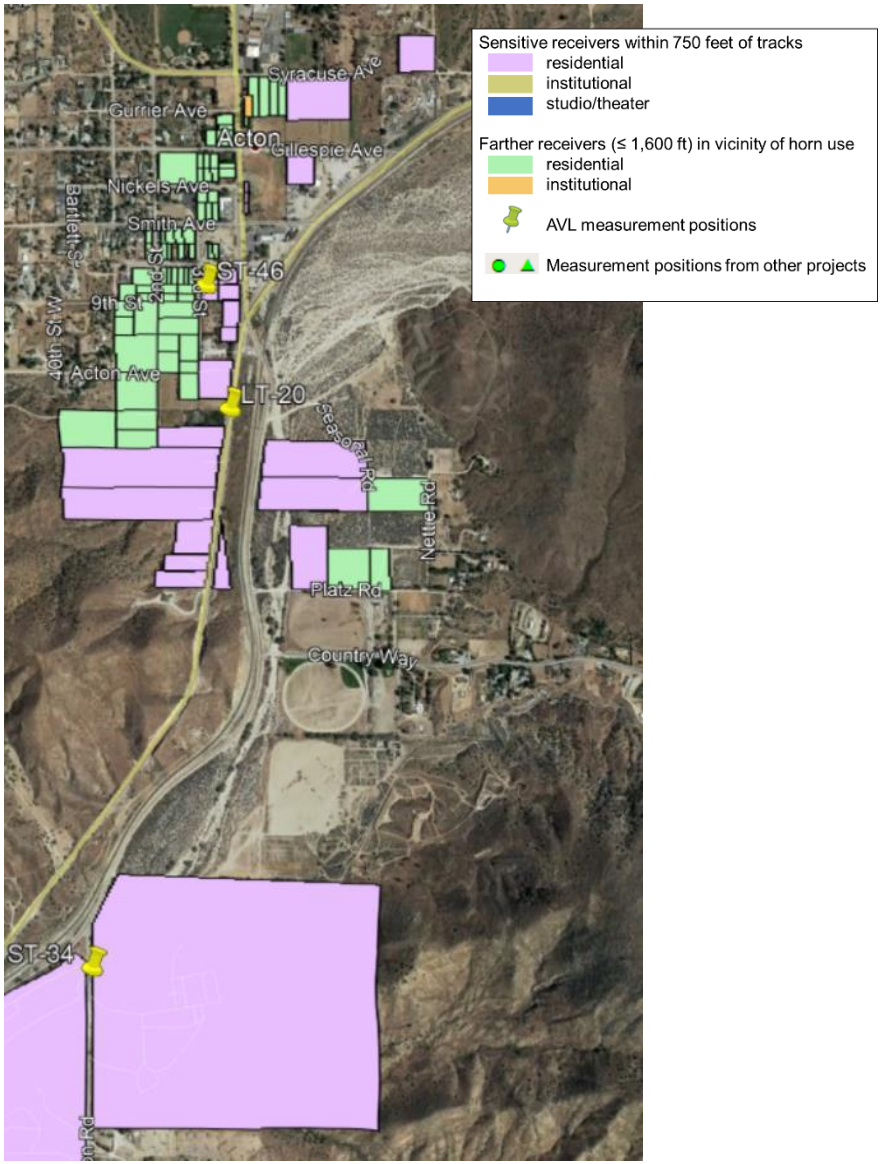


Figure 52: Measurement Locations: Section 6
Receivers: NB-6-022 to NB-6-025, SB-6-009 to SB-6-029; Measurements: LT-20, ST-34,46



Metro

Figure 53: Measurement Locations: Section 6
Receivers: NB-5-026 to NB-5-033, SB-6-030 to SB-6-072, SB-6-A; Measurements: ST-35,36,47

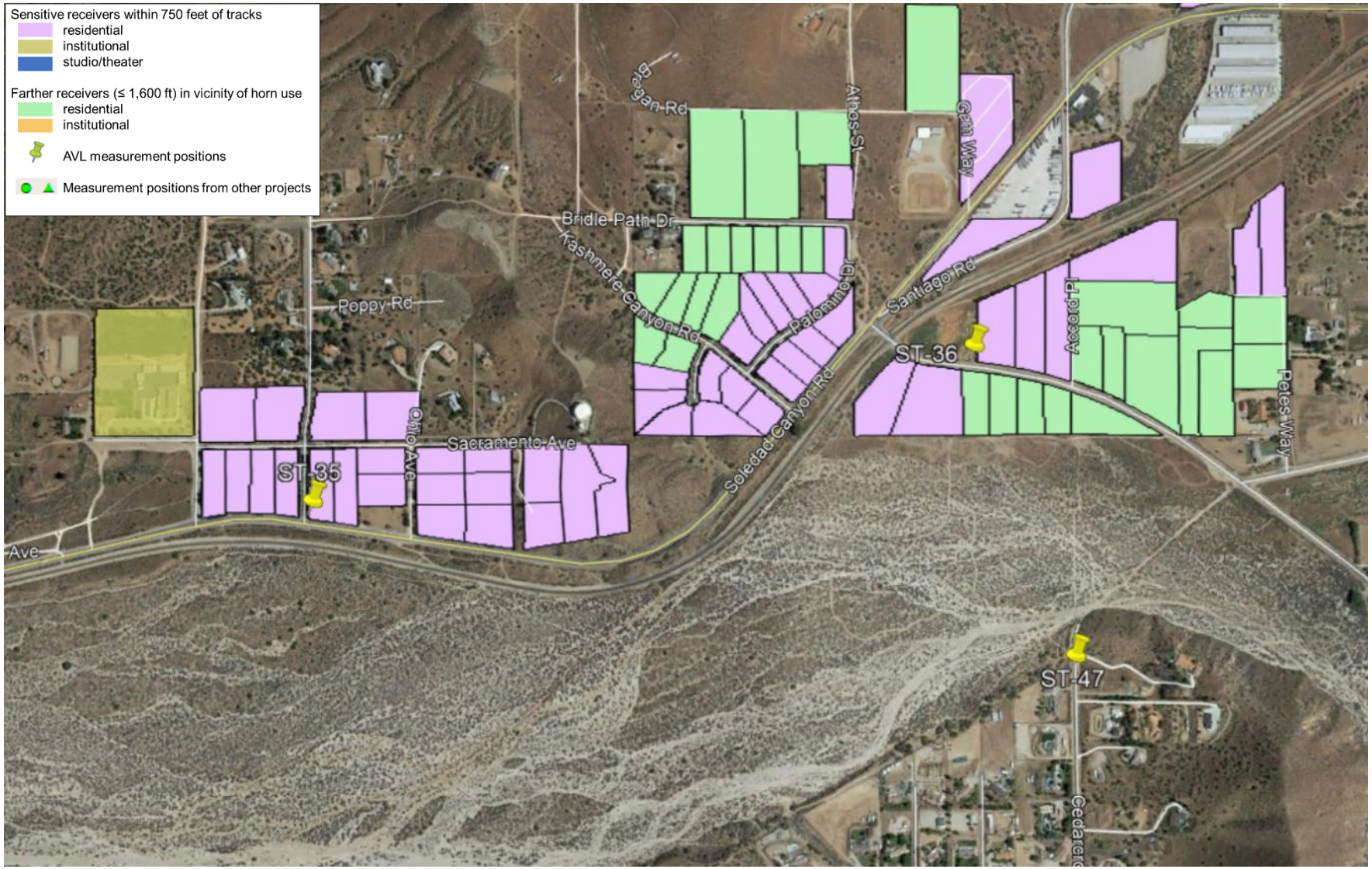


Figure 54: Measurement Locations: Section 6
Receivers: NB-5-034 to NB-5-035, SB-6-073 to SB-6-096; Measurements: LT-21, ST-37

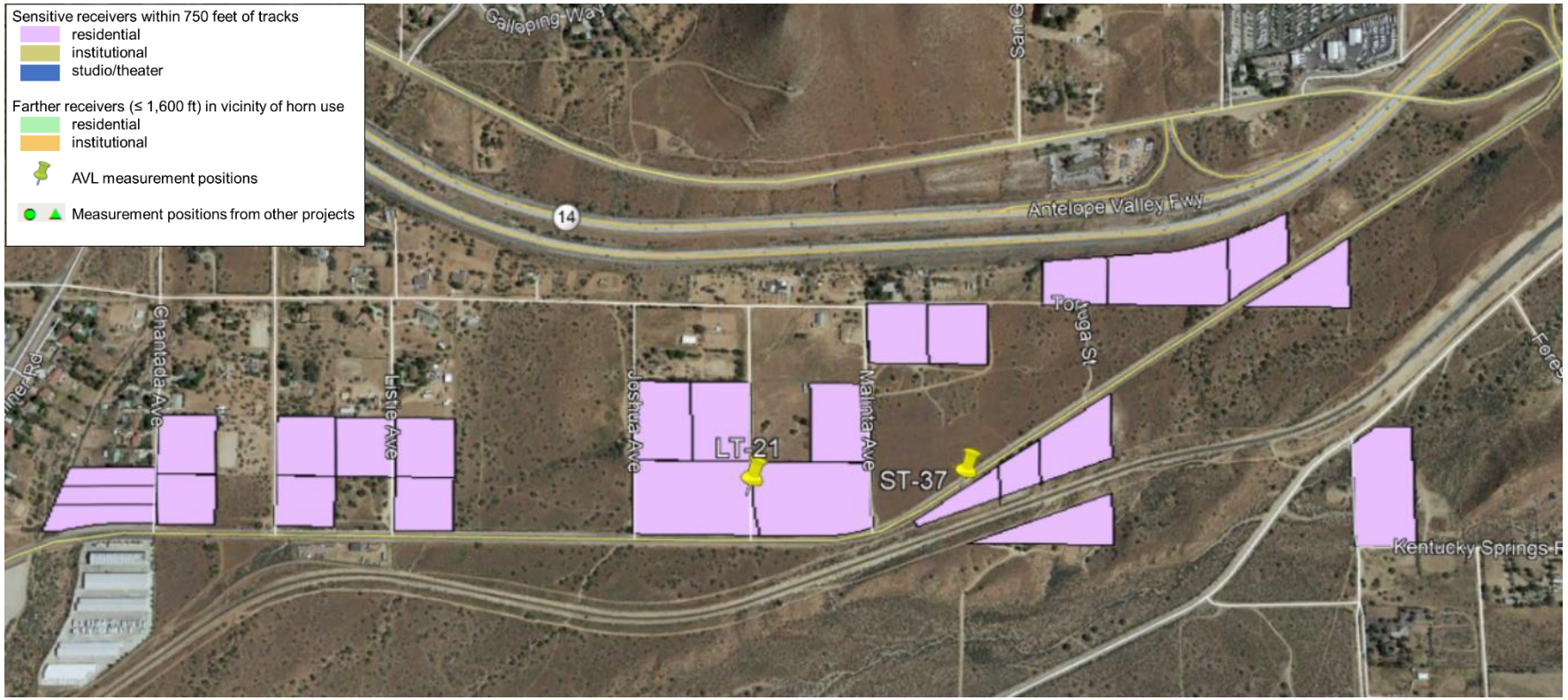


Figure 55: Measurement Locations: Section 6
Receivers: NB-6-036 to NB-6-047, SB-6-097 to SB-6-099; Measurements: HSR-N9, LT-22

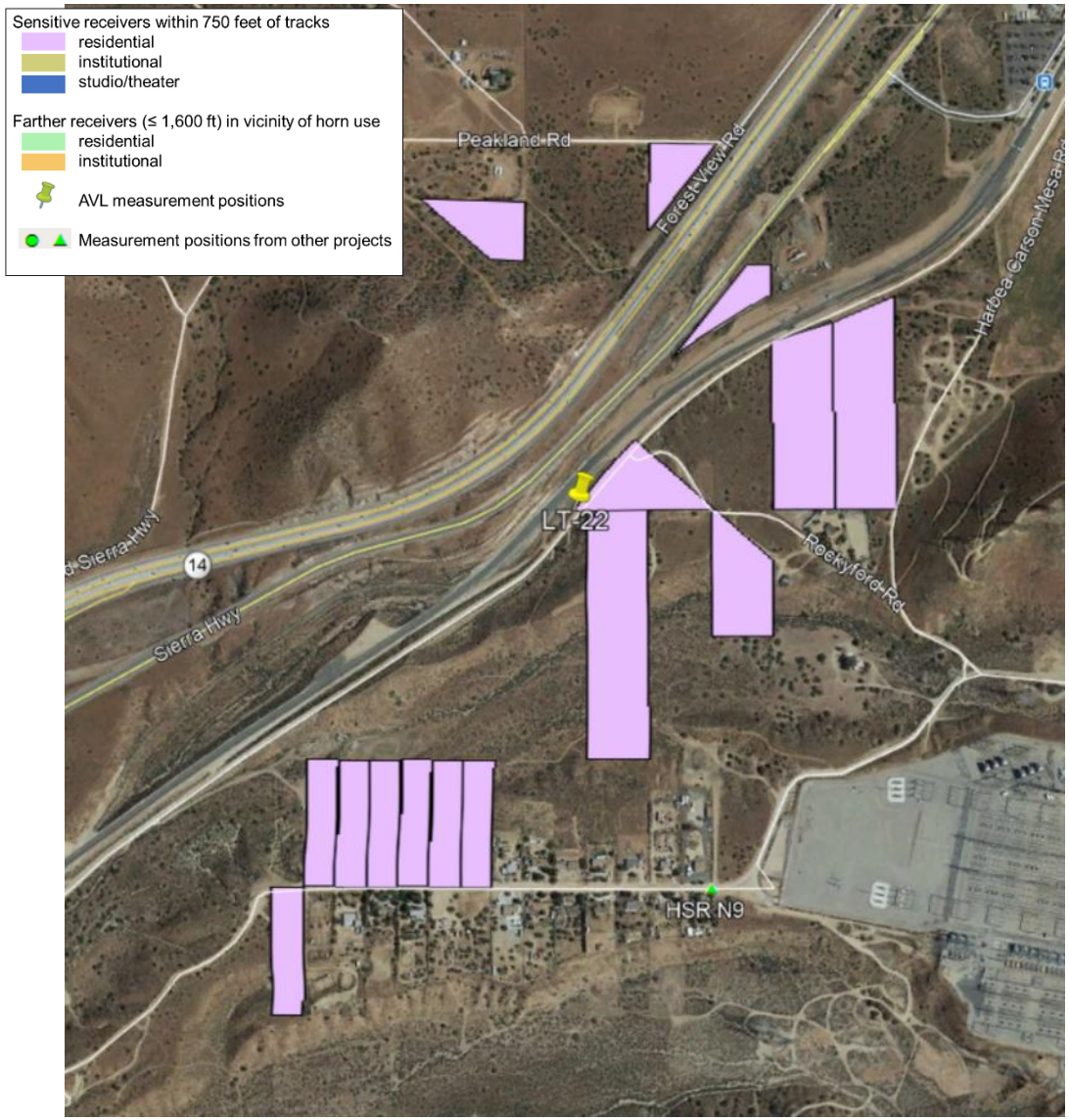


Figure 56: Measurement Locations: Section 6
Receivers: NB-6-048 to NB-6-057 (SB side seen next Section); Measurements: HSR-N10, LT-23, ST-38

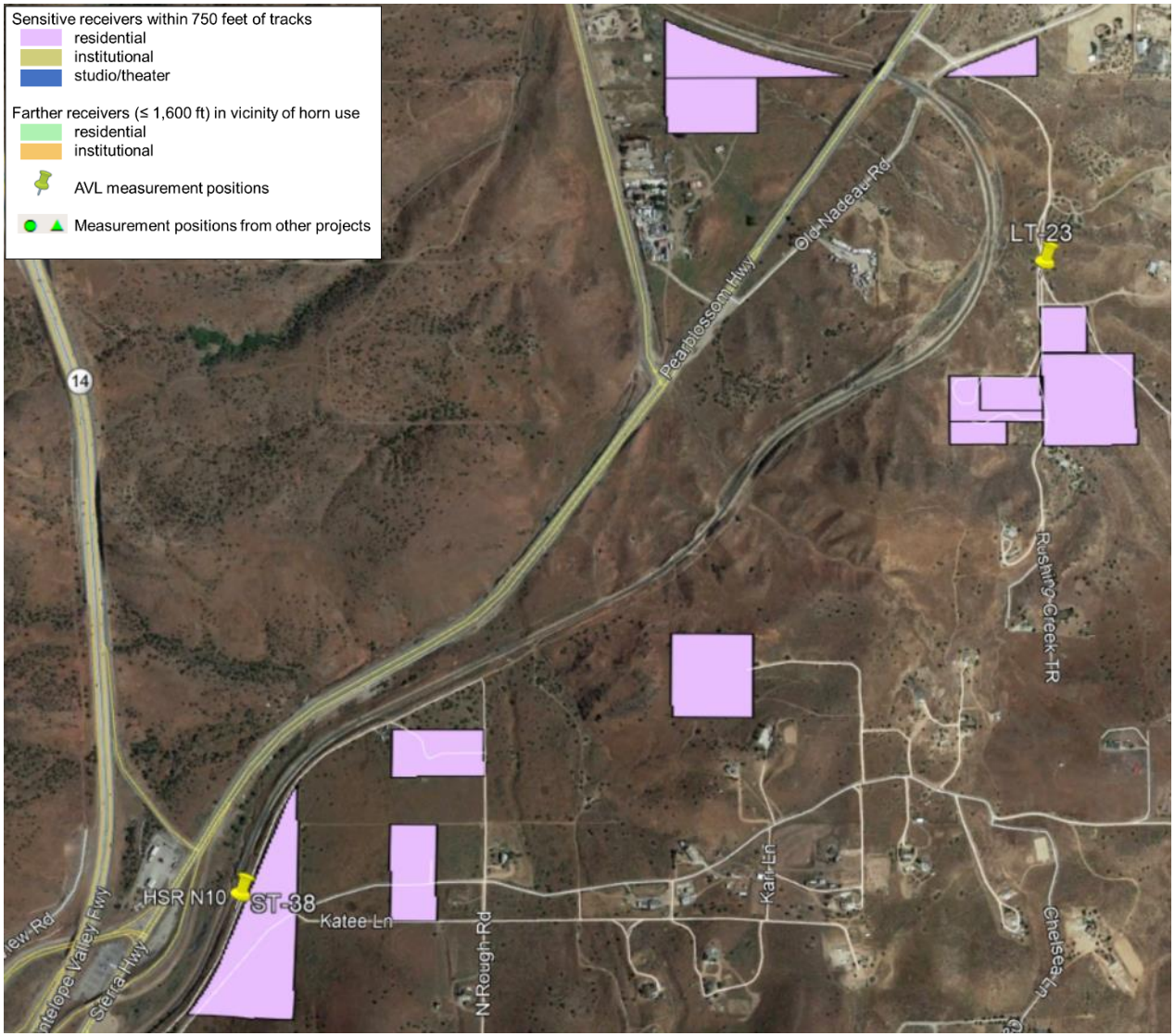


Figure 57: Measurement Locations: Section 7
Receivers: NB-7-001 to NB-7-026, SB-7-001 to SB-7-022; Measurements: HSR-LT-1, HSR-ST-1,2,3

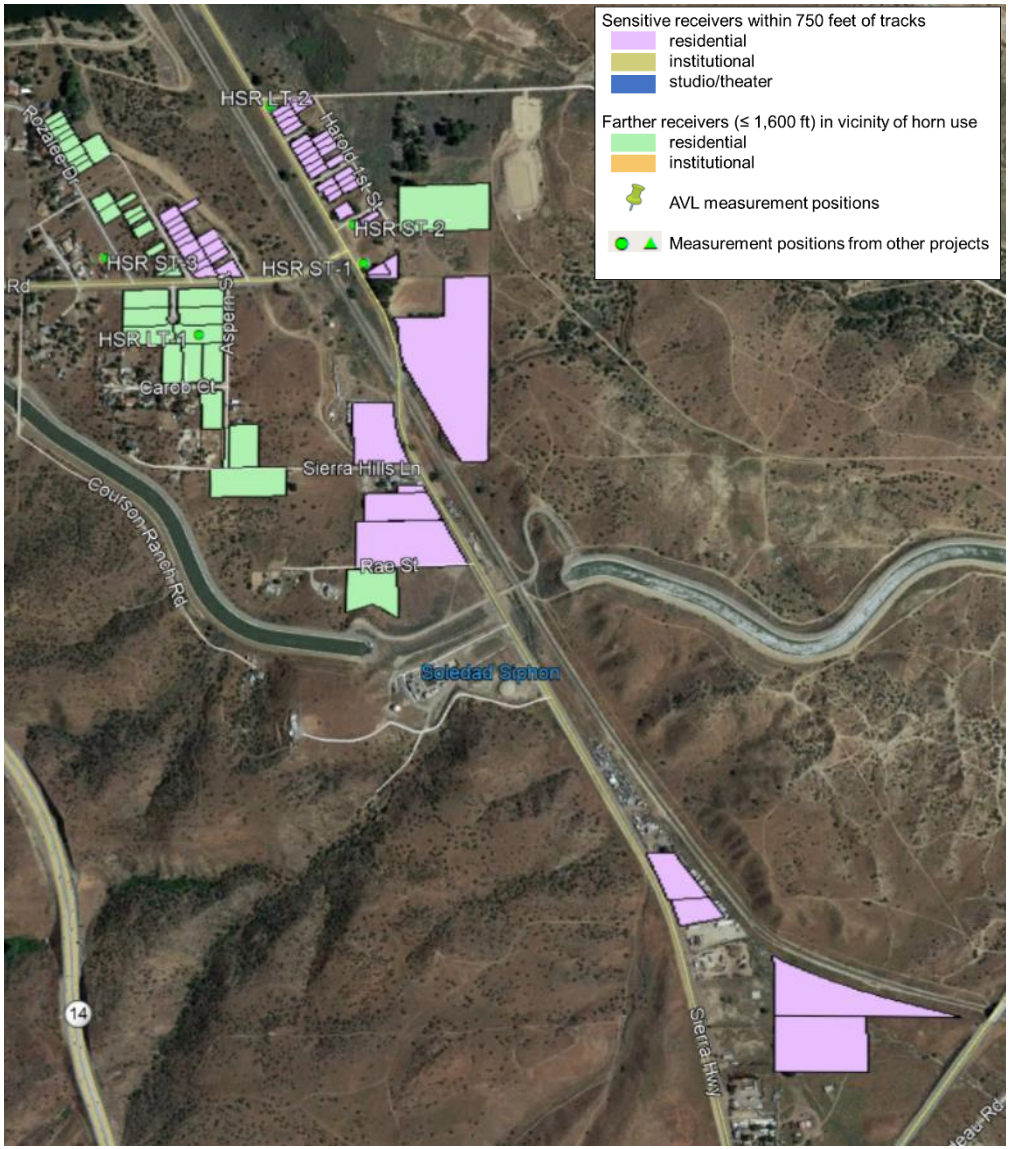


Figure 58: Measurement Locations: Section 7
Receivers: NB-7-027 to NB-7-028, SB-7-023 to SB-7-052; Measurements: HSR-LT-3, LT-24

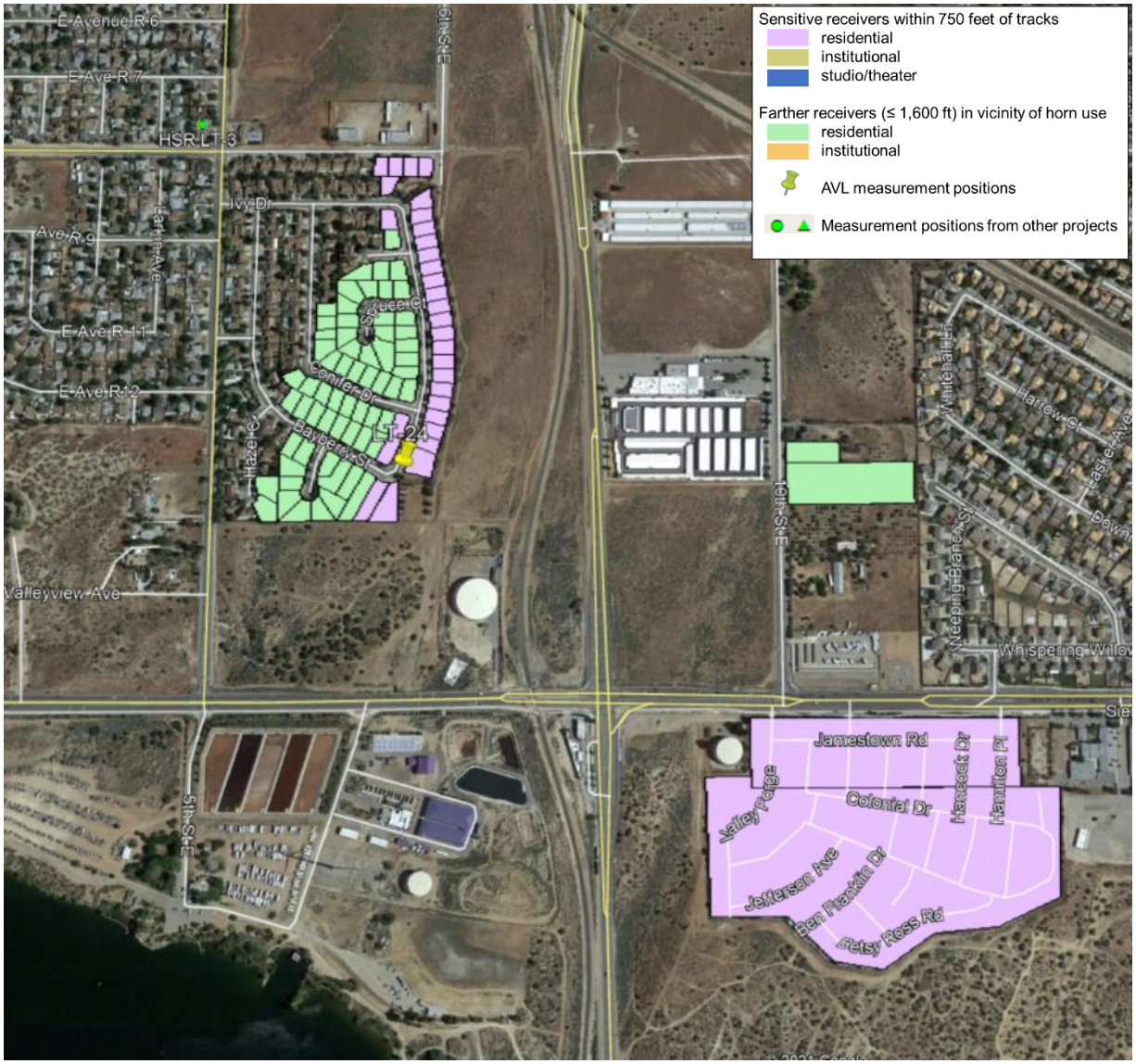
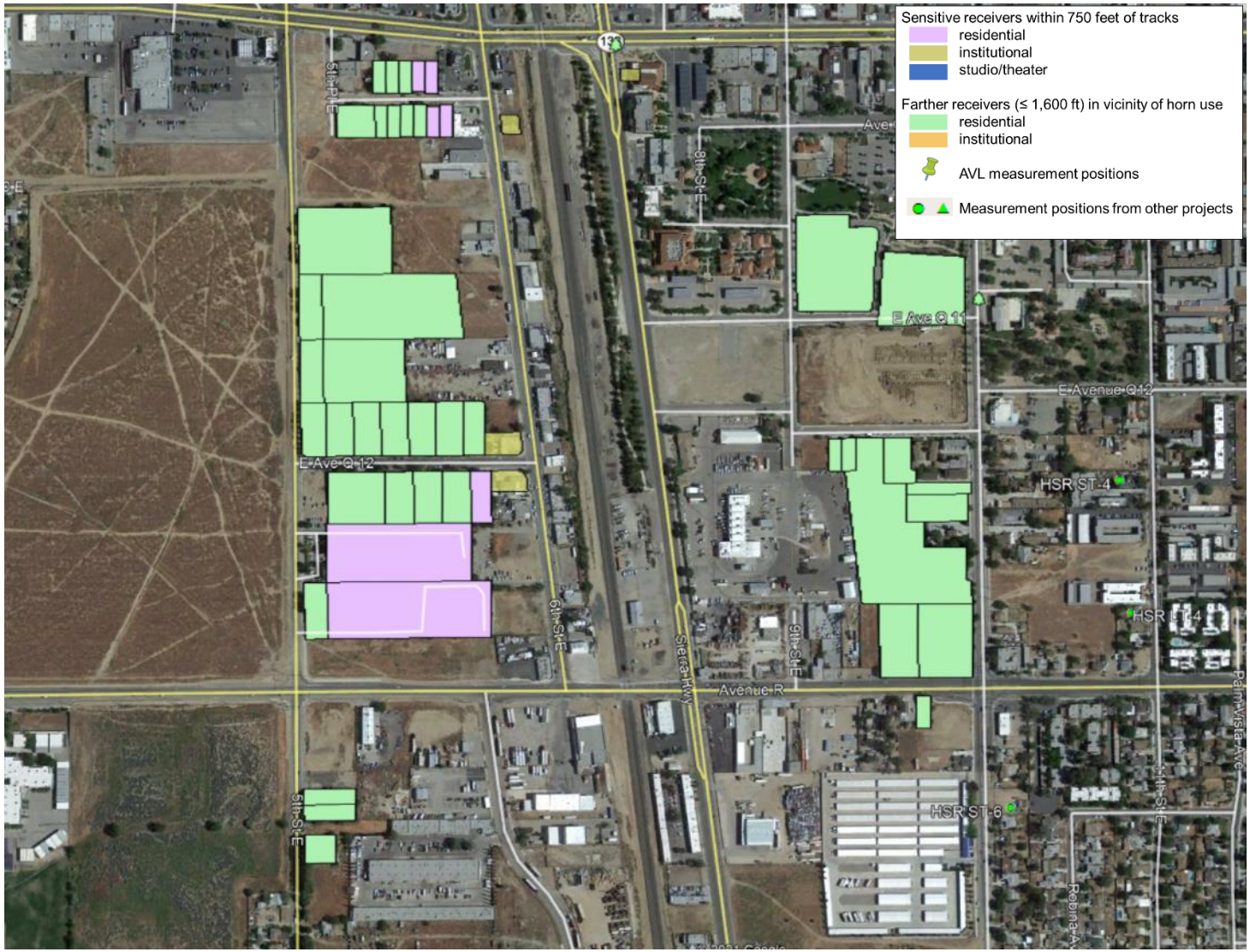
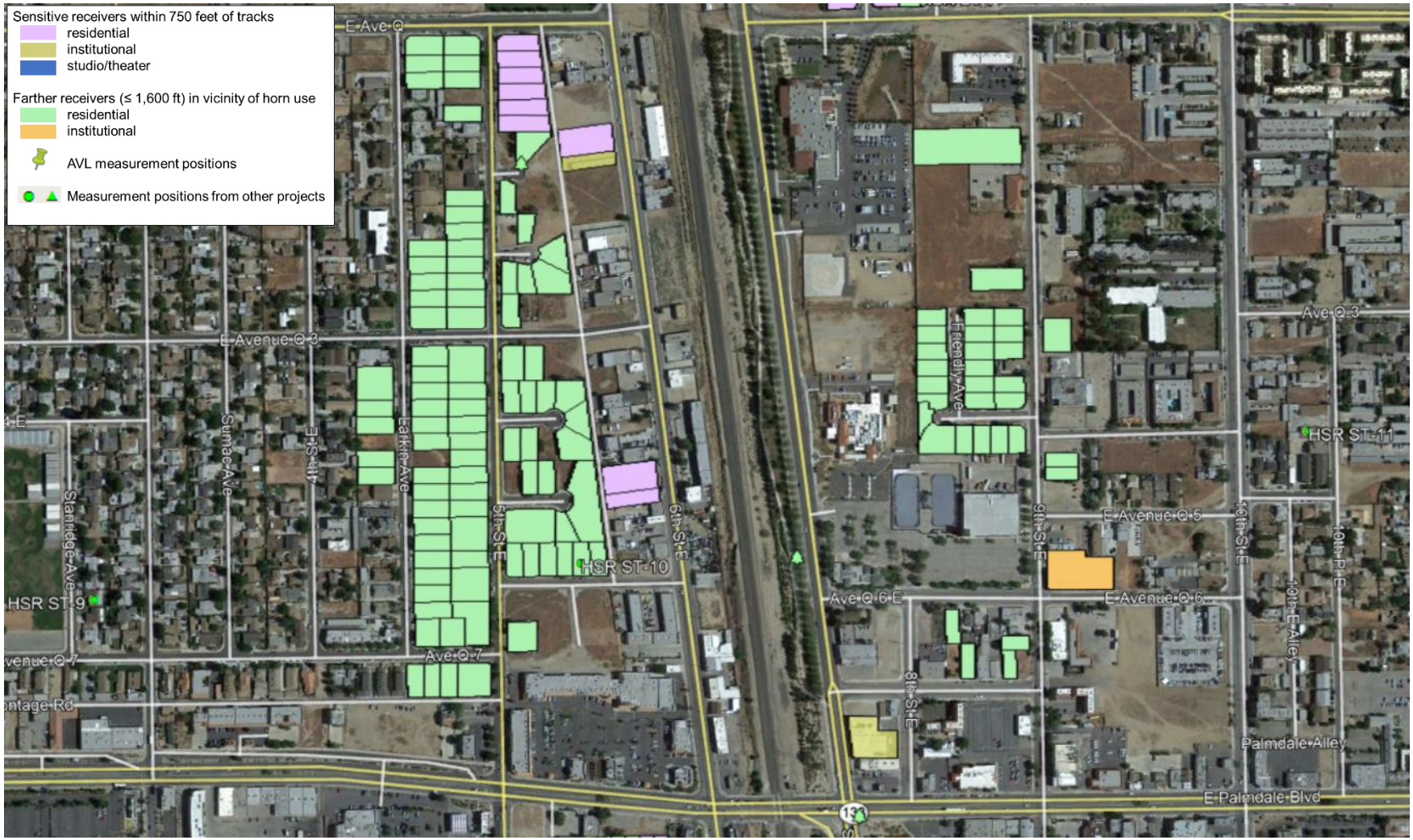


Figure 59: Measurement Locations: Section 7
Receivers: SB-7-053 to SB-7-059, NB-7-A, SB-7-A,B,C; Measurements: HSR-LT-4, HSR-ST-4,6



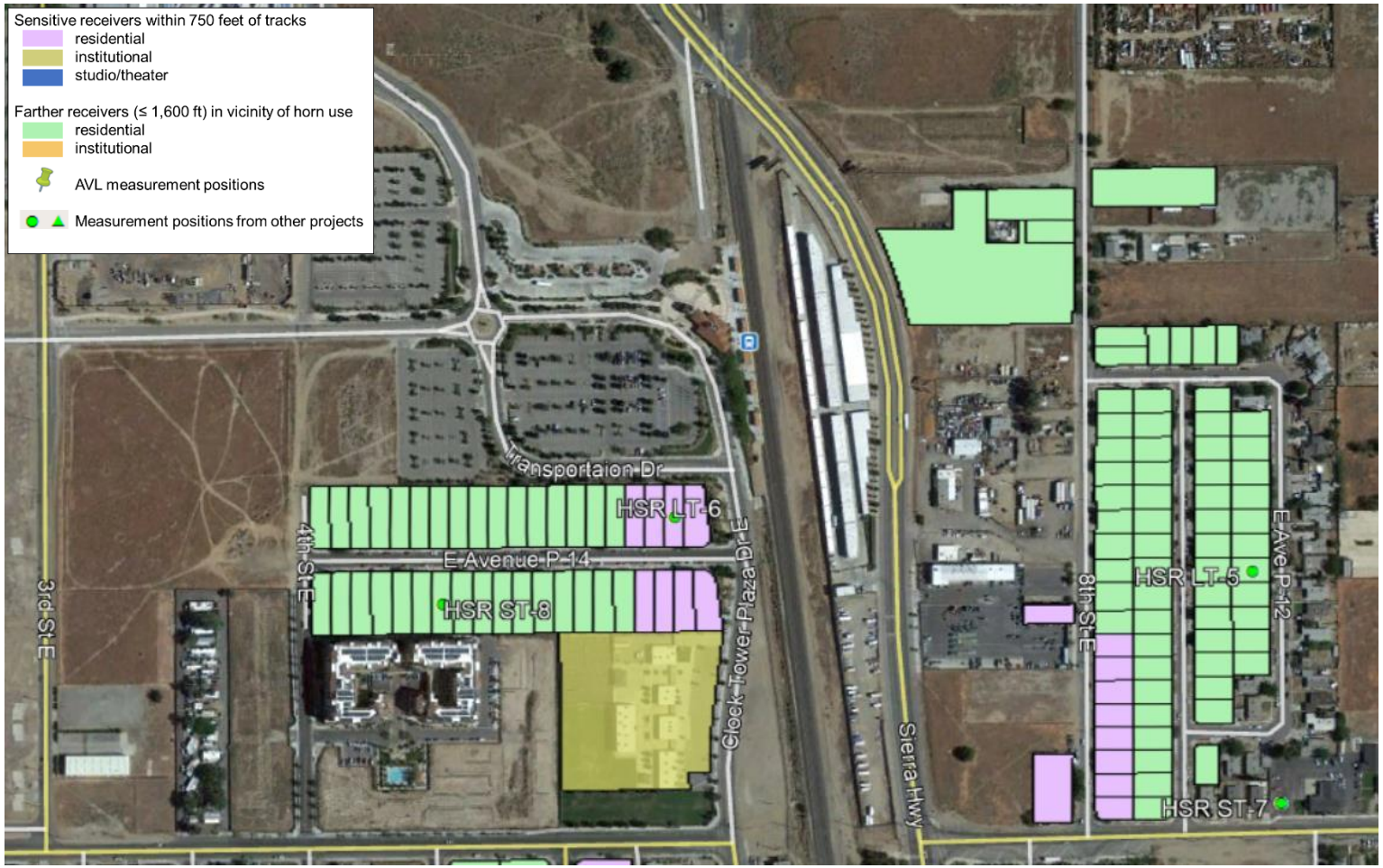
Metro

Figure 60: Measurement Locations: Section 7
Receivers: SB-7-060 to SB-7-068, NB-7-B, SB-7-D; Measurements: HSR-ST-9,10,11



Metro

Figure 61: Measurement Locations: Section 7
Receivers: NB-7-029 to NB-7-038, SB-7-069 to SB-7-076, SB-7-E; Measurements: LT-5,6, ST-7,8



Metro

Figure 62: Measurement Locations: Section 7
Receivers: SB-7-F; Measurements: HSR-LT-7, LT-25, ST-39

Figure 63: Measurement Locations: Section 7
Receivers: NB-7-039 to NB-7-043, SB-7-077 to SB-7-081; Measurements: ST-40

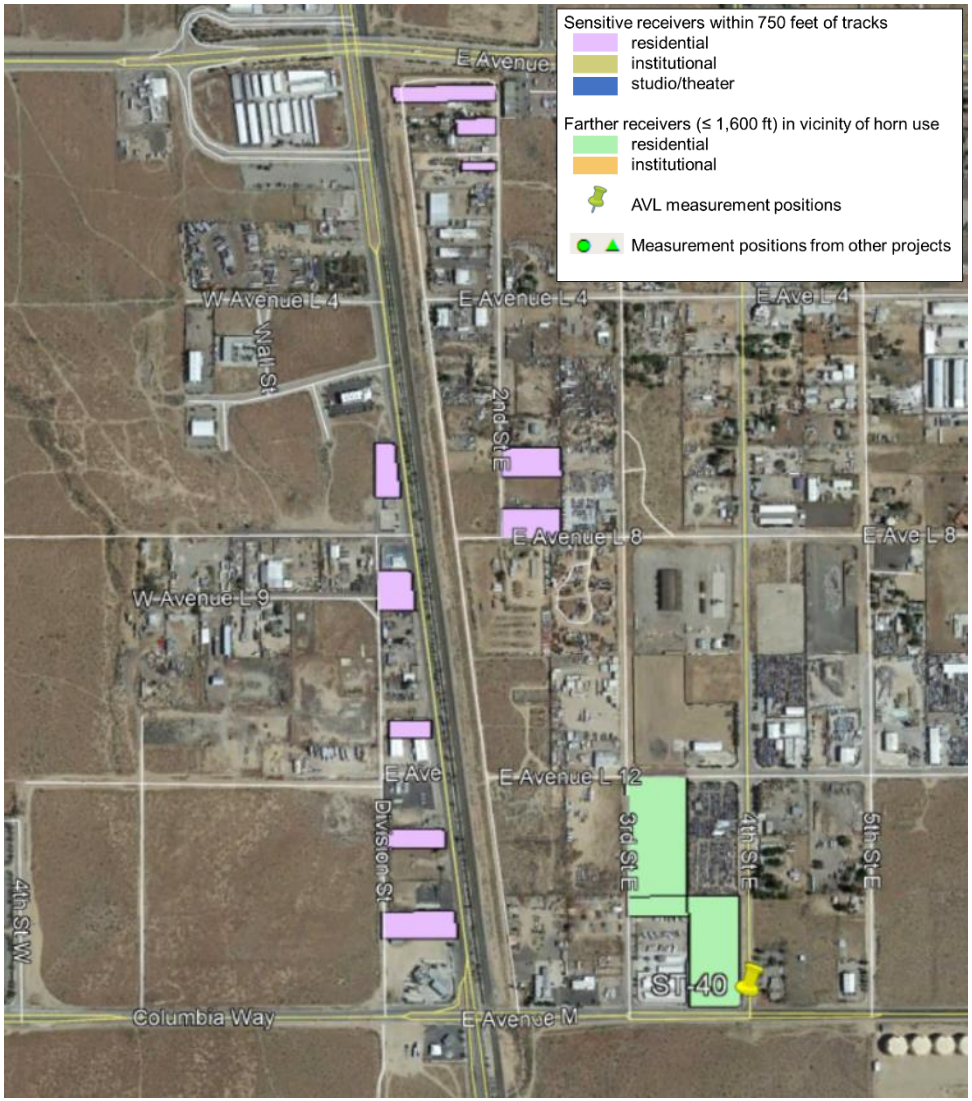
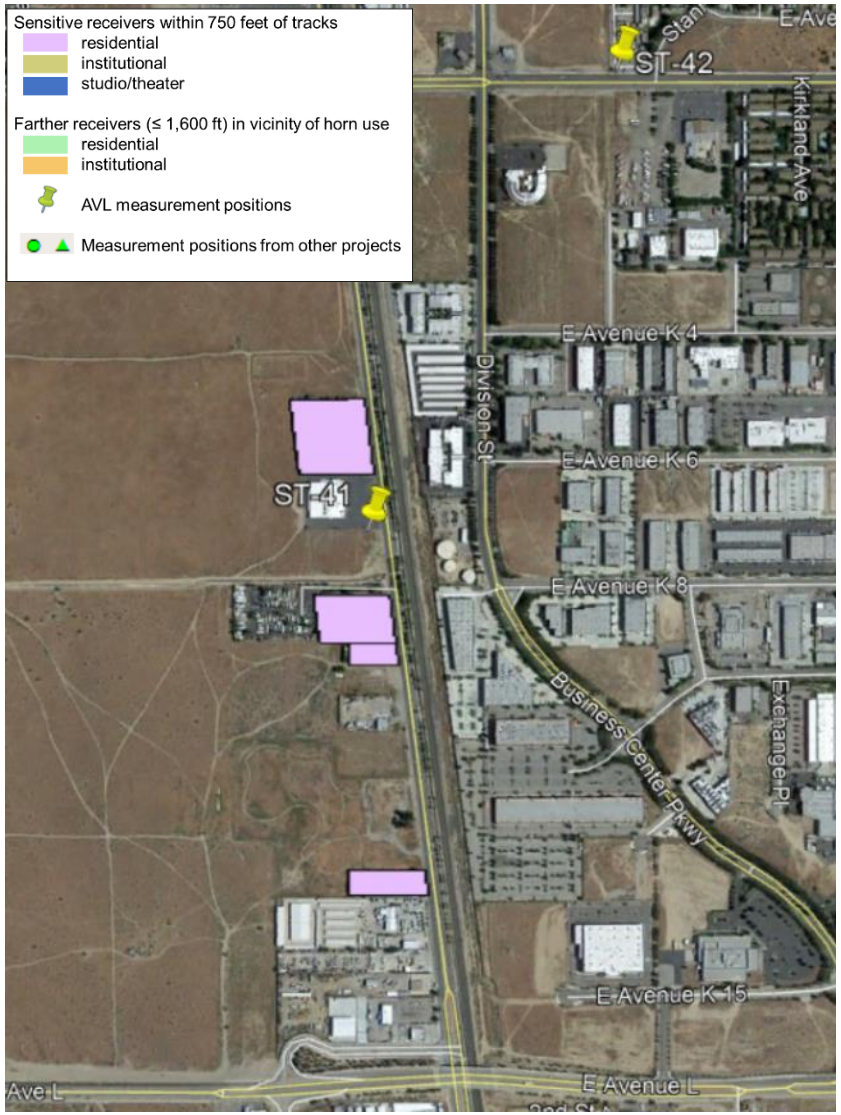


Figure 64: Measurement Locations: Section 7
Receivers: SB-7-082 to SB-7-085; Measurements: ST-41,42



Metro

Figure 65: Measurement Locations: Section 7
Receivers: SB-7-086 to SB-7-116, NB-7-C, SB-7-G,H; Measurements: LT-26, ST-43

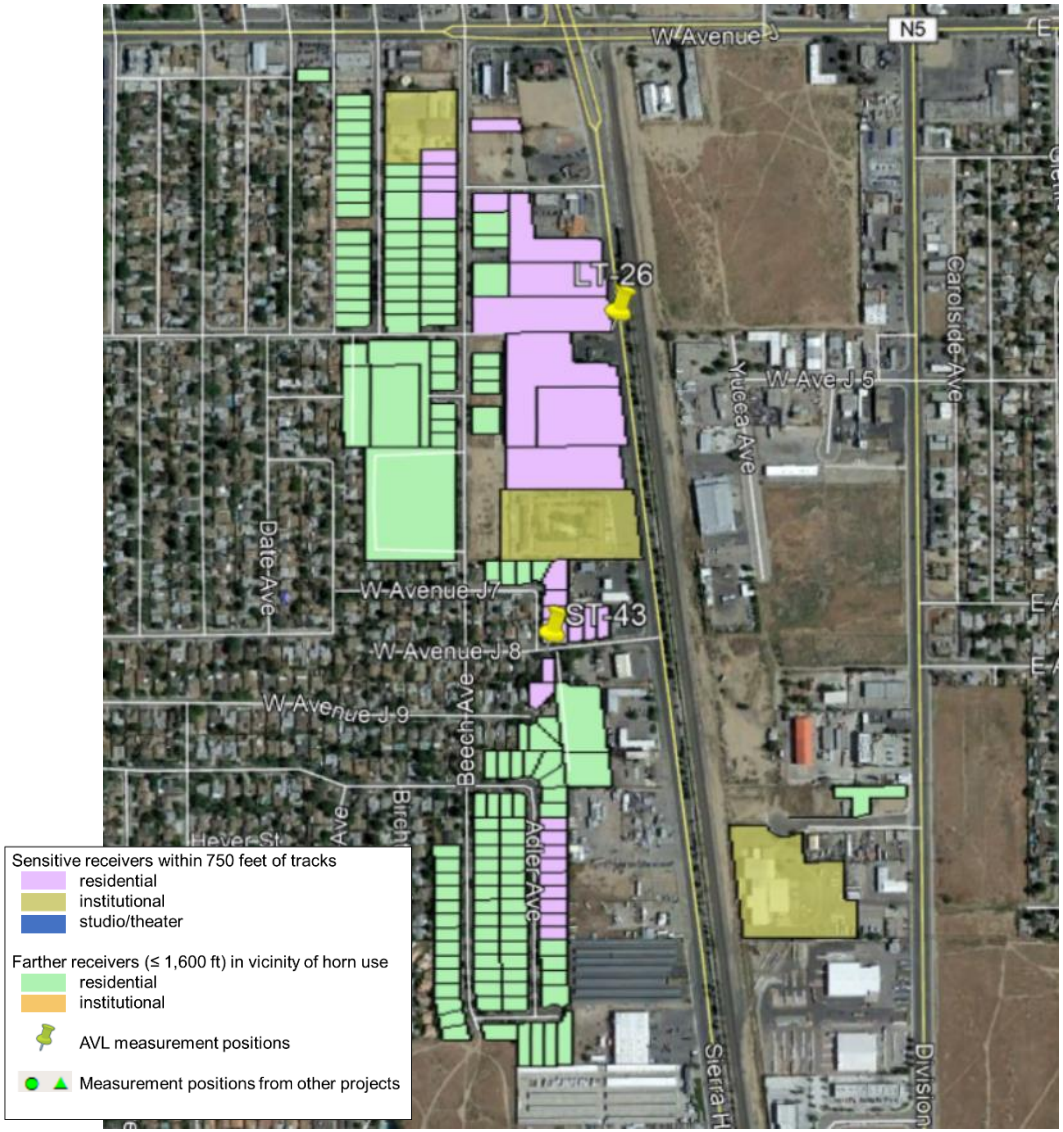


Figure 66: Measurement Locations: Section 7
Receivers: NB-7-044 to NB-7-047, SB-7-117 to SB-7-136, SB-7-I,J; Measurements: LT-27, ST-44,45

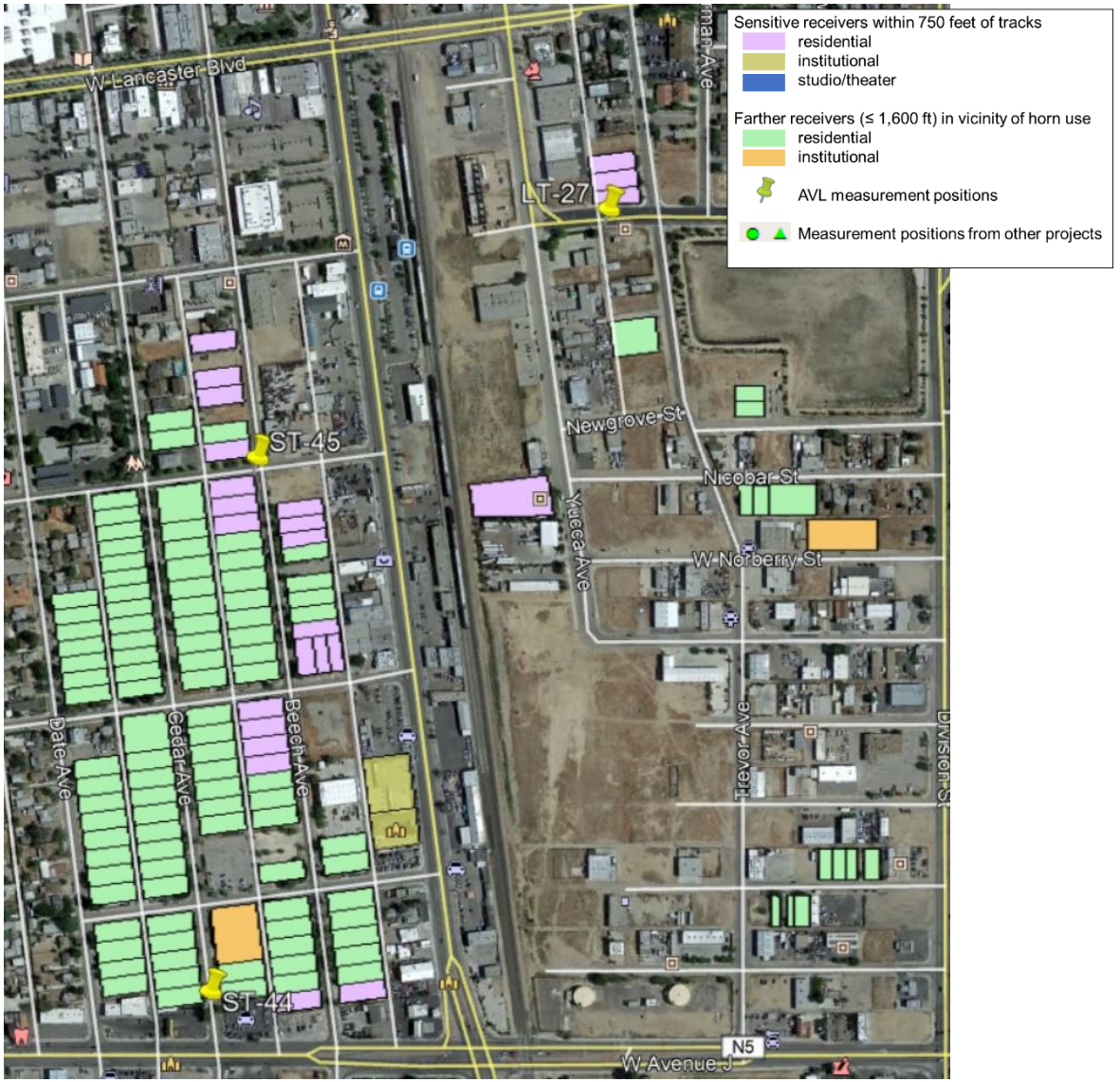


Table 21: Existing Noise Data

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
LT-01	Behind 241 S Ave 18, adjacent to fields, Los Angeles	3/1/2021	05:19	25	60	60	60
LT-02	Intersection of Arvia St and Granada St, Los Angeles	3/1/2021	05:29	25	67	67	67
LT-03	End of N Coolidge Ave, adjacent to river, Los Angeles	3/1/2021	05:03	24	59	61	61
LT-04	Sidewalk between 3210 and 3204 Casitas Ave, Los Angeles	3/2/2021	06:30	27	58	61	61
LT-05	Near 652 Hawthorne St, adjacent to storage facility, Los Angeles	3/2/2021	14:30	22	59	64	64
LT-06	On Omar Street across from San Fernando Road at 716 Kellog Ave, Sun Valley	3/2/2021	07:00	26	63	64	65
LT-07	On corner of Arcola Ave and San Fernando Rd at 7629 Arcola Ave, Sun Valley	3/4/2021	05:12	25	60	62	63
LT-08	On corner of Montague St and Debell St near San Fernando Rd SB at 12531 Debell St, Los Angeles	3/4/2021	05:39	25	64	63	63
LT-09	On corner of Sutter Ave and Judd St adjacent to fire hydrant at 10928 Sutter Ave, Pacoima	3/4/2021	05:59	25	66	65	65
LT-10	On Astoria St directly across from 14929 Astoria St near San Fernando Rd SB, Sylmar	3/15/2021	06:40	25	68	67	67
LT-11	15831 Olden St in front of entrance to Los Olivos Trailer Home Park at 15831 Olden St near San Fernando Rd, Sylmar	3/15/2021	06:18	31	62	61	62
LT-12	At utility pole adjacent to 14748 San Fernando Rd near I-5 Overpass, Sylmar	3/15/2021	07:18	30	77	75	76

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
LT-13	At corner of 12th St and an alleyway between Spruce Str and Railroad Ave, Santa Clarita	3/15/2021	15:51	24	68	67	67
LT-14	At corner of Oak Ridge Dr and Arbor Hill Dr, Santa Clarita	3/15/2021	15:52	24	70	70	70
LT-15	Behind parking lot and office retail off of Bouquet Canyon Rd, Santa Clarita	3/15/2021	16:26	24	54	55	55
LT-16	Near corner of Soledad Canyon Rd and Honby Ave, Santa Clarita	3/16/2021	08:54	24	69	70	71
LT-17	On Canyon Park Blvd, adjacent to 18325 Oakmont Dr, Santa Clarita	3/16/2021	17:13	24	74	75	75
LT-18	At 28110 Sand Canyon Rd, Santa Clarita	3/16/2021	08:46	24	74	73	73
LT-19	Near 13130 Soledad Canyon Rd at River's End RV Park, Santa Clarita	3/16/2021	09:06	24	76	74	75
LT-20	Near 3511 Soledad Canyon Rd near intersection of Crown Valley Rd, Acton	3/17/2021	10:20	25	72	73	74
LT-21	At 2nd light pole on Horndean Ave at approximate setback of 1st residence; 32821 Horndean Ave near intersection of Soledad Canyon Ave, Acton	3/17/2021	10:19	24	58	61	61
LT-22	Between 892 W Carsob Mesa Rd and tracks, Acton	3/17/2021	09:48	24	79	75	75
LT-23	Near intersection of Small Rd and Rushing Creek TR, Palmdale	3/17/2021	10:10	24	57	59	59
LT-24	Adjacent to 37340 Larchwood Dr near the intersection of Bayberry St, Palmdale	3/18/2021	10:40	24	59	54	55
LT-25	In field behind 262 P-5 Ave, near intersection of 3rd St E, Palmdale	3/18/2021	10:59	24	57	58	59

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
LT-26[c]	At utility pole near Sammy's Restaurant at 44219 Sierra Highway, Lancaster	3/18/2021	11:05	12	82	75	75
LT-27	Near 340 W Milling St (corner of an alleyway) between Yucca and Trevor, Lancaster	3/18/2021	11:06	24	69	72	72
LT-extra horn	At Polsa Rosa Ranch on Archdale Rd, near Soledad Canyon Rd, Acton	3/17/2021	10:01	24	73	73	73
ST-01	In front of 1811 N Main St near intersection of Lamar St, Los Angeles	3/1/2021	05:57	1	68	--	--
ST-02	In front of a parking lot and across the street from 165 N Ave 18, near intersection of Barranca St, Los Angeles	3/1/2021	07:20	1	57	--	--
ST-03	Adjacent to 2230 Oros at the corner of Oros and the Los Angeles River Greenway Trail, Los Angeles	3/1/2021	08:55	1	57	--	--
ST-04	At sidewalk 7 feet from fence in front of residence at 2613 Loosemore St, approx. 150' from San Fernando Rd, Los Angeles	3/1/2021	07:30	1	59	--	--
ST-05	In front of residence at 3034 Casitas Ave near Highway 2, Los Angeles	3/2/2021	06:47	1	60	--	--
ST-06	In front of residence at 1818 Gardena Ave, Glendale	3/2/2021	08:37	1	52	--	--
ST-07	At residence at 3865 Seneca Ave, Glendale	3/2/2021	07:00	1	55	--	--
ST-08	At residence at 427 Acacia Ave, Glendale	3/2/2021	08:23	1	54	--	--
ST-09	At residence at 4604 Alger between Sequoia and Baywood, across from Industrial buildings and railroad tracks, Los Angeles	3/2/2021	09:47	1	58	--	--
ST-10	Near 4510 Sperry St approx. 10' from the stop sign at San Fernando Rd intersection, Los Angeles	3/2/2021	10:57	1	62	--	--

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
ST-11	Adjacent to sidewalk in front of 874 Grange St, approx. 200' from San Fernando Rd, Glendale	3/2/2021	07:15	1	62	--	--
ST-12	Near residence at 1012 Justin Ave, approx. 1 block from San Fernando Rd, Glendale	3/2/2021	08:39	1	60	--	--
ST-13	Near 1516 Broadway, approx. 4 parcels from the intersection of Leland, and then a sound wall and I-5, Burbank	3/4/2021	07:48	1	57	--	--
ST-14	Near 12608 Wingo St near the intersection of San Fernando NB, Pacoima	3/4/2021	05:55	1	54	--	--
ST-15	On Pierce Ave at approx. setback distance of 10546 El Dorado Ave., Pacoima	3/4/2021	06:10	1	52	--	--
ST-16	At setback distance of 13522 Weidner St on sidewalk adjacent to driveway, Pacoima	3/4/2021	07:30	1	56	--	--
ST-17	Near 110 ¾ Jessie St, San Fernando	3/5/2021	08:17	1	65	--	--
ST-18	On the corner of Polk St and Ralston Ave, adjacent to 14900 Polk St, Sylmar	3/5/2021	06:55	1	67	--	--
ST-19	In front of driveway of 15522 Cobalt St at setback distance of new development on Evelina, Sylmar	3/5/2021	09:54	1	58	--	--
ST-20	At setback distance of building north of parking lot near 16521 Filbert St, Sylmar	3/5/2021	07:34	1	64	--	--
ST-21	Near 23598 Pine St, Santa Clarita	3/16/2021	07:25	1	57	--	--
ST-22	At the corner of Arch St and 3rd St adjacent to 24054 Arch St, Santa Clarita	3/16/2021	06:10	1	57	--	--
ST-23	Adjacent to 24287 Newhall Ave near Market Street and across from the Veterans Historical Plaza, Santa Clarita	3/16/2021	04:45	1	67	--	--

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
ST-24	Near 24963 Alderbrook Dr, Newhall	3/16/2021	05:51	1	53	--	--
ST-25	Near 25664 Alicante Dr, Santa Clarita	3/16/2021	07:18	1	54	--	--
ST-26	At corner of Prima Way and Soledad Canyon Rd, on the opposite side of Prima Way from 21801 Soledad Canyon Rd, Santa Clarita	3/17/2021	06:00	1	71	--	--
ST-27	Across the street from 26840 Claudette St, near Golden Triangle Rd, Santa Clarita	3/17/2021	07:30	1	53	--	--
ST-28	On cul-de-sac, near corner of Via Princessa and Weyerhauser, on large berm approx. 15' higher elevation than cul-de-sac, Santa Clarita	3/17/2021	05:20	1	59	--	--
ST-29	On sidewalk of Jakes Way at approx. setback of 18006 Danielson St, Santa Clarita	3/17/2021	06:45	1	65	--	--
ST-30	At end of Blue Aspen Lane cul-de-sac, Santa Clarita	3/17/2021	08:04	1	52	--	--
ST-31	Lang Station Rd, ~ 265 ft NW of crossing, Santa Clarita	3/17/2021	08:00	1	60	--	--
ST-32	At Sanna Ranch near Soledad Canyon Rd, Santa Clarita	3/17/2021	07:18	1	71	--	--
ST-33	Indian Canyon Trailhead Parking lot, approx 50' higher than Soledad Canyon Rd, Santa Clarita	3/18/2021	06:55	1	51	--	--
ST-34	Arrastre Canyon Rd, Acton	3/18/2021	08:14	1	57	--	--
ST-35	Approx 20' from Soledad Canyon Rd on east shoulder of Michigan Ave near 2835 Soledad Canyon Rd, Acton	3/18/2021	07:25	1	63	--	--
ST-36	In field adjacent to 32548 Aliso Canyon Rd approx. 500' from tracks, Acton	3/18/2021	08:45	1	65	--	--
ST-37	Adjacent to 1414 Soledad Canyon Rd, Acton	3/18/2021	07:00	1	70	--	--

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
ST-38	On dirt road adjacent to a vineyard across from tracks, Highway 122 and 14, Palmdale	3/18/2021	08:30	1	55	--	--
ST-39	In roundabout off of Sierra Highway between 40025 and 39959 Sierra Highway, Palmdale	3/19/2021	08:45	1	57	--	--
ST-40	Ave M at 4th St E, at NW corner of intersection at All American Truck Parts, 25' to center of near lane of Ave M, Lancaster	3/19/2021	07:52	1	77	--	--
ST-41	43233 Sierra Highway, at edge of Bowlero parking lot at approx. setback distance of hotel, Lancaster	3/19/2021	09:03	1	66	--	--
ST-42	Near intersection of Ave K and Stanridge, approx 40' from near lane of traffic, Lancaster	3/19/2021	10:50	1	69	--	--
ST-43	Near intersection of Alder Ave and Ave J8, Lancaster	3/19/2021	08:59	1	70	--	--
ST-44	Adjacent to 44415 Cedar Ave, Lancaster	3/19/2021	08:04	1	62	--	--
ST-45	At corner of Beech Ave and Newgrove St, Lancaster	3/19/2021	06:55	1	57	--	--
ST-46	31800 3rd St, Acton	3/18/2021	05:43	1	55	--	--
ST-47	Adjacent to 32196 Cedarcroft, Acton	3/18/2021	08:46	1	43	--	--
Data from other projects applied to Antelope Valley Line							
HSR-N1	Sun Valley – see maps for Section 4	5/16/2016	07:52	3	56	53	--
HSR-N4	Santa Clarita – see maps for Section 5	5/17/2016	17:09	3	63	60	--
HSR-N9	Acton – see maps for Section 6	5/16/2016	12:08	3	53	57	--
HSR-N10	Acton – see maps for Section 6	5/16/2016	13:31	3	60	66	--
HSR-N11	Palmdale – see maps for Section 7	5/17/2016	16:00	1	58	--	--
HSR-LT-1	Palmdale – see maps for Section 7	3/23/2015	10:20	24	49	51	--

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
HSR-LT-2	Palmdale – see maps for Section 7	3/23/2015	11:10	24	64	67	--
HSR-LT-3	Palmdale – see maps for Section 7	3/24/2015	12:40	24	62	65	--
HSR-LT-4	Palmdale – see maps for Section 7	3/23/2015	13:15	24	68	66	--
HSR-LT-5	Palmdale – see maps for Section 7	3/25/2015	10:10	24	53	63	--
HSR-LT-6	Palmdale – see maps for Section 7	3/23/2015	13:20	24	59	65	--
HSR-LT-7	Palmdale – see maps for Section 7	3/23/2015	14:20	24	55	60	--
HSR-LT-21	Los Angeles – see maps for Section 4	4/8/2015	11:35	24	67	66	--
HSR-LT-22	Los Angeles – see maps for Section 4	4/9/2015	10:15	24	60	61	--
HSR-LT-23	Sun Valley – see maps for Section 3	4/16/2015	10:15	24	51	58	--
HSR-LT-26	Burbank – see maps for Section 3	4/14/2015	13:10	24	54	61	--
HSR-LT-27	Burbank – see maps for Section 3	4/14/2015	13:45	24	55	61	--
HSR-LT-28	Burbank – see maps for Section 3	4/15/2015	15:15	24	57	58	--
HSR-LT-30	Burbank – see maps for Section 3	4/15/2015	17:40	24	54	60	--
HSR-ST-1	Palmdale – see maps for Section 7	3/23/2015	11:25	0.5	61	--	--
HSR-ST-2	Palmdale – see maps for Section 7	3/23/2015	12:05	1	56	--	--
HSR-ST-3	Palmdale – see maps for Section 7	3/23/2015	14:45	1	49	--	--
HSR-ST-4	Palmdale – see maps for Section 7	3/24/2015	9:22	1	55	--	--
HSR-ST-6	Palmdale – see maps for Section 7	3/24/2015	16:41	1	64	--	--
HSR-ST-7	Palmdale – see maps for Section 7	3/25/2015	10:35	0.5	62	--	--
HSR-ST-8	Palmdale – see maps for Section 7	3/25/2015	13:39	1	52	--	--
HSR-ST-9	Palmdale – see maps for Section 7	3/25/2015	14:47	0.5	48	--	--

Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
HSR-ST-10	Palmdale – see maps for Section 7	3/26/2015	08:57	1	53	--	--
HSR-ST-11	Palmdale – see maps for Section 7	3/26/2015	9:33	1	53	--	--
HSR-ST-21	Los Angeles – see maps for Section 4	4/9/2015	13:25	1	66	--	--
HSR-ST-23	Burbank – see maps for Section 3	4/16/2015	11:56	1	54	--	--
LUS-ML1a	William Mead Homes, Los Angeles	1/24/2017	10:00	24	66	69	--
LUS-ML1b	William Mead Homes fields, Los Angeles	1/24/2017	09:38	24	66	69	--
LUS-ML2	Terminal tower, representing correctional facility	1/24/2017	13:52	24	71	73	--
LUS-ML3	Rooftop of Amtrak building, representing 888 N Alameda St, Los Angeles	1/24/2017	13:27	24	64	67	--
CMF-A	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	62	61	--
CMF-B	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	63	61	--
CMF-C	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	65	62	--
CMF-D	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	66	64	--
CMF-E	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	62	65	--

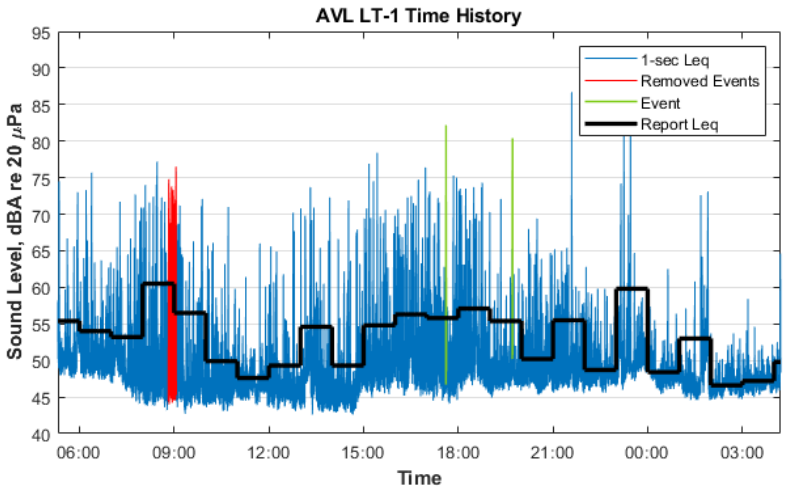
Site ID	Location	Date	Start time	Duration[a] (hours)	1-hour L_{eq}[b] (dBA)	L_{dn} (dBA)	CNEL (dBA)
CMF-F	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	76	77	--
CMF-J	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	69	68	--
CMF-K	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	71	70	--
CMF-N	Los Angeles – see maps for Section 1	10-11/2020	multi-day average	24	71	73	--

[a]When more than 24 hours of data were collected, the most representative 24 hours was used to determine the L_{dn} and CNEL values. Where less than 24 hours, representative nearby data were used to complete 24 hours of data for L_{dn} and CNEL.
[b]Loudest hour for long-term measurements (LT).
[c]Half of the 24-hour data were invalid, so L_{dn} was constructed applying data from nearby measurements for missing hours.

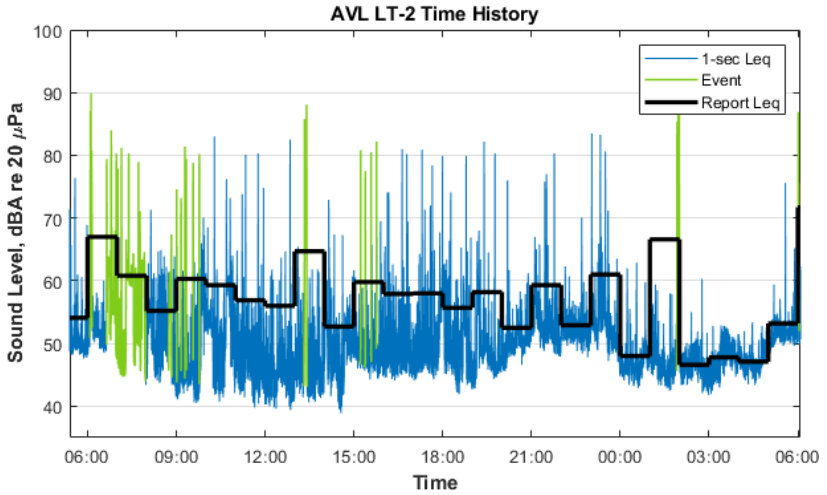
Antelope Valley Line Existing Noise Measurement Locations and Time Histories

A photograph and time history for each Antelope Valley Line measurement location are shown below. Note that in each time history, identifiable valid train events are indicated, as well as contaminating noise events (e.g., loud siren, people talking near microphone, dogs barking near microphone, etc.), which were removed from the data.

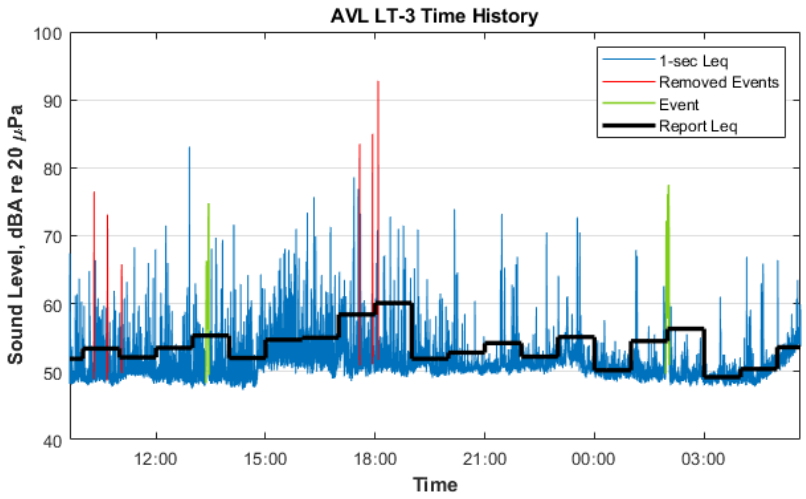
LT-01


AVL LT-1 Time History
Sound Level, dBA re 20 μPa
Time
1-sec Leq
Removed Events
Event
Report Leq
95
90
85
80
75
70
65
60
55
50
45
40
06:00
09:00
12:00
15:00
18:00
21:00
00:00
03:00

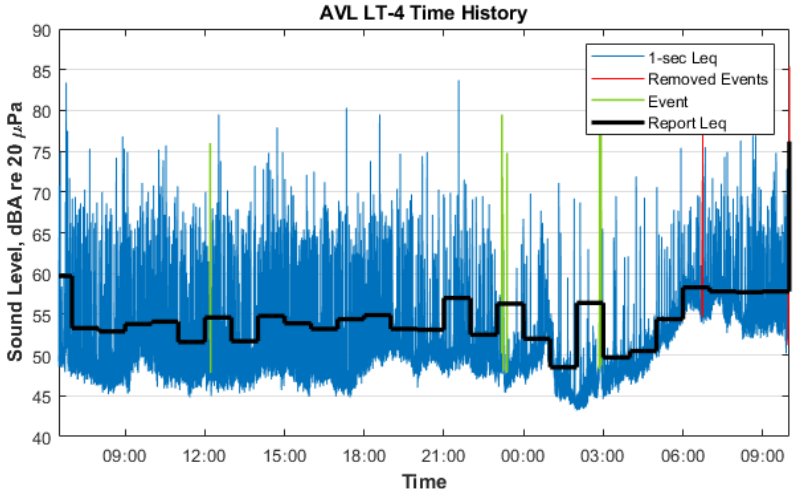
LT-02


AVL LT-2 Time History
Sound Level, dBA re 20 μPa
Time
1-sec Leq
Event
Report Leq
100
90
80
70
60
50
40
06:00
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00

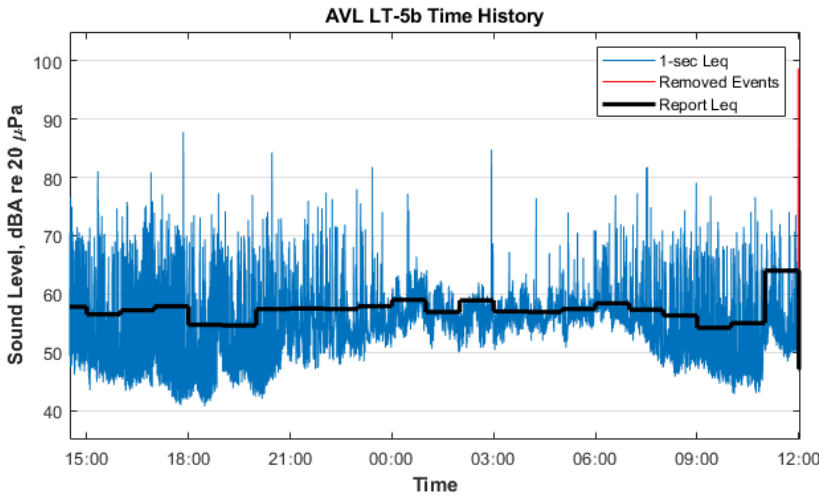
LT-03


AVL LT-3 Time History
Sound Level, dBA re 20 μPa
100
90
80
70
60
50
40
12:00
15:00
18:00
21:00
00:00
03:00
Time
1-sec Leq
Removed Events
Event
Report Leq

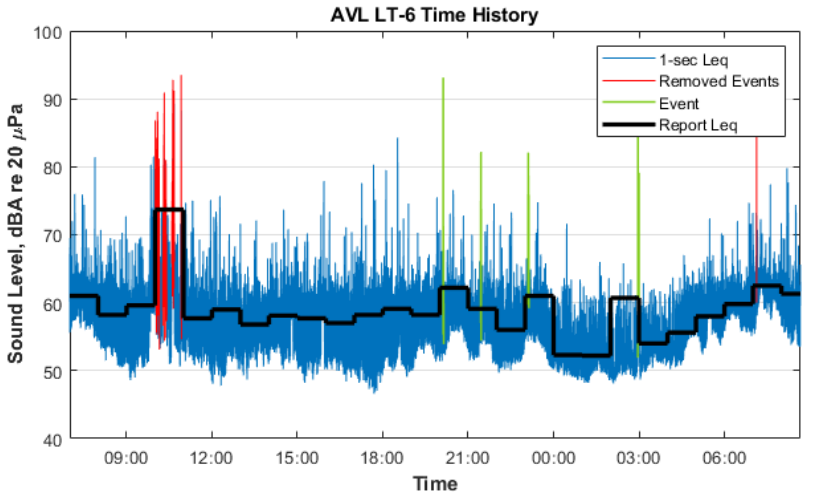
LT-04


AVL LT-4 Time History
Sound Level, dBA re 20 μPa
90
85
80
75
70
65
60
55
50
45
40
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00
Time
1-sec Leq
Removed Events
Event
Report Leq

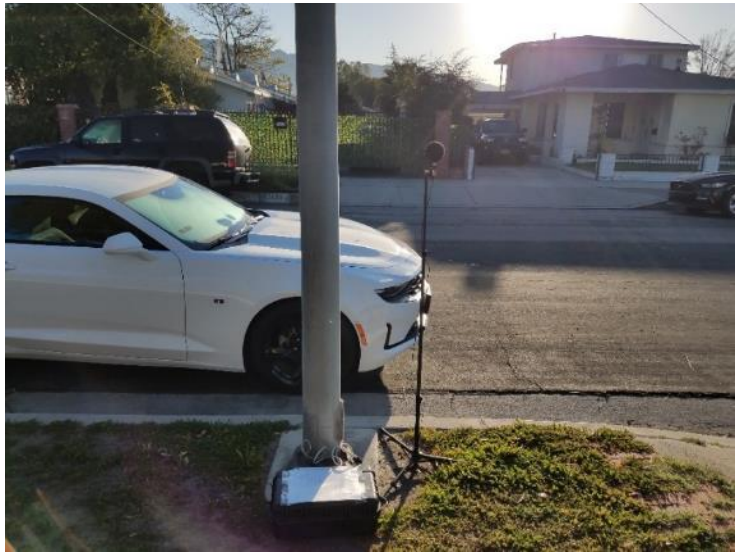
LT-05

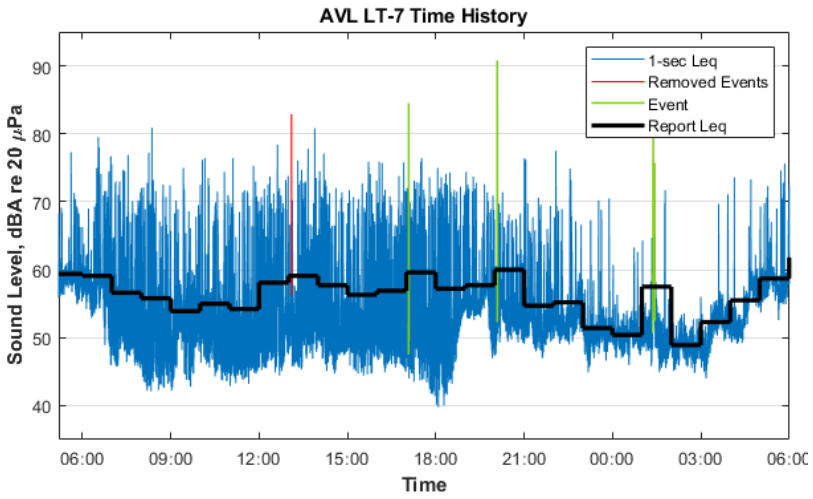

AVL LT-5b Time History
1-sec Leq
Removed Events
Report Leq
Sound Level, dBA re 20 μPa
100
90
80
70
60
50
40
15:00
18:00
21:00
00:00
03:00
06:00
09:00
12:00
Time

LT-06

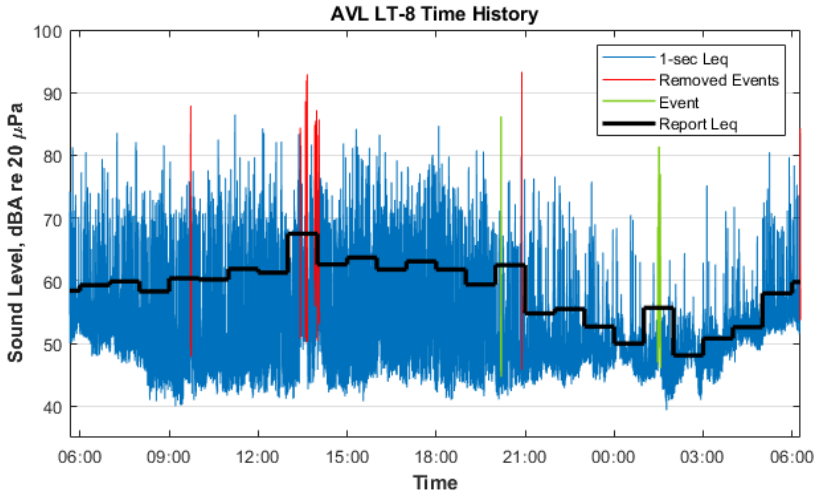

AVL LT-6 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA re 20 μPa
100
90
80
70
60
50
40
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00
Time

LT-07

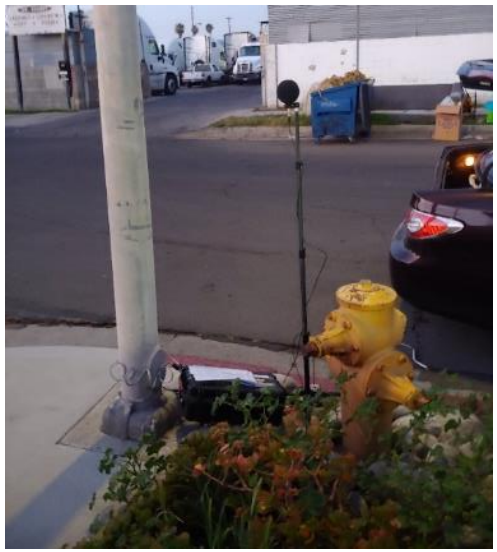


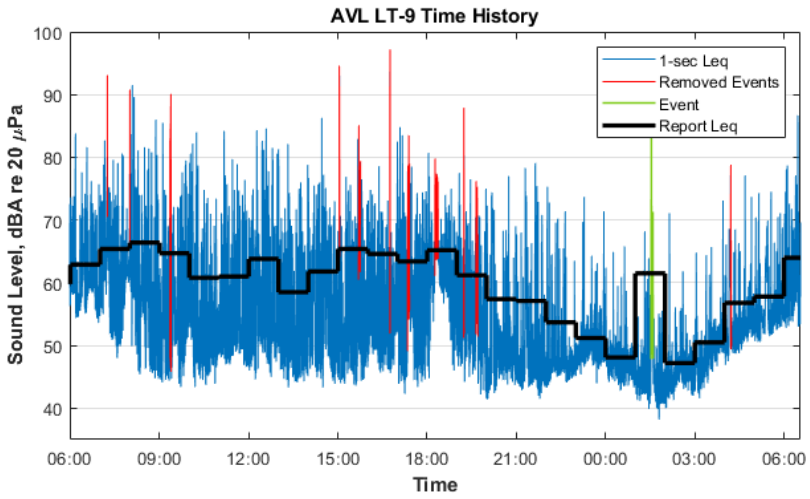

AVL LT-7 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA re 20 μPa
90
80
70
60
50
40
06:00
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00
Time

LT-08

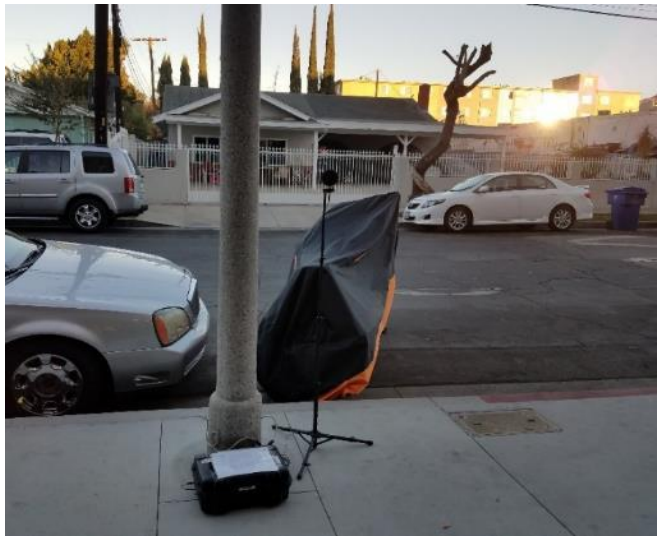

AVL LT-8 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA re 20 μPa
100
90
80
70
60
50
40
06:00
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00
Time

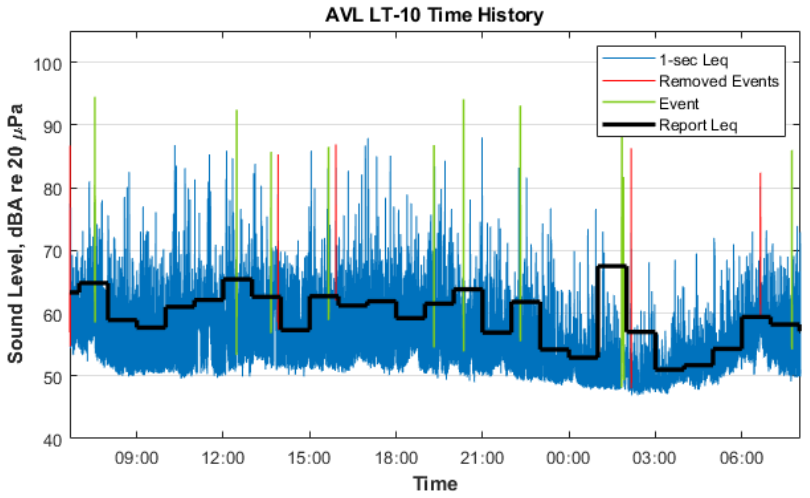
LT-09



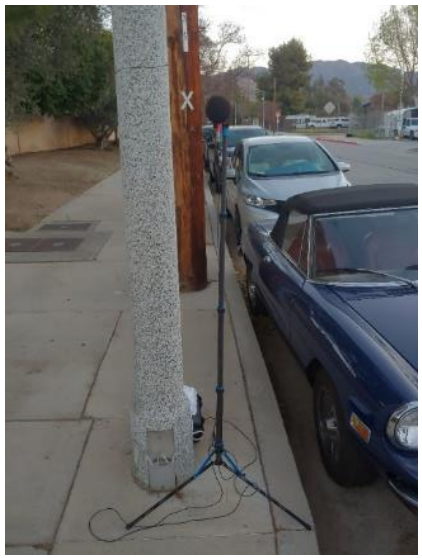

AVL LT-9 Time History
Sound Level, dBA re 20 μPa
100
90
80
70
60
50
40
06:00
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00
Time
1-sec Leq
Removed Events
Event
Report Leq

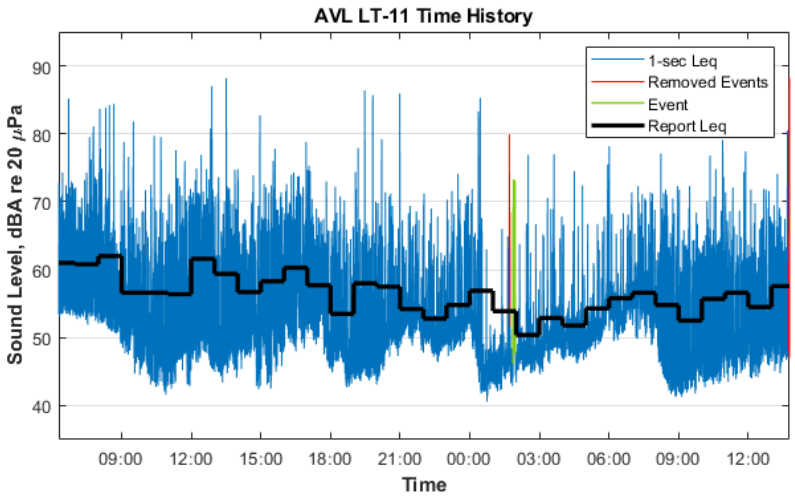
LT-10



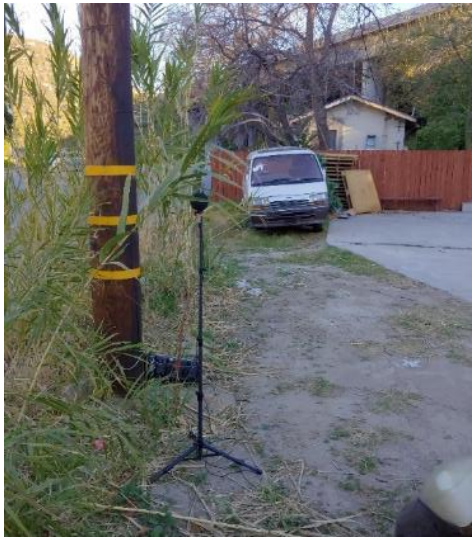

AVL LT-10 Time History
Sound Level, dBA re 20 μPa
100
90
80
70
60
50
40
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00
Time
1-sec Leq
Removed Events
Event
Report Leq

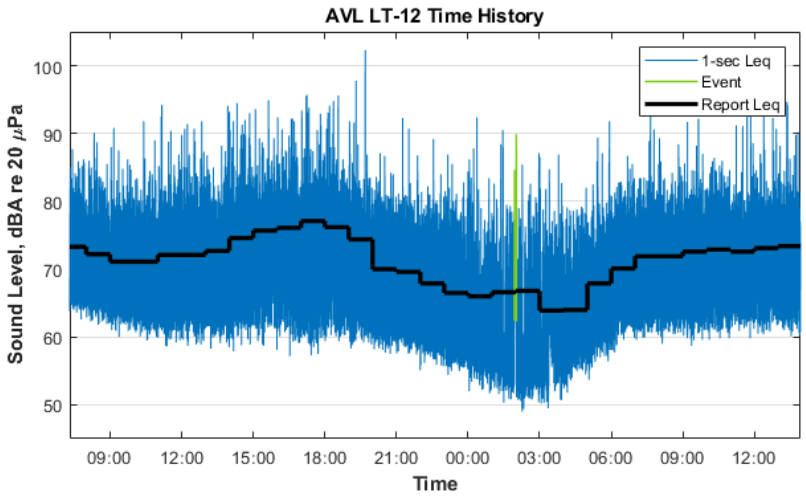
LT-11





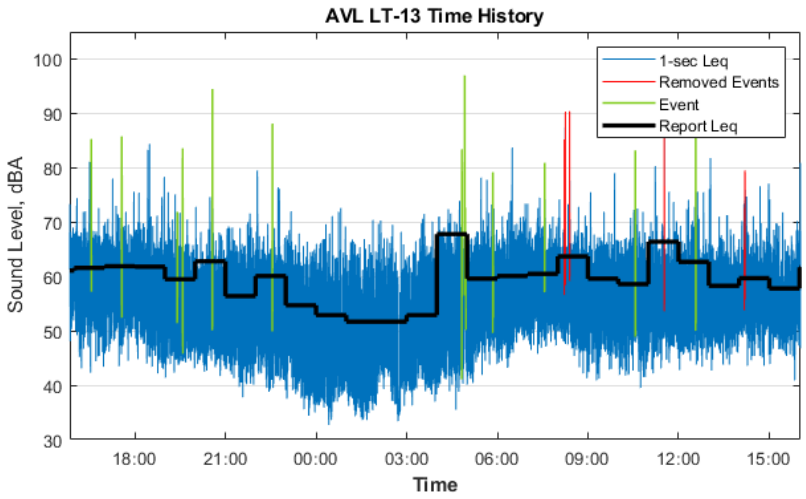
LT-12



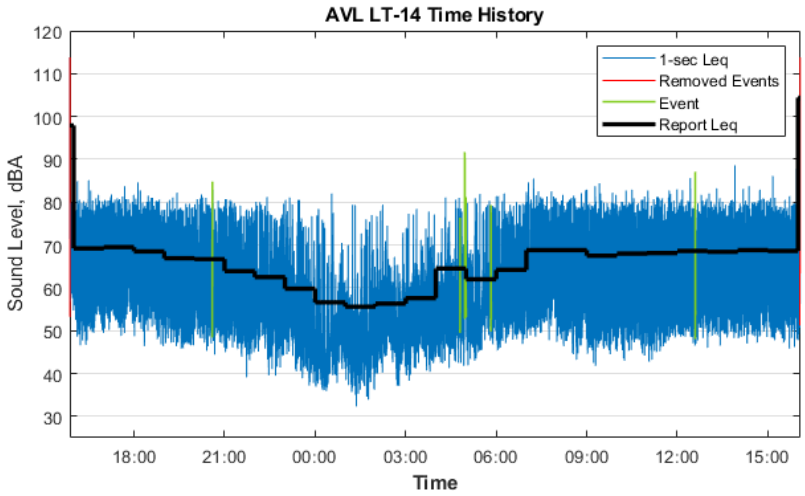


Metro

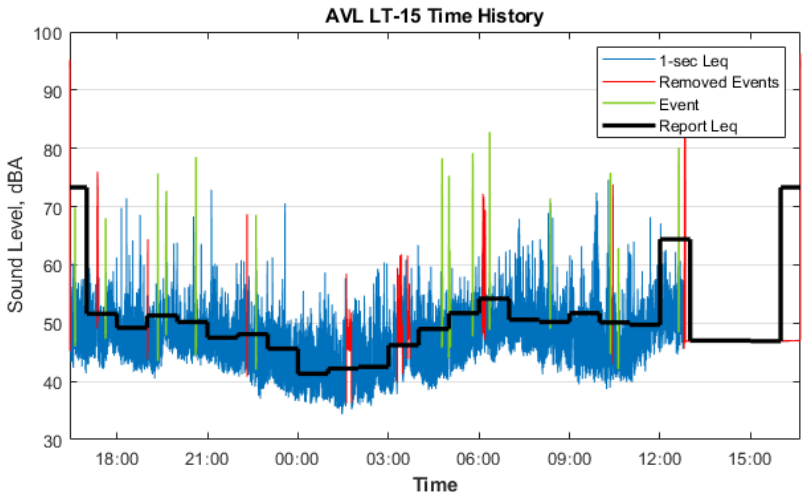
LT-13


AVL LT-13 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA
100
90
80
70
60
50
40
30
18:00
21:00
00:00
03:00
06:00
09:00
12:00
15:00
Time

LT-14

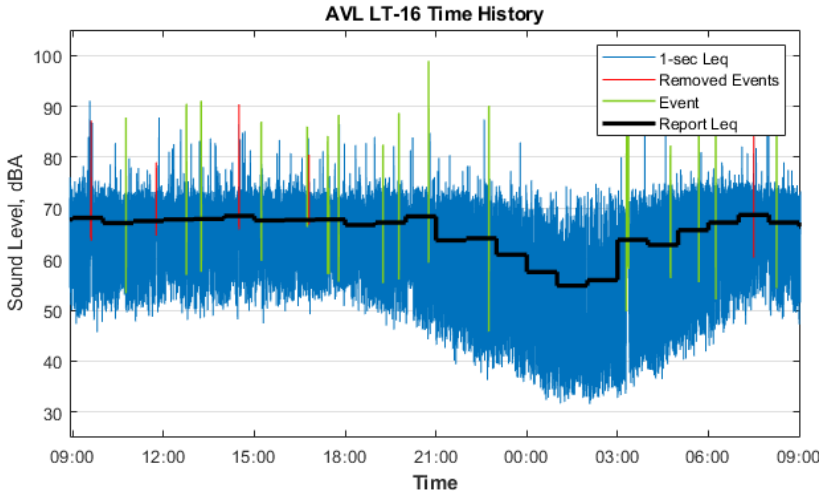

AVL LT-14 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA
120
110
100
90
80
70
60
50
40
30
18:00
21:00
00:00
03:00
06:00
09:00
12:00
15:00
Time

LT-15

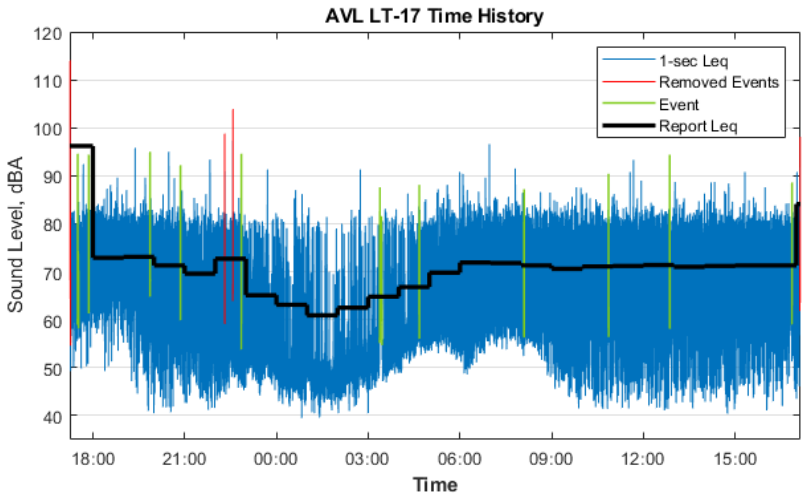

AVL LT-15 Time History
Sound Level, dBA
Time
1-sec Leq
Removed Events
Event
Report Leq
100
90
80
70
60
50
40
30
18:00
21:00
00:00
03:00
06:00
09:00
12:00
15:00

LT-16

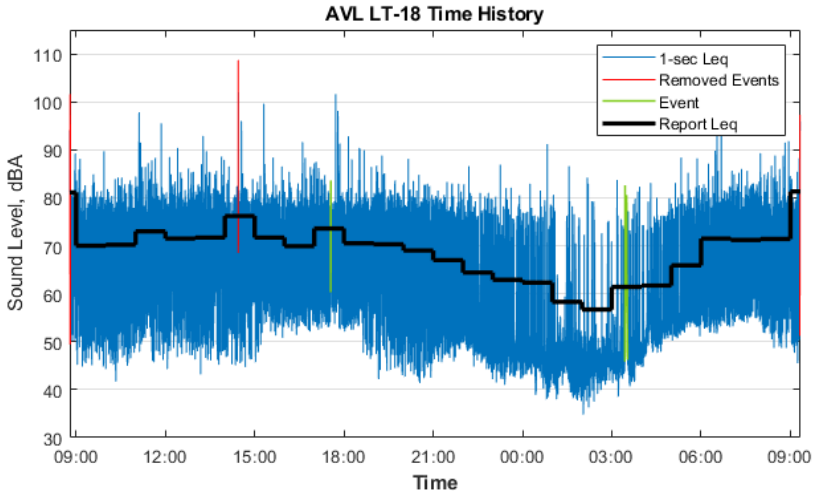

WHEELS & TIRES
844-777-0018


AVL LT-16 Time History
Sound Level, dBA
Time
1-sec Leq
Removed Events
Event
Report Leq
100
90
80
70
60
50
40
30
09:00
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00

LT-17

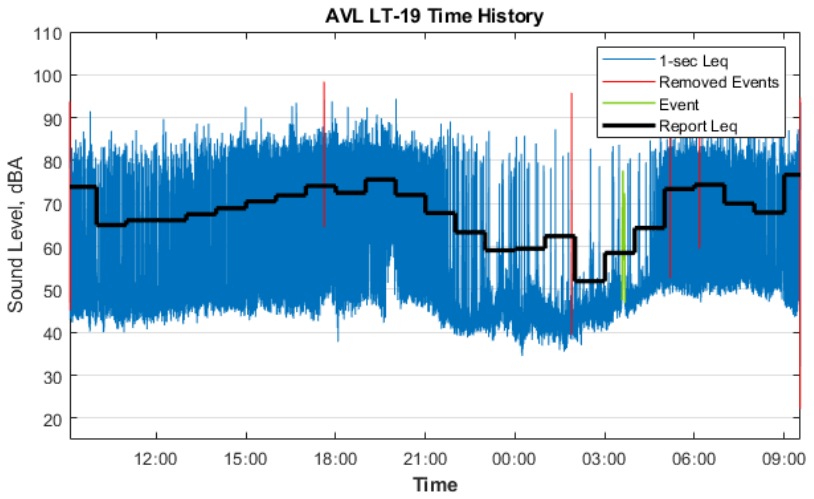


LT-18

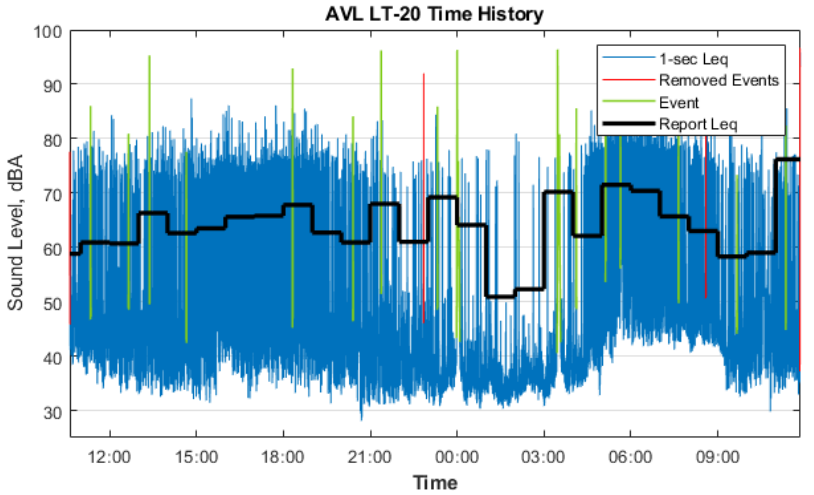


Metro

LT-19

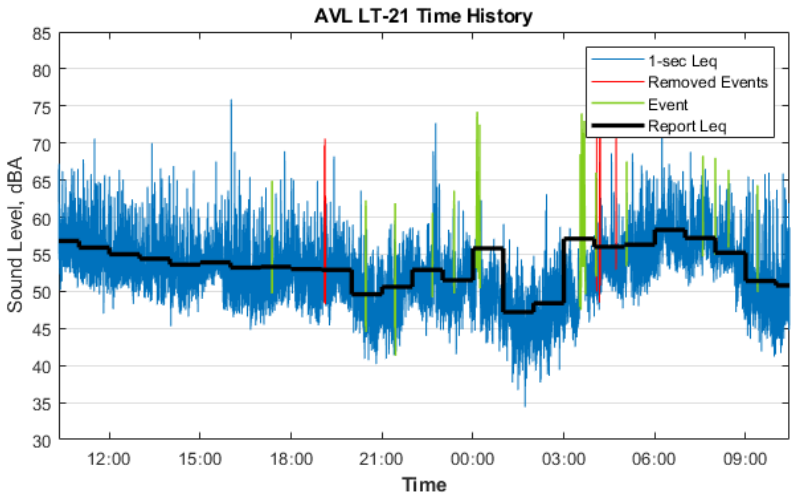


LT-20

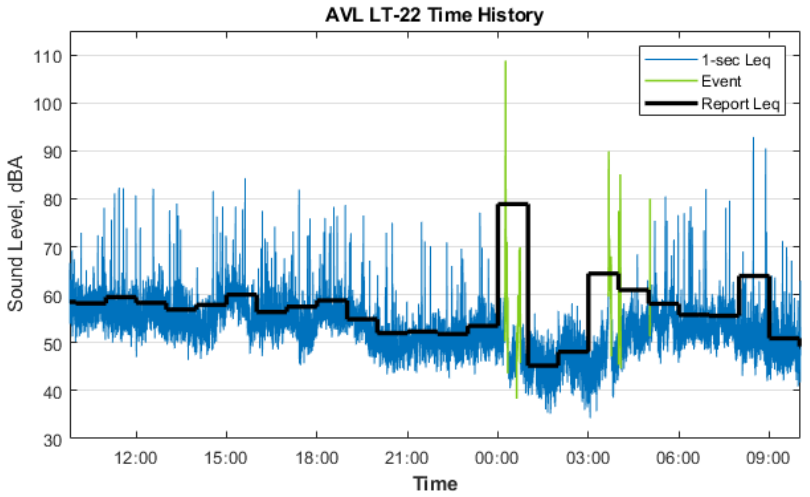


Metro

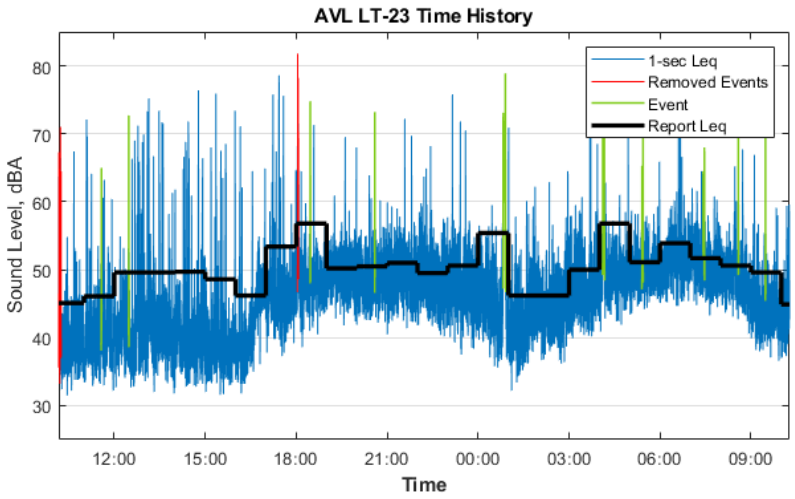
LT-21


AVL LT-21 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA
85
80
75
70
65
60
55
50
45
40
35
30
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00
Time

LT-22

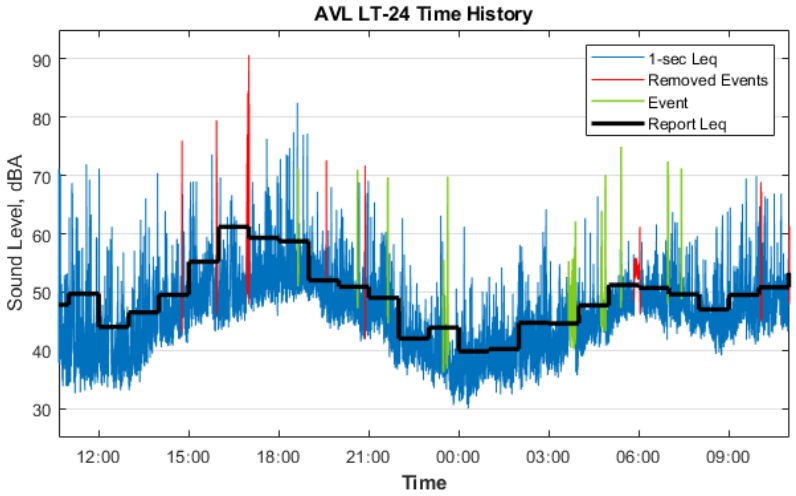

AVL LT-22 Time History
1-sec Leq
Event
Report Leq
Sound Level, dBA
110
100
90
80
70
60
50
40
30
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00
Time

LT-23

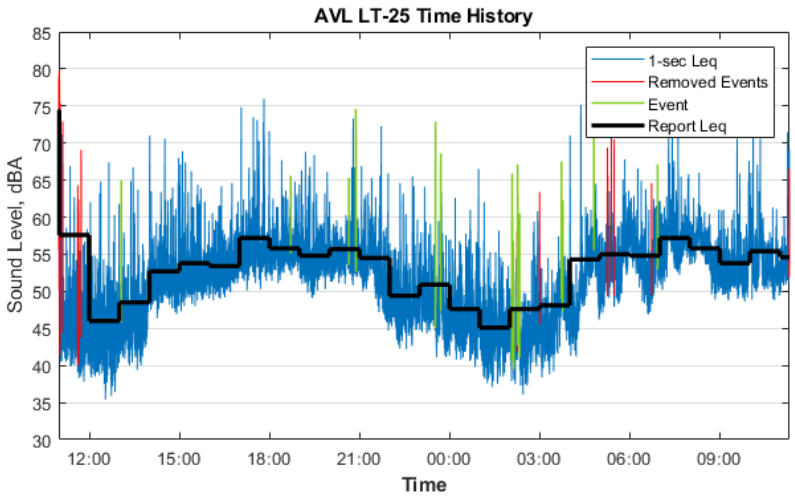

AVL LT-23 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA
80
70
60
50
40
30
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00
Time

LT-24

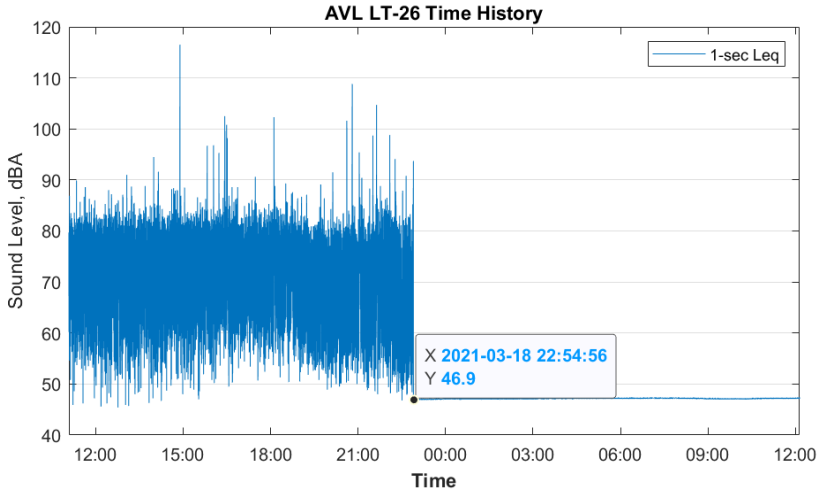

Larchwood


AVL LT-24 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA
90
80
70
60
50
40
30
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00
Time

LT-25

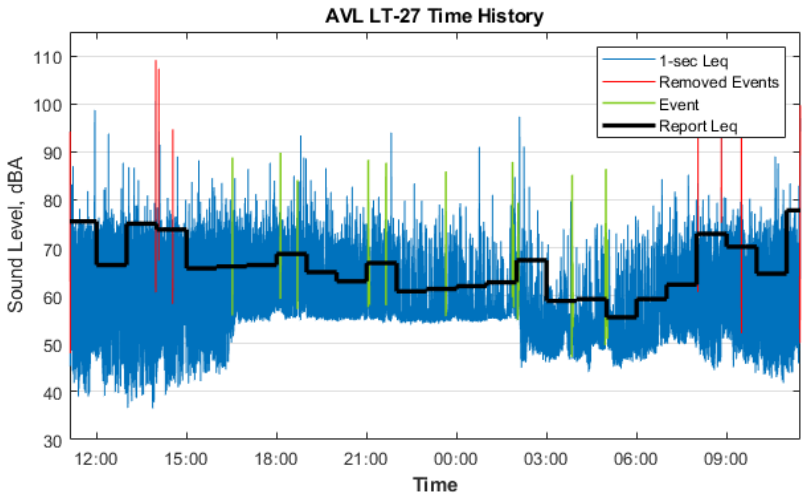


LT-26 (half the recorded data were invalid due to microphone theft)

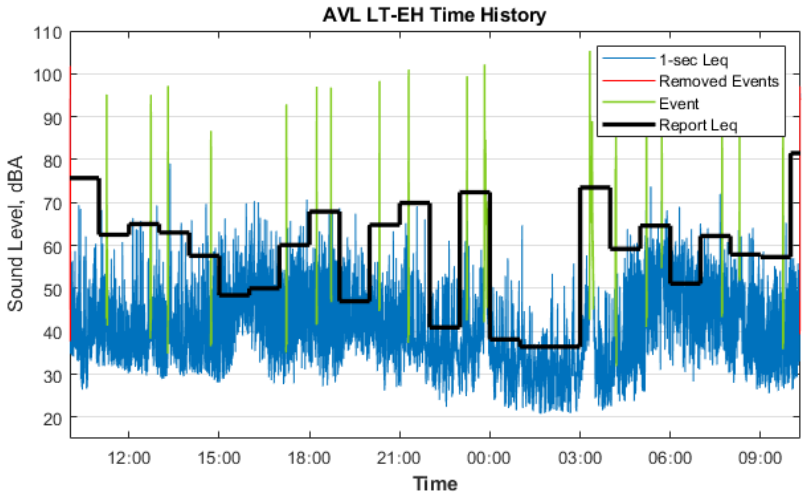


Metro

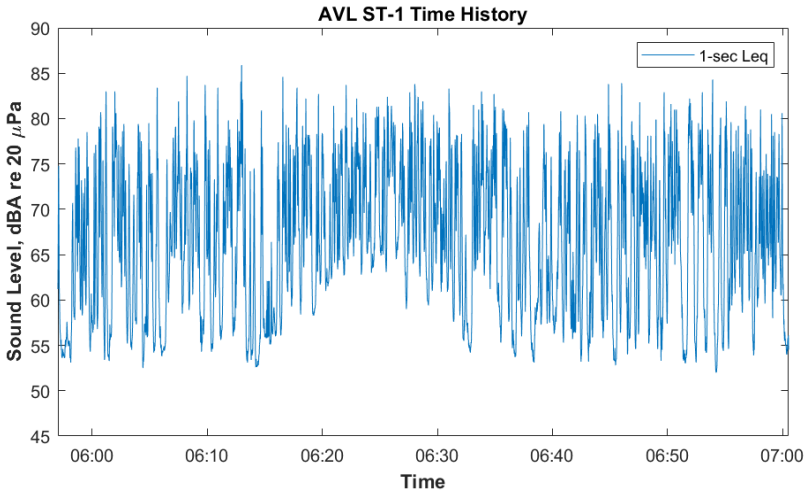
LT-27


AVL LT-27 Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA
110
100
90
80
70
60
50
40
30
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00
Time

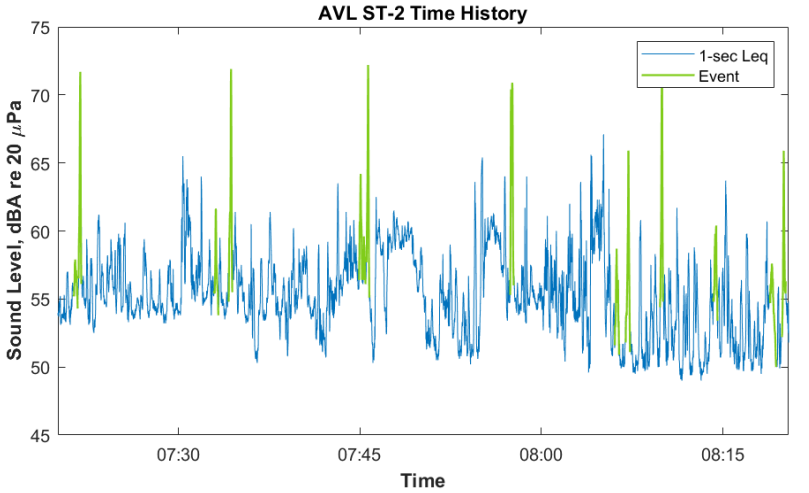
LT-EH


AVL LT-EH Time History
1-sec Leq
Removed Events
Event
Report Leq
Sound Level, dBA
110
100
90
80
70
60
50
40
30
20
12:00
15:00
18:00
21:00
00:00
03:00
06:00
09:00
Time

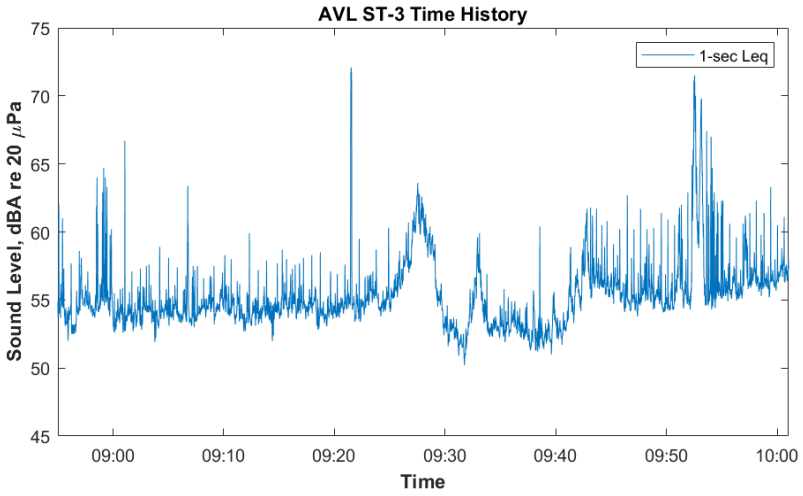
ST-1


AVL ST-1 Time History
1-sec Leq
Sound Level, dBA re 20 μPa
90
85
80
75
70
65
60
55
50
45
06:00
06:10
06:20
06:30
06:40
06:50
07:00
Time

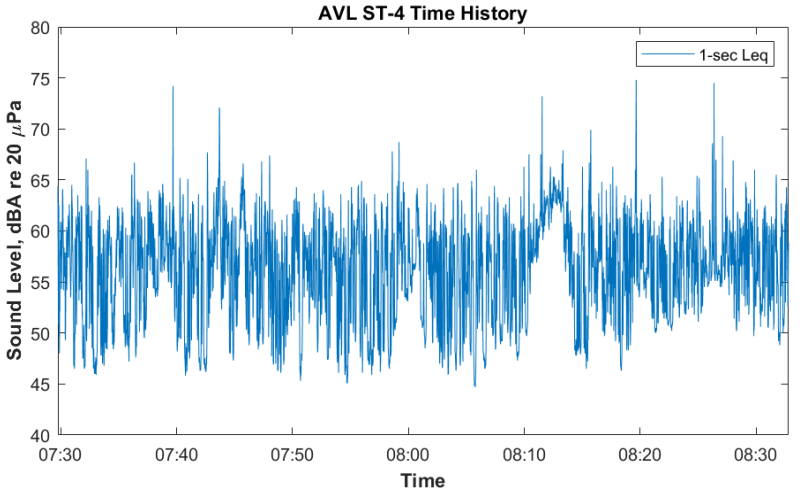
ST-2


AVL ST-2 Time History
1-sec Leq
Event
Sound Level, dBA re 20 μPa
75
70
65
60
55
50
45
07:30
07:45
08:00
08:15
Time

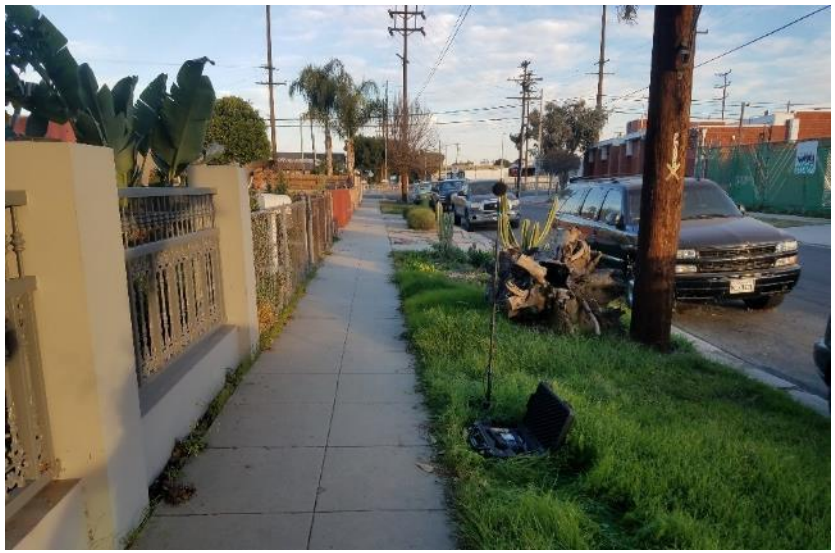
ST-3

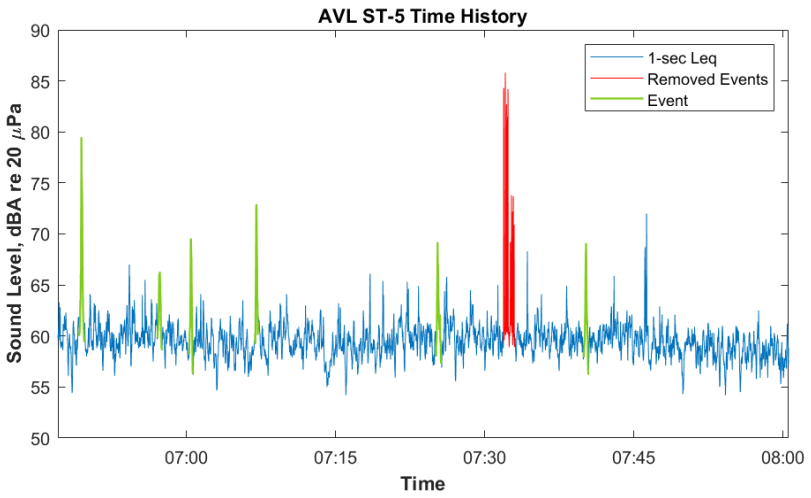

AVL ST-3 Time History
1-sec Leq
Sound Level, dBA re 20 μPa
75
70
65
60
55
50
45
09:00
09:10
09:20
09:30
09:40
09:50
10:00
Time

ST-4


AVL ST-4 Time History
1-sec Leq
Sound Level, dBA re 20 μPa
80
75
70
65
60
55
50
45
40
07:30
07:40
07:50
08:00
08:10
08:20
08:30
Time

ST-5




AVL ST-5 Time History
Sound Level, dBA re 20 μPa
Time
1-sec Leq
Removed Events
Event
90
85
80
75
70
65
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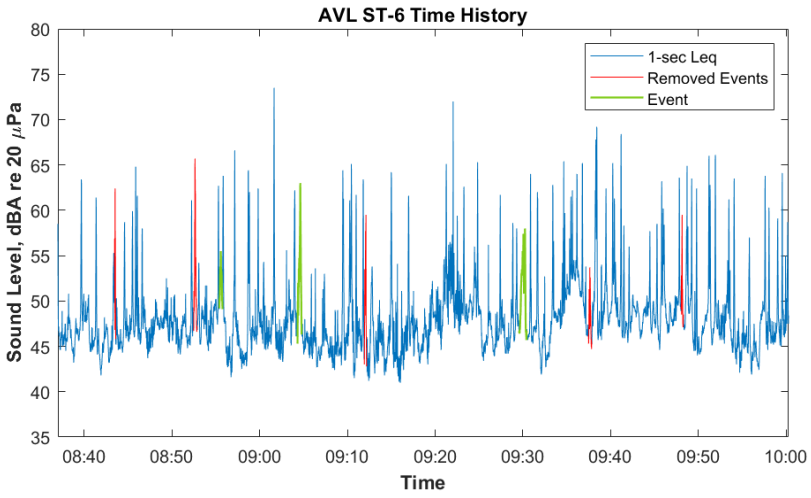
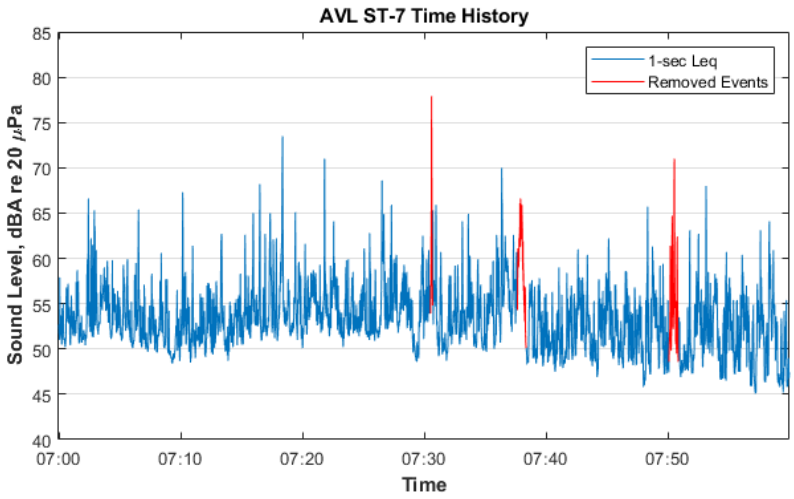
07:00
07:15
07:30
07:45
08:00

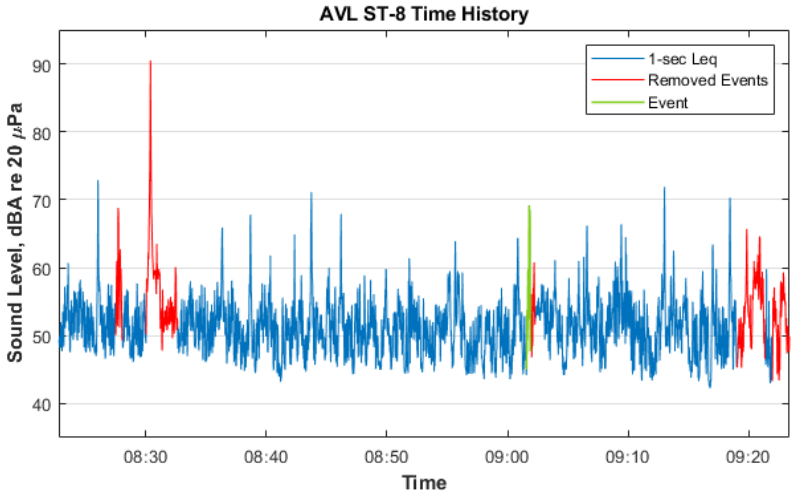
ST-6


AVL ST-6 Time History
Sound Level, dBA re 20 μPa
Time
1-sec Leq
Removed Events
Event
80
75
70
65
60
55
50
45
40
35
08:40
08:50
09:00
09:10
09:20
09:30
09:40
09:50
10:00

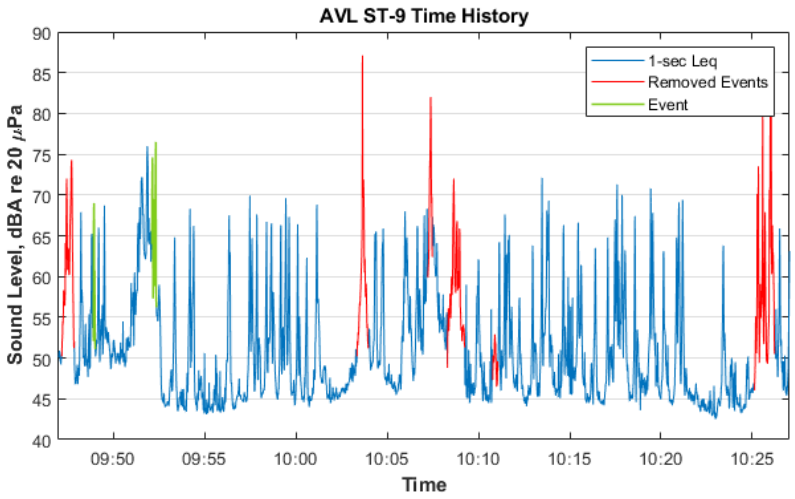
ST-7


AVL ST-7 Time History
1-sec Leq
Removed Events
Sound Level, dBA re 20 μPa
85
80
75
70
65
60
55
50
45
40
07:00
07:10
07:20
07:30
07:40
07:50
Time

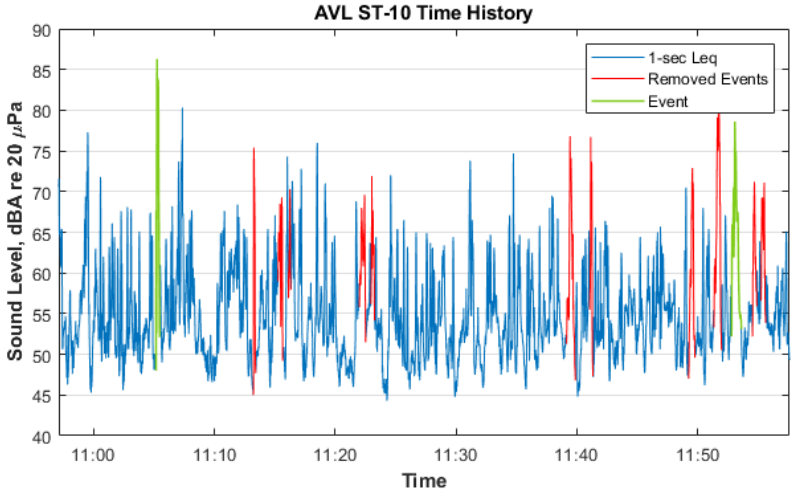
ST-8


AVL ST-8 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA re 20 μPa
90
80
70
60
50
40
08:30
08:40
08:50
09:00
09:10
09:20
Time

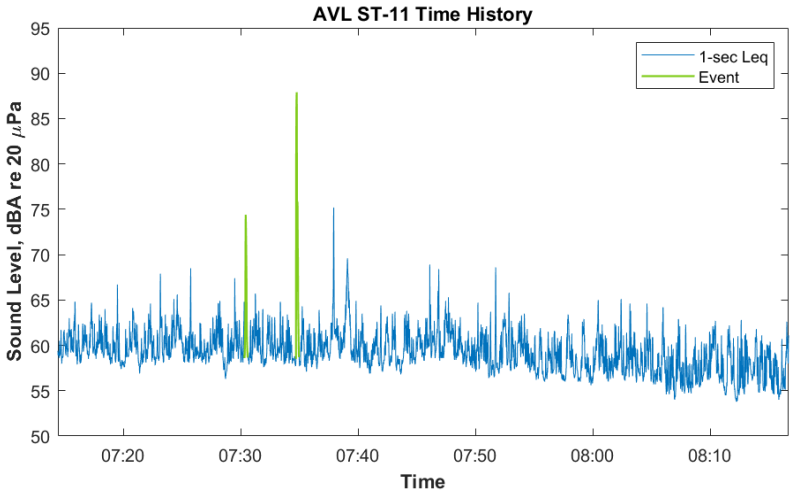
ST-9


AVL ST-9 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA re 20 μPa
90
85
80
75
70
65
60
55
50
45
40
09:50
09:55
10:00
10:05
10:10
10:15
10:20
10:25
Time

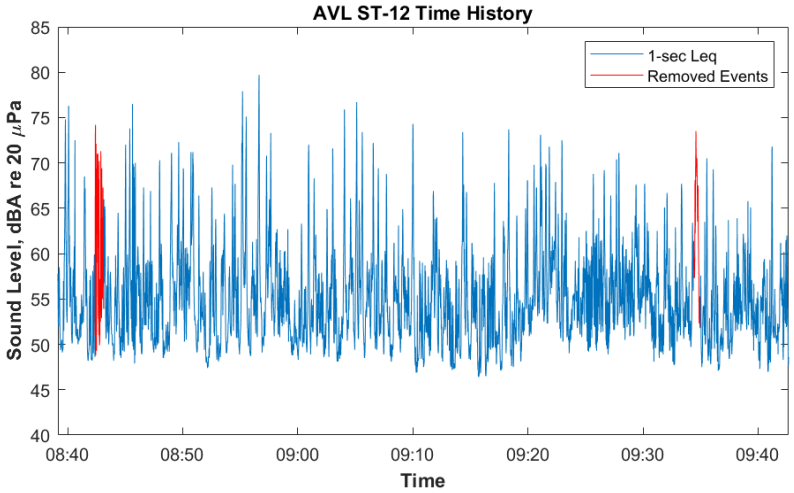
ST-10


AVL ST-10 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA re 20 μPa
90
85
80
75
70
65
60
55
50
45
40
11:00
11:10
11:20
11:30
11:40
11:50
Time

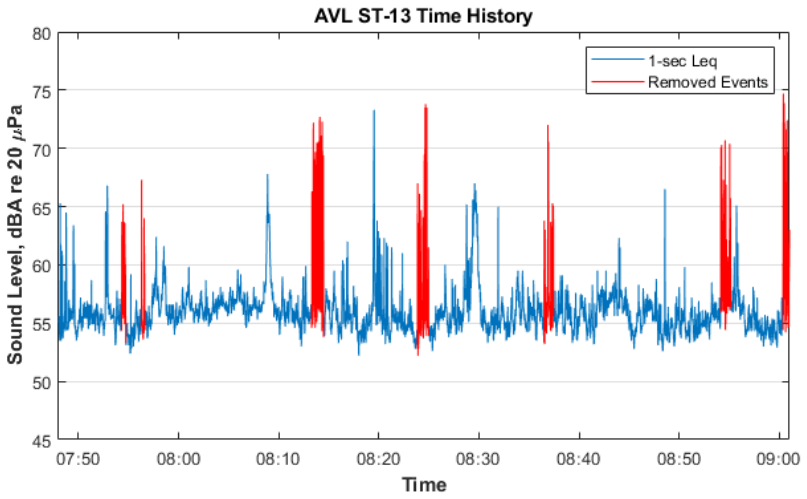
ST-11


AVL ST-11 Time History
1-sec Leq
Event
Sound Level, dBA re 20 μPa
95
90
85
80
75
70
65
60
55
50
07:20
07:30
07:40
07:50
08:00
08:10
Time

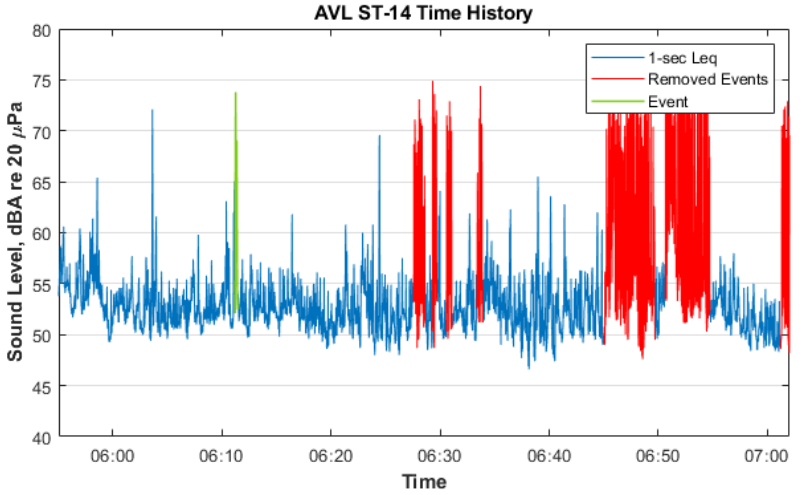
ST-12


AVL ST-12 Time History
1-sec Leq
Removed Events
Sound Level, dBA re 20 μPa
85
80
75
70
65
60
55
50
45
40
08:40
08:50
09:00
09:10
09:20
09:30
09:40
Time

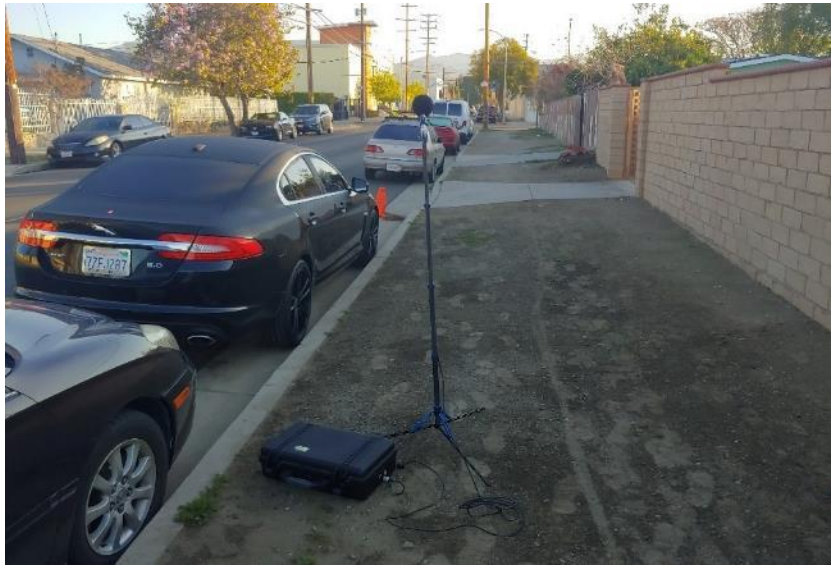
ST-13

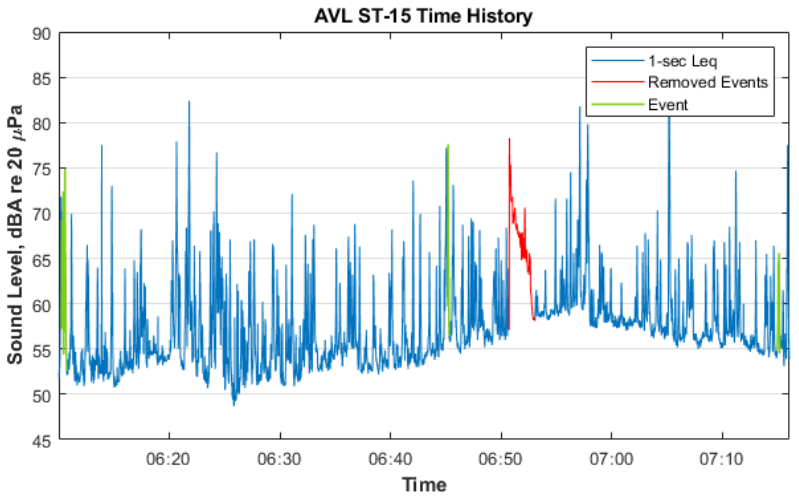

AVL ST-13 Time History
1-sec Leq
Removed Events
Sound Level, dBA re 20 μPa
80
75
70
65
60
55
50
45
07:50
08:00
08:10
08:20
08:30
08:40
08:50
09:00
Time

ST-14

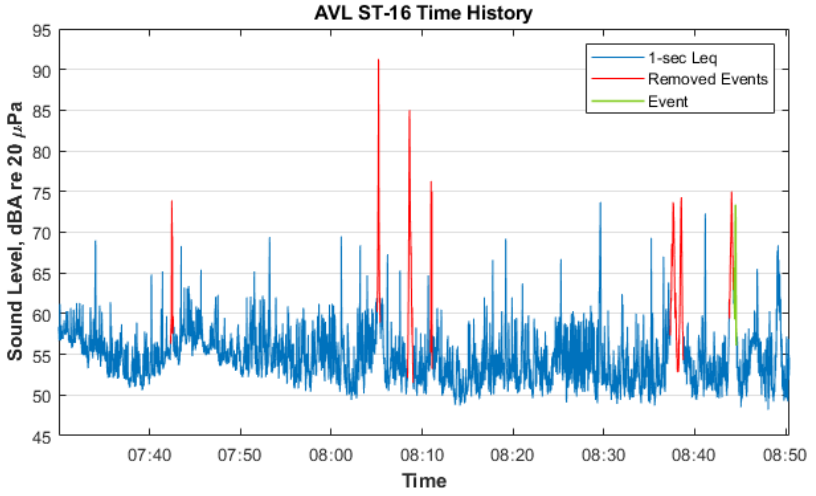

AVL ST-14 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA re 20 μPa
80
75
70
65
60
55
50
45
40
06:00
06:10
06:20
06:30
06:40
06:50
07:00
Time

ST-15

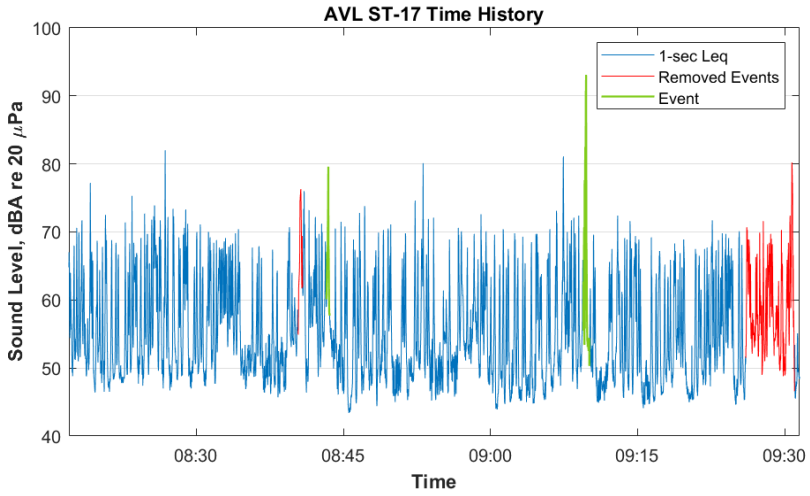



AVL ST-15 Time History
Sound Level, dBA re 20 μPa
90
85
80
75
70
65
60
55
50
45
06:20
06:30
06:40
06:50
07:00
07:10
Time
1-sec Leq
Removed Events
Event

ST-16

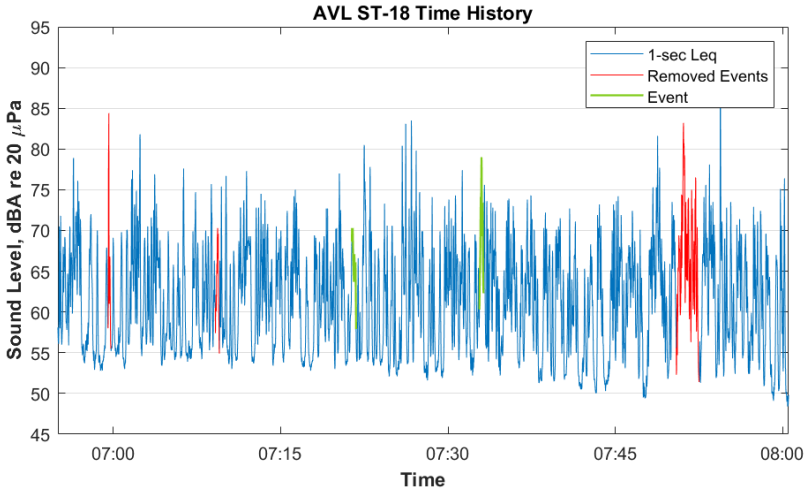

AVL ST-16 Time History
Sound Level, dBA re 20 μPa
95
90
85
80
75
70
65
60
55
50
45
07:40
07:50
08:00
08:10
08:20
08:30
08:40
08:50
Time
1-sec Leq
Removed Events
Event

ST-17

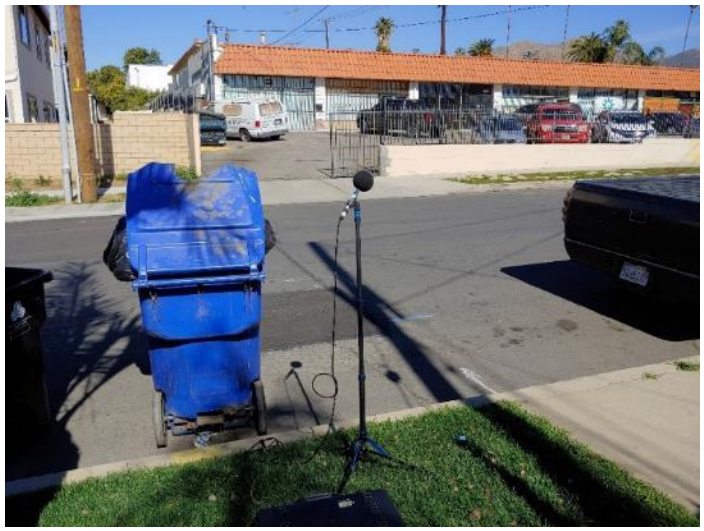

AVL ST-17 Time History
Sound Level, dBA re 20 μPa
100
90
80
70
60
50
40
08:30
08:45
09:00
09:15
09:30
Time
1-sec Leq
Removed Events
Event

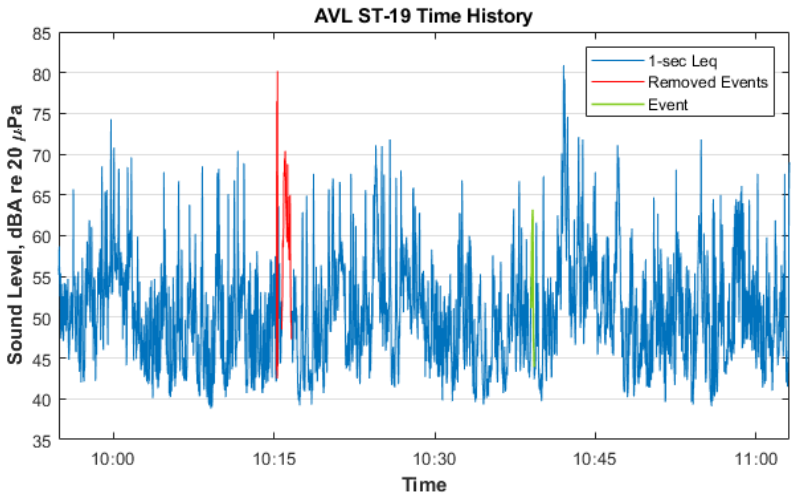
ST-18


Ralston Av

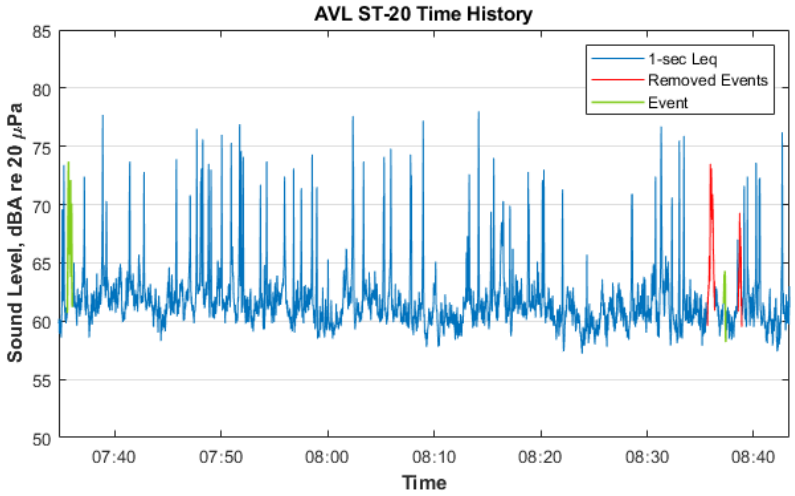

AVL ST-18 Time History
Sound Level, dBA re 20 μPa
95
90
85
80
75
70
65
60
55
50
45
07:00
07:15
07:30
07:45
08:00
Time
1-sec Leq
Removed Events
Event

ST-19

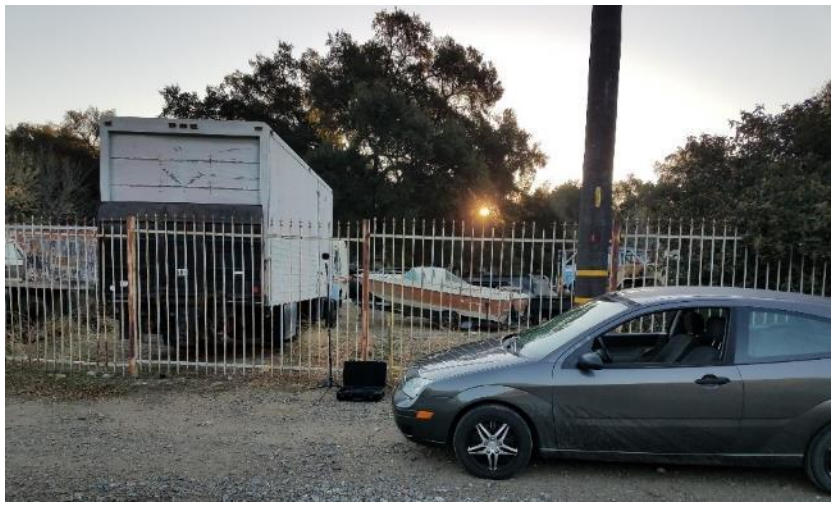


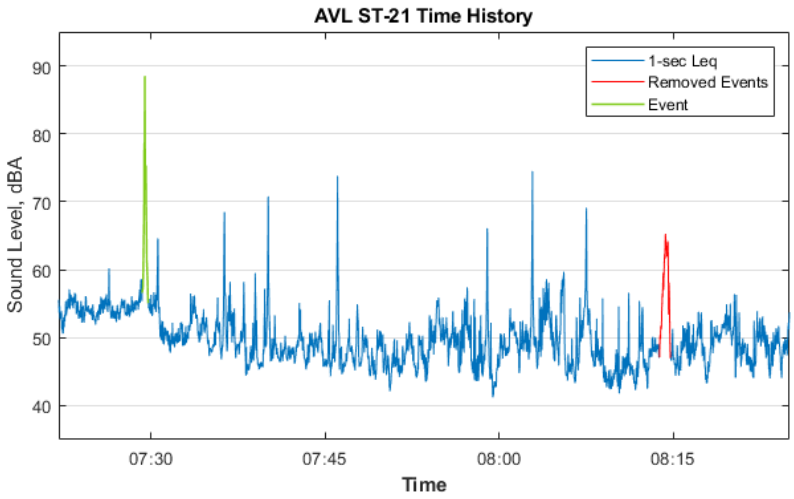

AVL ST-19 Time History
Sound Level, dBA re 20 μPa
Time
1-sec Leq
Removed Events
Event
85
80
75
70
65
60
55
50
45
40
35
10:00
10:15
10:30
10:45
11:00

ST-20

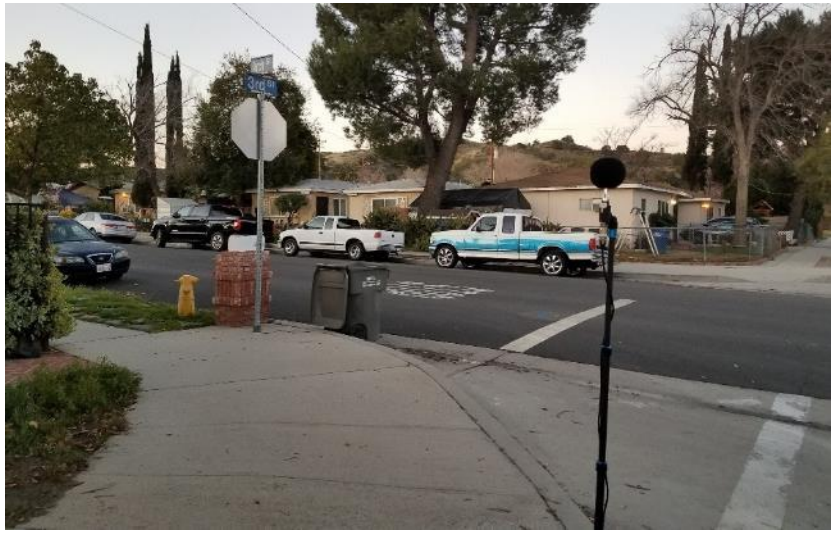

AVL ST-20 Time History
Sound Level, dBA re 20 μPa
Time
1-sec Leq
Removed Events
Event
85
80
75
70
65
60
55
50
07:40
07:50
08:00
08:10
08:20
08:30
08:40

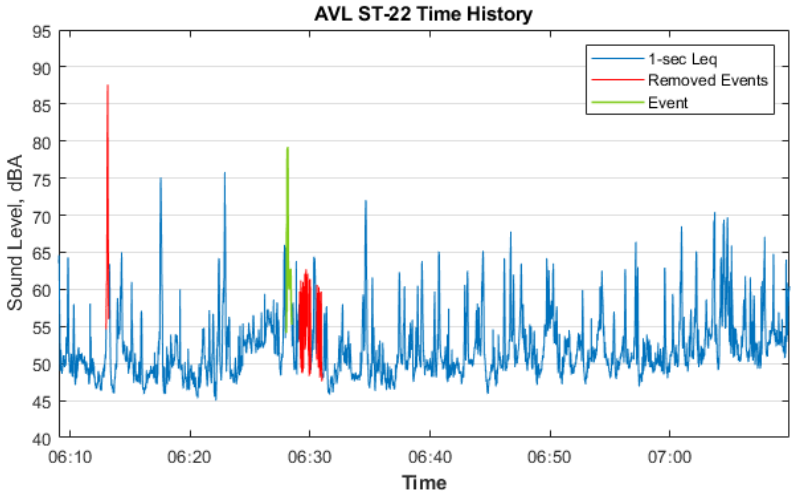
ST-21



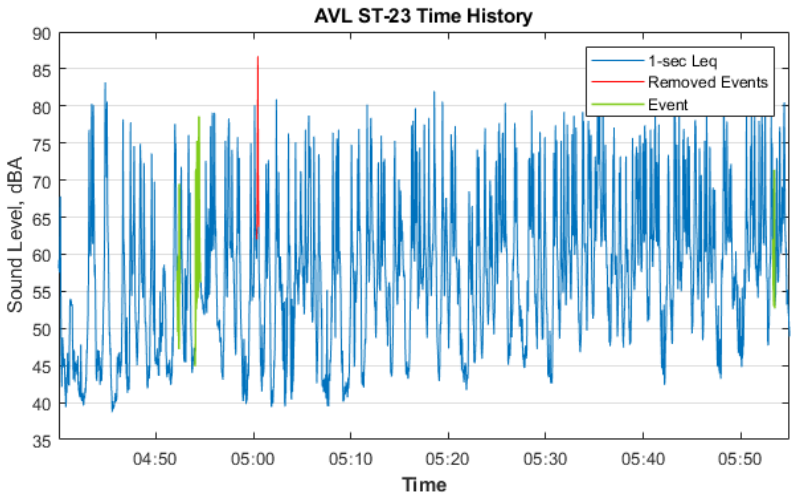

AVL ST-21 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
90
80
70
60
50
40
07:30
07:45
08:00
08:15
Time

ST-22

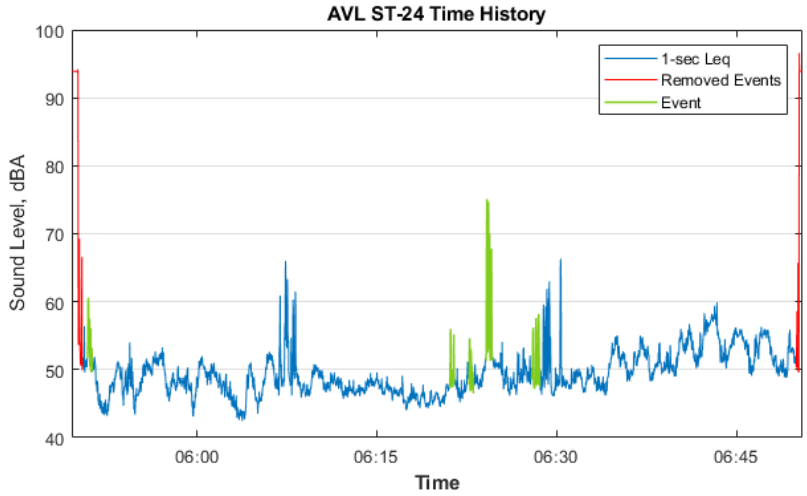



AVL ST-22 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
06:10
06:20
06:30
06:40
06:50
07:00
Time

ST-23

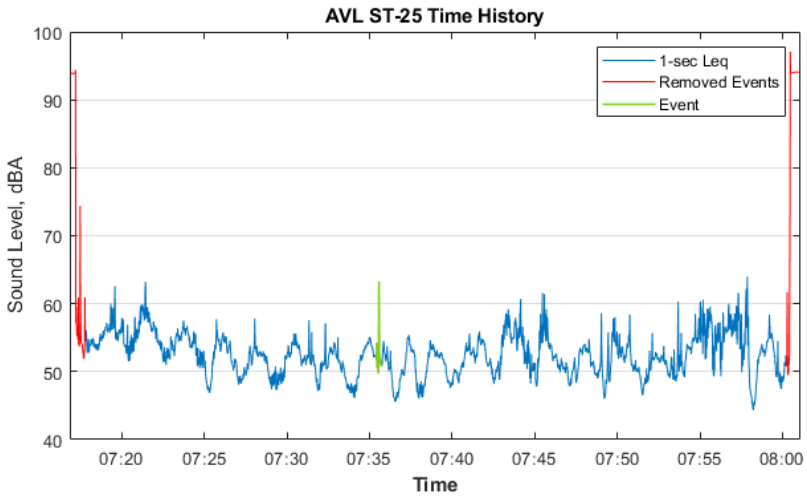


ST-24



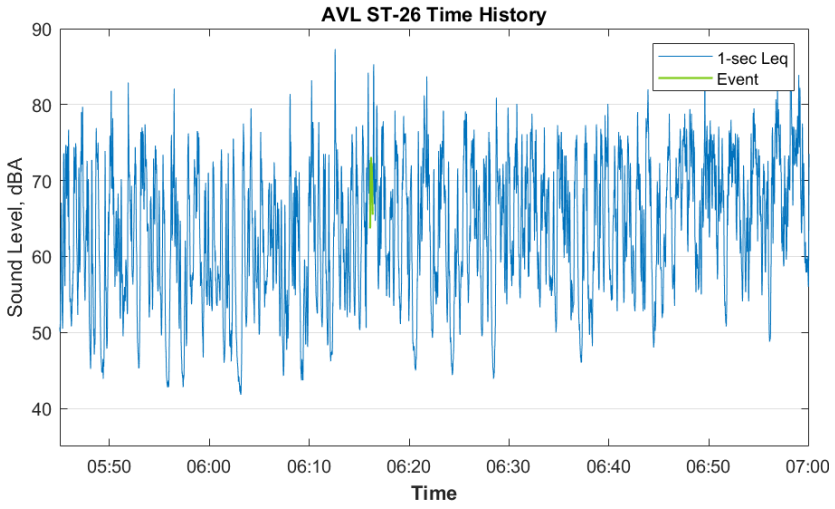
Metro

ST-25

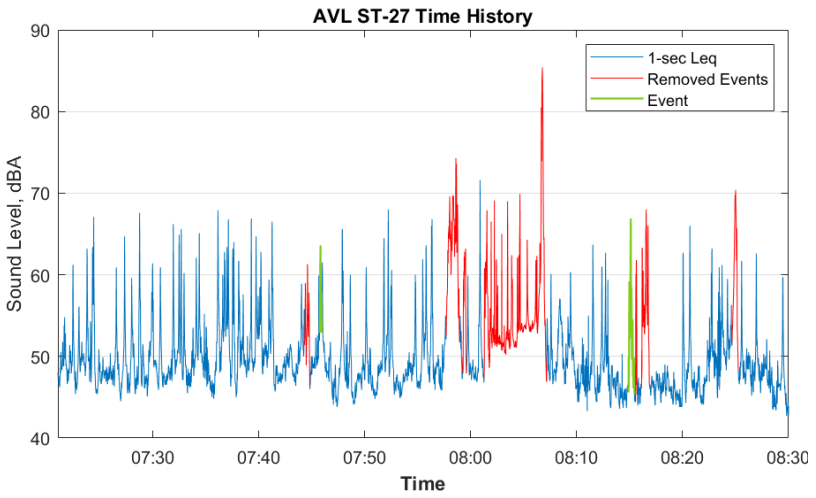

AVL ST-25 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
90
80
70
60
50
40
07:20
07:25
07:30
07:35
07:40
07:45
07:50
07:55
08:00
Time

ST-26

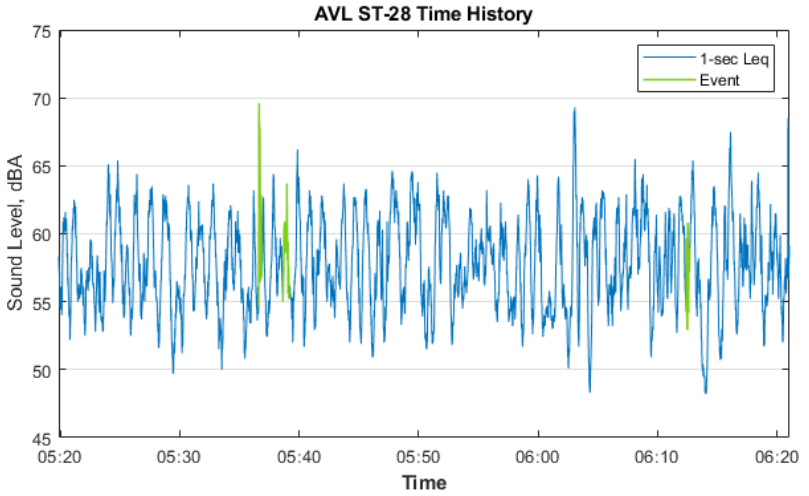

WAIT
FOR


AVL ST-26 Time History
1-sec Leq
Event
Sound Level, dBA
90
80
70
60
50
40
05:50
06:00
06:10
06:20
06:30
06:40
06:50
07:00
Time

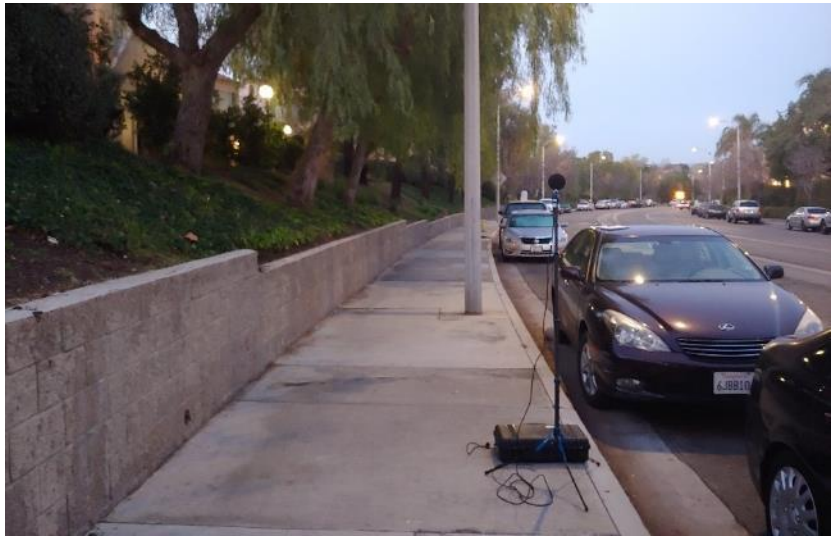
ST-27

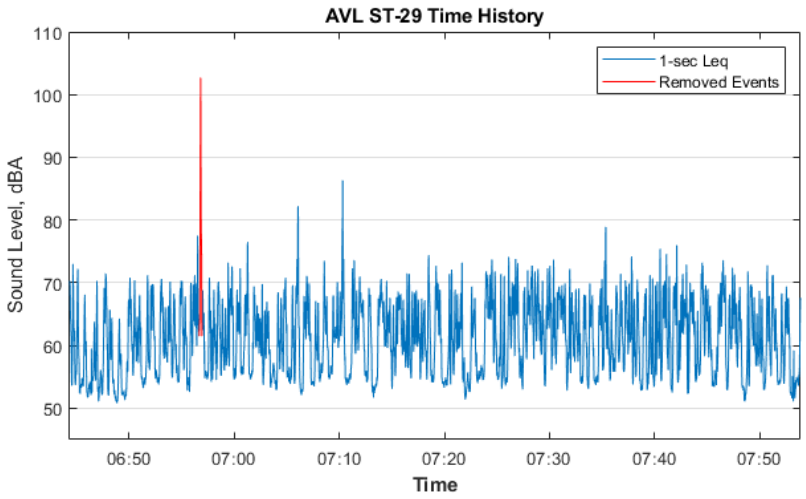

AVL ST-27 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
90
80
70
60
50
40
07:30
07:40
07:50
08:00
08:10
08:20
08:30
Time

ST-28

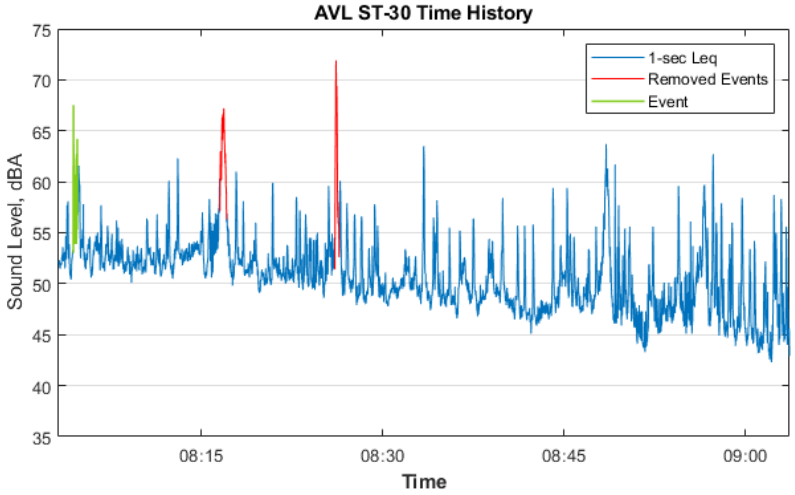

AVL ST-28 Time History
1-sec Leq
Event
Sound Level, dBA
75
70
65
60
55
50
45
05:20
05:30
05:40
05:50
06:00
06:10
06:20
Time

ST-29

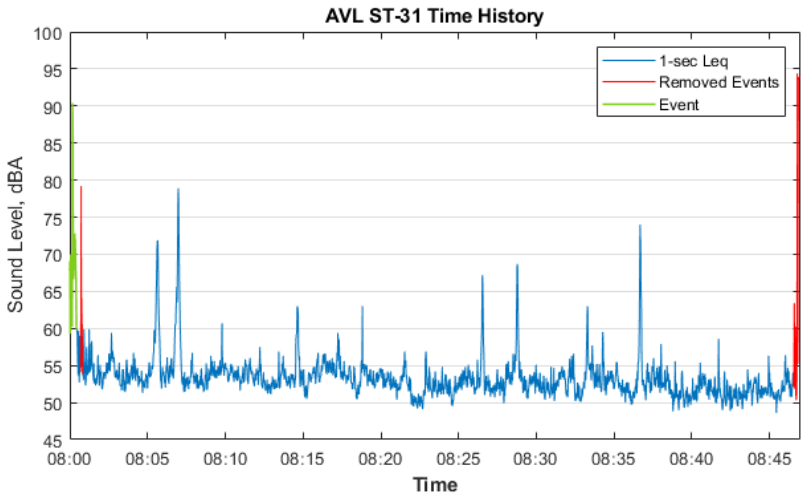



AVL ST-29 Time History
1-sec Leq
Removed Events
Sound Level, dBA
110
100
90
80
70
60
50
06:50
07:00
07:10
07:20
07:30
07:40
07:50
Time

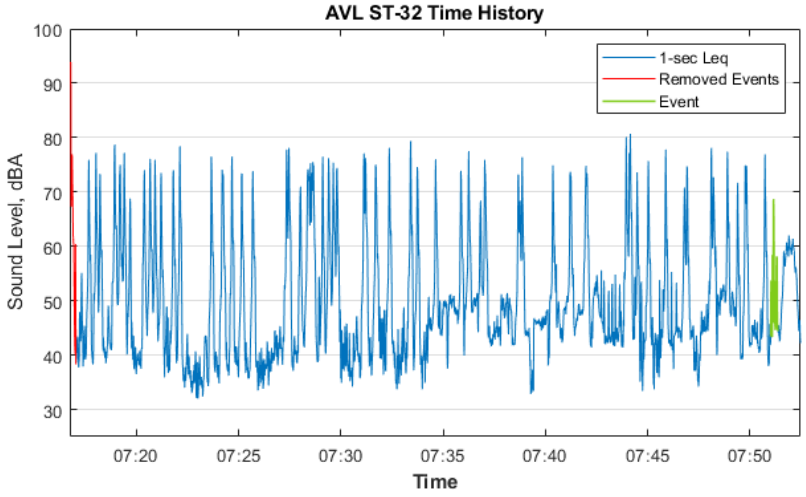
ST-30


AVL ST-30 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
75
70
65
60
55
50
45
40
35
08:15
08:30
08:45
09:00
Time

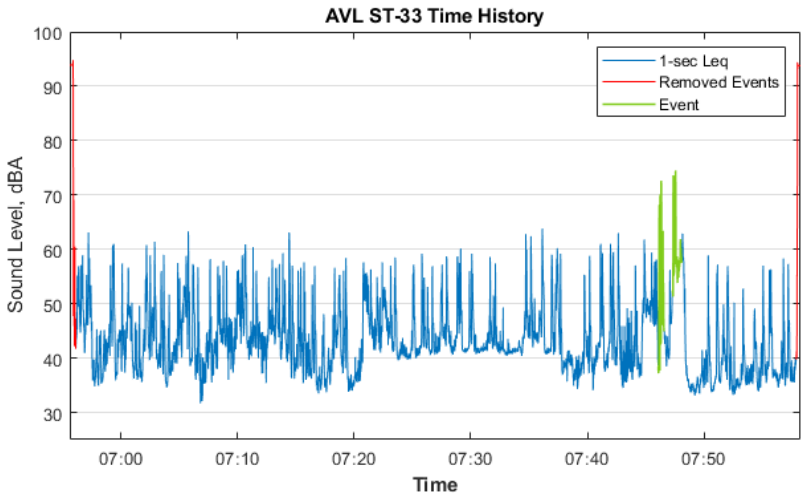
ST-31


AVL ST-31 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
95
90
85
80
75
70
65
60
55
50
45
08:00
08:05
08:10
08:15
08:20
08:25
08:30
08:35
08:40
08:45
Time

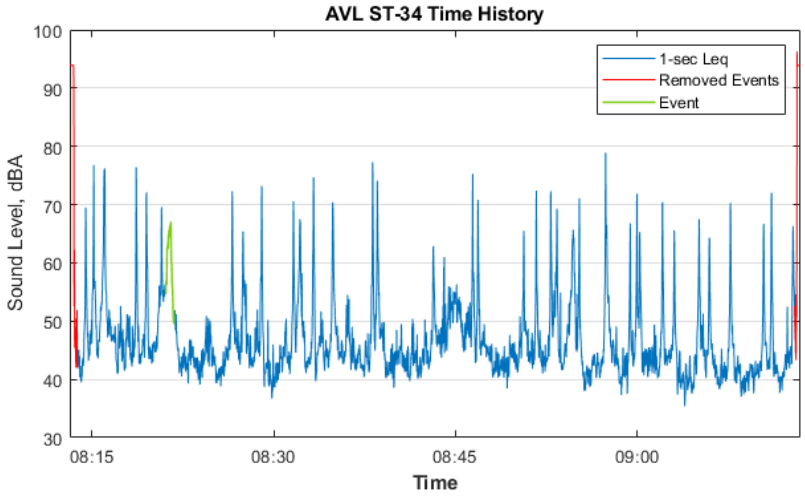
ST-32


AVL ST-32 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
90
80
70
60
50
40
30
07:20
07:25
07:30
07:35
07:40
07:45
07:50
Time

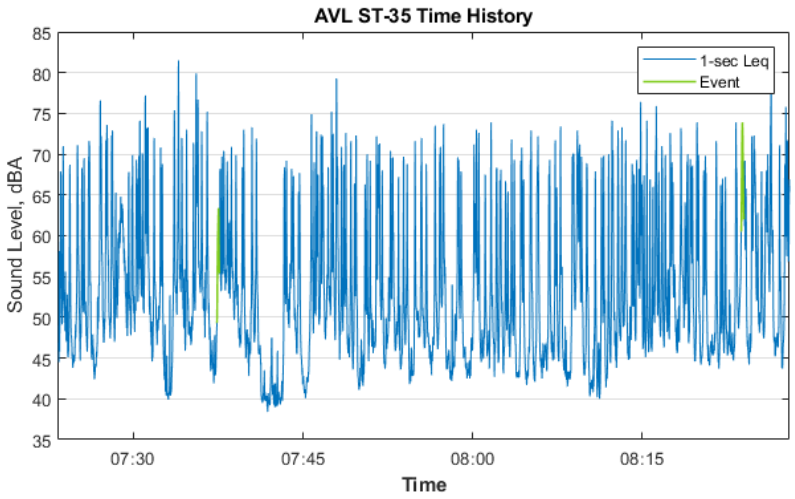
ST-33


AVL ST-33 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
90
80
70
60
50
40
30
07:00
07:10
07:20
07:30
07:40
07:50
Time

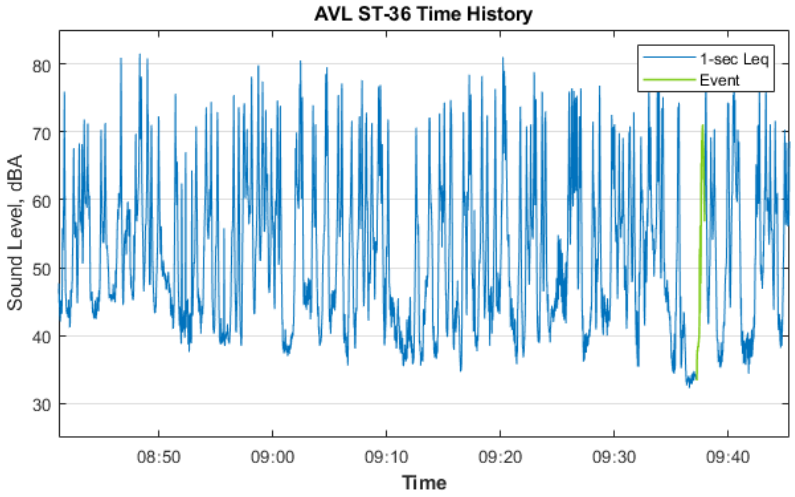
ST-34


AVL ST-34 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
90
80
70
60
50
40
30
08:15
08:30
08:45
09:00
Time

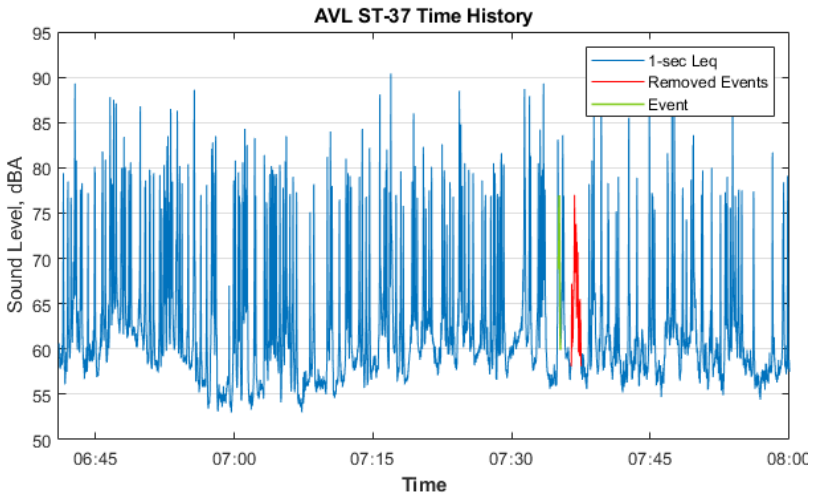
ST-35


AVL ST-35 Time History
1-sec Leq
Event
Sound Level, dBA
85
80
75
70
65
60
55
50
45
40
35
07:30
07:45
08:00
08:15
Time

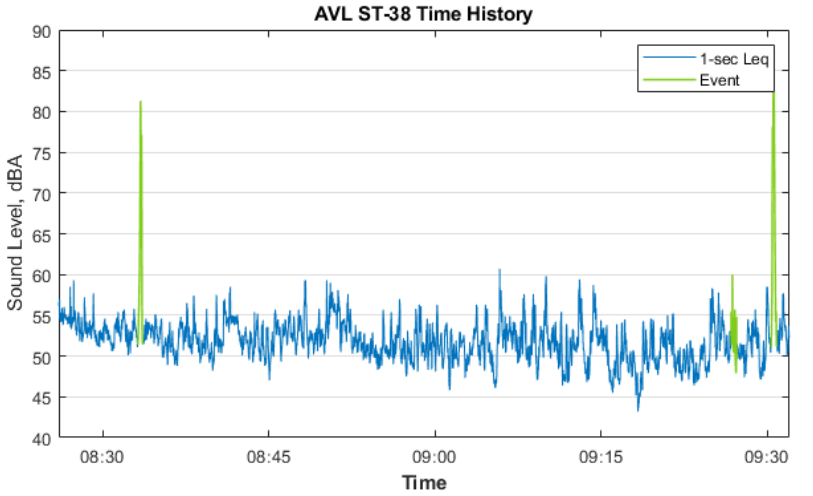
ST-36


AVL ST-36 Time History
1-sec Leq
Event
Sound Level, dBA
80
70
60
50
40
30
08:50
09:00
09:10
09:20
09:30
09:40
Time

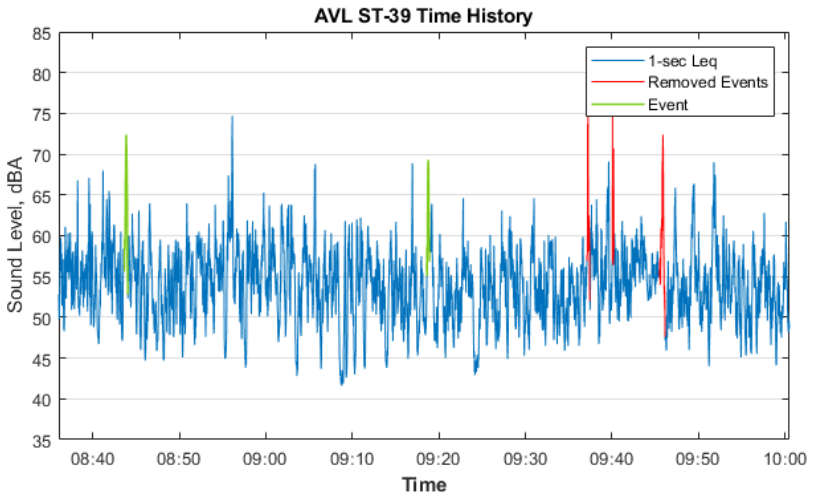
ST-37


AVL ST-37 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
95
90
85
80
75
70
65
60
55
50
06:45
07:00
07:15
07:30
07:45
08:00
Time

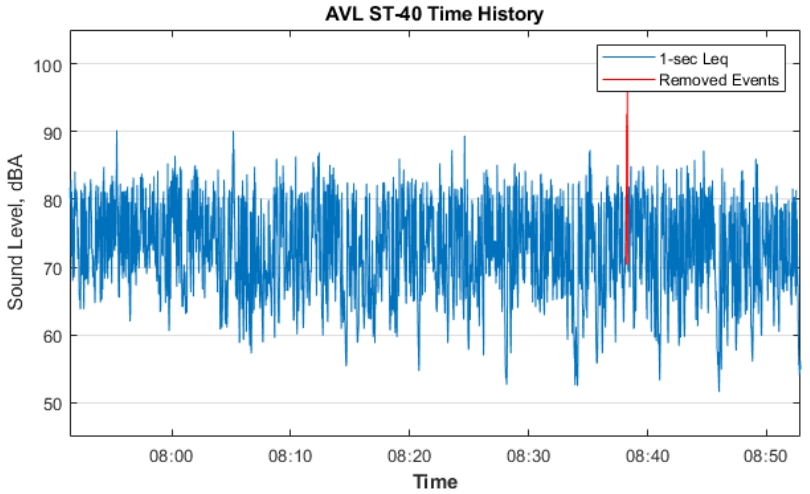
ST-38


AVL ST-38 Time History
1-sec Leq
Event
Sound Level, dBA
90
85
80
75
70
65
60
55
50
45
40
08:30
08:45
09:00
09:15
09:30
Time

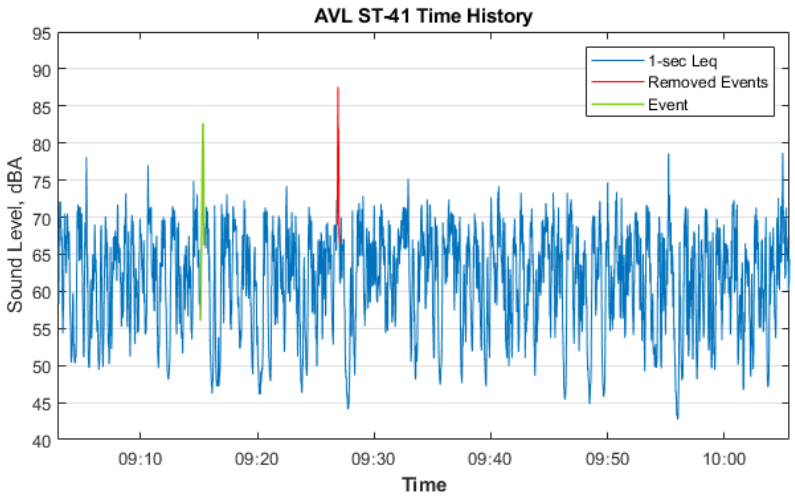
ST-39


AVL ST-39 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
85
80
75
70
65
60
55
50
45
40
35
08:40
08:50
09:00
09:10
09:20
09:30
09:40
09:50
10:00
Time

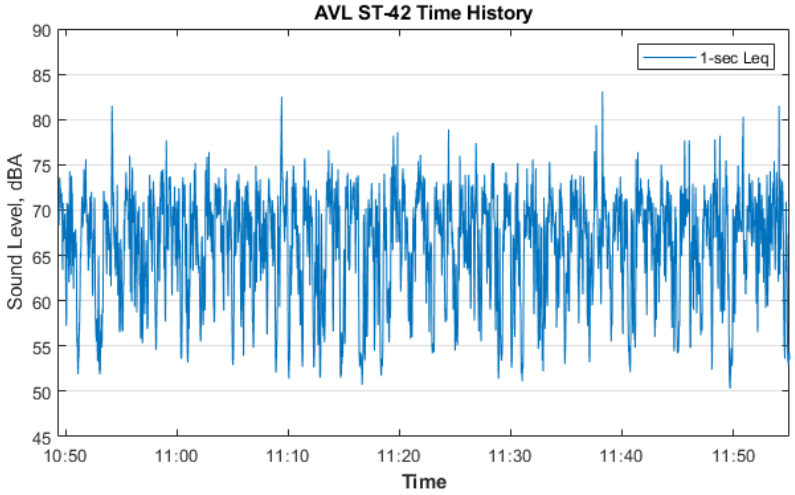
ST-40


AVL ST-40 Time History
1-sec Leq
Removed Events
Sound Level, dBA
100
90
80
70
60
50
08:00
08:10
08:20
08:30
08:40
08:50
Time

ST-41

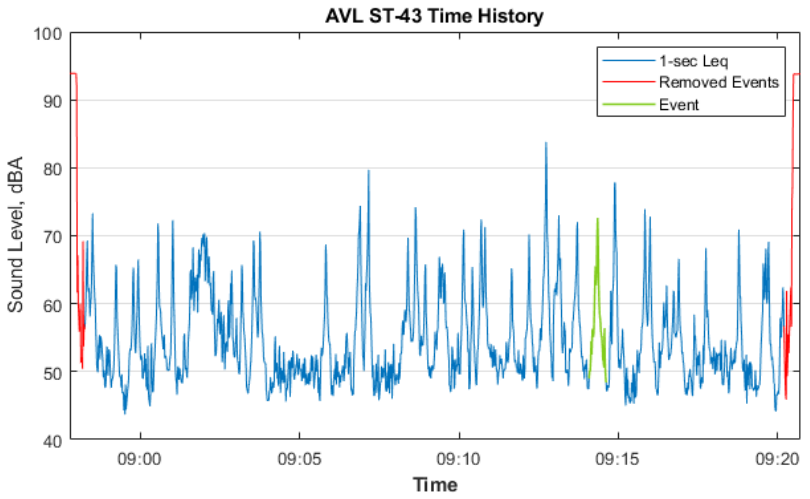


ST-42

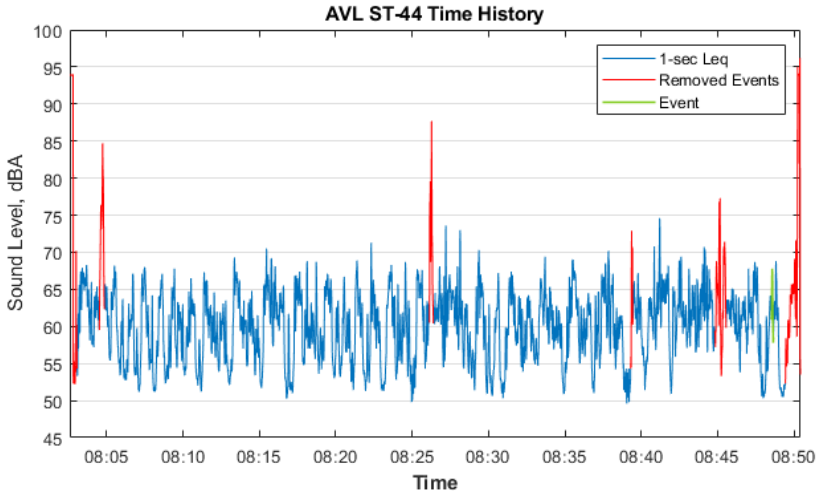


Metro

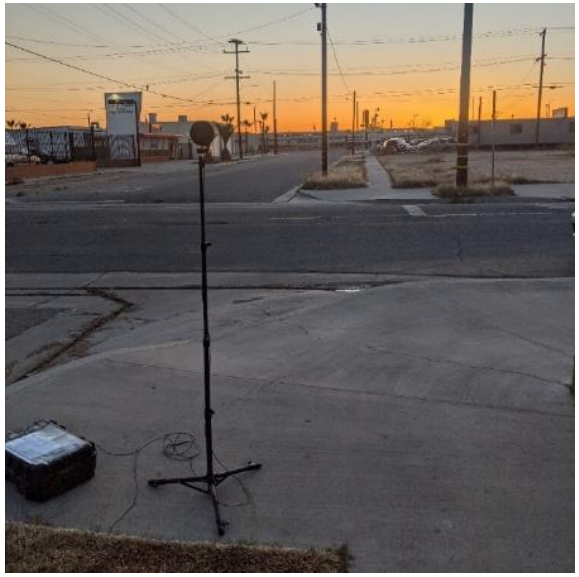
ST-43

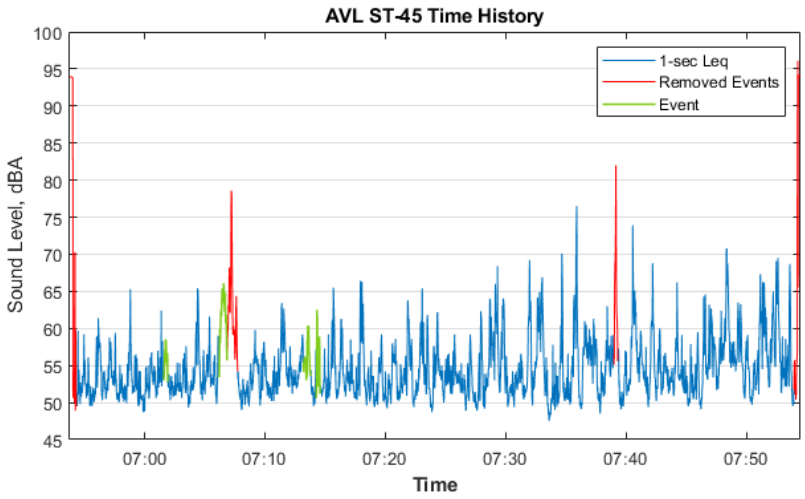

AVL ST-43 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
90
80
70
60
50
40
09:00
09:05
09:10
09:15
09:20
Time

ST-44

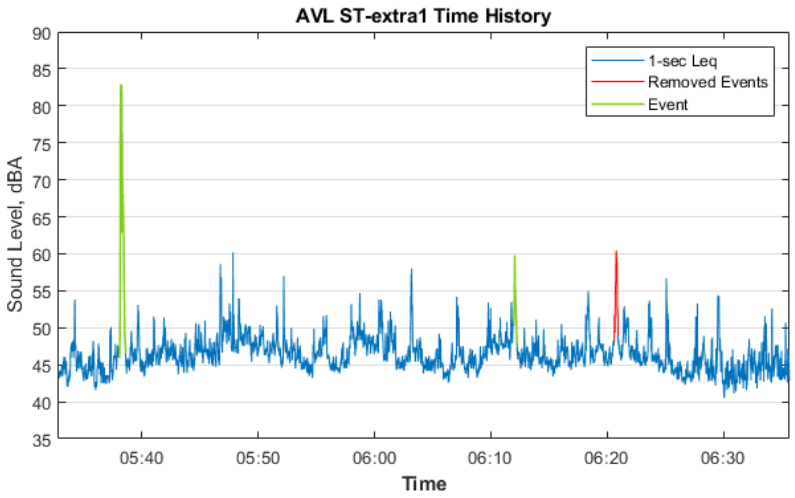

AVL ST-44 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
95
90
85
80
75
70
65
60
55
50
45
08:05
08:10
08:15
08:20
08:25
08:30
08:35
08:40
08:45
08:50
Time

ST-45

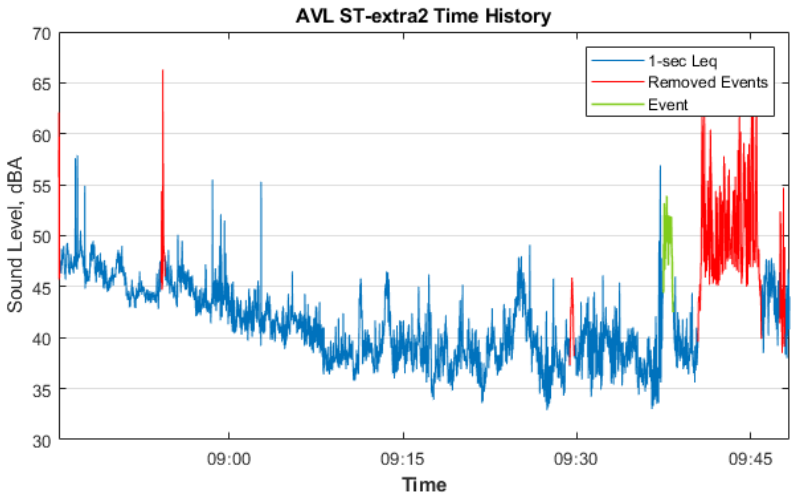



AVL ST-45 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
100
95
90
85
80
75
70
65
60
55
50
45
07:00
07:10
07:20
07:30
07:40
07:50
Time

ST-46


AVL ST-extra1 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
90
85
80
75
70
65
60
55
50
45
40
35
05:40
05:50
06:00
06:10
06:20
06:30
Time

ST-47


AVL ST-extra2 Time History
1-sec Leq
Removed Events
Event
Sound Level, dBA
70
65
60
55
50
45
40
35
30
09:00
09:15
09:30
09:45
Time

Appendix C – Sensitive Receivers and Operational Noise Predictions

For easy reference, the noise and vibration Study Area sections are as follows in **Table 22**:

Number	Study Area Section	Associated City/Jurisdiction
1	LA Union Station to Highway	Los Angeles
2	Highway 2 to Highway 134	Los Angeles - Glendale
3	Highway 134 to I-5	Glendale - Burbank
4	I-5 to 210	Burbank - Sylmar
5	SW mountains: 210 to Capra Rd)	Sylmar - Santa Clarita
6	NE mountains: Capra Rd to Pearblossom Hwy)	Santa Clarita - Palmdale
7	Pearblossom Hwy to Lancaster Station)	Palmdale - Lancaster

All residential sensitive receivers are listed first, followed by institutional, studio, and theater receivers. Groupings of receivers can be seen graphically in Appendix B.

There are no FTA severe threshold exceedances. FTA moderate threshold exceedances are indicated with bold font for the predicted noise increase (4 receivers, exceedance of 0.1 dBA: NB-4-166, NB-5-098, NB-5-100, NB-3-G). Moderate exceedances do not indicate a significant impact under CEQA. For L.A. CEQA thresholds (5 dB or more when existing is < 70 dBA and 3 dBA or more when existing is ≥ 70 dBA) there are no threshold exceedances, so none are indicated.

Table 22: Sensitive Receivers and Predicted Noise Increases

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA)	
							moderate	severe (significant for CEQA)
NB-1-001	2 - residential	450 BAUCHET ST	515	20	63	0.7	1.6	4.1
NB-1-002	2 - residential	429 BAUCHET ST	85	20	71	0.6	1.0	2.8

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
NB-1-003	2 - residential	1771 ALBION ST	729	30	61	1.0	1.9	4.7
NB-1-004	2 - residential	161 N AVENUE 18	402	50	64	0.5	1.5	3.9
NB-1-005	2 - residential	165 N AVENUE 18	404	50	64	0.5	1.5	3.9
NB-1-006	2 - residential	165 N AVENUE 18	404	50	64	0.5	1.5	3.9
NB-1-007	2 - residential	570 W AVENUE 26	729	50	73	0.0	0.6	2.4
NB-1-008	2 - residential	570 W AVENUE 26	691	50	73	0.0	0.6	2.4
NB-1-009	2 - residential	551 W AVENUE 26	722	50	73	0.0	0.6	2.4
NB-1-010	2 - residential	551 W AVENUE 26	682	50	73	0.0	0.6	2.4
NB-1-011	2 - residential	--	538	50	73	0.0	0.6	2.4
NB-1-012	2 - residential	--	509	50	73	0.0	0.6	2.4
NB-1-013	2 - residential	2600 IDELL ST	401	50	73	0.1	0.6	2.4
NB-1-014	2 - residential	2600 IDELL ST	487	50	73	0.0	0.6	2.4
NB-1-015	2 - residential	656 N SAN FERNANDO RD	110	50	77	0.1	0.3	2.0
NB-1-016	2 - residential	716 N SAN FERNANDO RD	201	50	65	0.3	1.4	3.6
NB-1-017	2 - residential	2608 MERCED ST	240	50	65	0.2	1.4	3.6
NB-1-018	2 - residential	2612 MERCED ST	281	50	65	0.1	1.4	3.6
NB-1-019	2 - residential	2616 MERCED ST	321	50	65	0.1	1.4	3.6
NB-1-020	2 - residential	716 N SAN FERNANDO RD	196	50	65	0.3	1.4	3.6
NB-1-021	2 - residential	2608 MERCED ST	229	50	65	0.2	1.4	3.6
NB-1-022	2 - residential	2612 MERCED ST	273	50	65	0.1	1.4	3.6
NB-1-023	2 - residential	2616 MERCED ST	314	50	65	0.1	1.4	3.6
NB-1-024	2 - residential	810 N SAN FERNANDO RD	161	50	65	0.4	1.4	3.6
NB-1-025	2 - residential	2604 CARLETON AVE	204	50	65	0.2	1.4	3.6
NB-1-026	2 - residential	2604 CARLETON AVE	239	50	65	0.1	1.4	3.6
NB-1-027	2 - residential	2612 CARLETON AVE	279	50	65	0.1	1.4	3.6

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
NB-1-028	2 - residential	2616 CARLETON AVE	333	50	65	0.0	1.4	3.6
NB-1-029	2 - residential	2604 CARLETON AVE	232	50	65	0.1	1.4	3.6
NB-1-030	2 - residential	2612 CARLETON AVE	285	50	65	0.1	1.4	3.6
NB-1-031	2 - residential	2616 CARLETON AVE	312	50	65	0.1	1.4	3.6
NB-1-032	2 - residential	--	315	50	65	0.2	1.4	3.6
NB-1-033	2 - residential	--	313	50	65	0.2	1.4	3.6
NB-1-034	2 - residential	2616 MACEO ST	274	50	65	0.2	1.4	3.6
NB-1-035	2 - residential	2616 MACEO ST	316	50	65	0.1	1.4	3.6
NB-1-036	2 - residential	2616 MACEO ST	274	50	65	0.2	1.4	3.6
NB-1-037	2 - residential	2616 MACEO ST	317	50	65	0.1	1.4	3.6
NB-1-038	2 - residential	2611 MACEO ST	258	50	65	0.2	1.4	3.6
NB-1-039	2 - residential	1010 N SAN FERNANDO RD	220	50	65	0.3	1.4	3.6
NB-1-040	2 - residential	2616 LOOSMORE ST	296	50	65	0.1	1.4	3.6
NB-1-041	2 - residential	2620 LOOSMORE ST	331	50	65	0.1	1.4	3.6
NB-1-042	2 - residential	2611 MACEO ST	258	50	65	0.2	1.4	3.6
NB-1-043	2 - residential	2616 LOOSMORE ST	296	50	65	0.1	1.4	3.6
NB-1-044	2 - residential	2620 LOOSMORE ST	340	50	65	0.1	1.4	3.6
NB-1-045	2 - residential	--	241	50	65	0.5	1.4	3.6
NB-1-046	2 - residential	2612 ROSEVIEW AVE	276	50	65	0.2	1.4	3.6
NB-1-047	2 - residential	2620 ROSEVIEW AVE	315	50	65	0.1	1.4	3.6
NB-1-048	2 - residential	1114 N SAN FERNANDO RD	241	50	65	0.2	1.4	3.6
NB-1-049	2 - residential	2612 ROSEVIEW AVE	281	50	65	0.2	1.4	3.6
NB-1-050	2 - residential	2616 ROSEVIEW AVE	319	50	65	0.1	1.4	3.6
NB-1-051	2 - residential	--	293	50	67	0.3	1.2	3.2
NB-1-052	2 - residential	--	91	50	67	0.9	1.2	3.2

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
NB-1-053	2 - residential	1311 N SAN FERNANDO RD	278	50	62	0.5	1.7	4.4
NB-1-054	2 - residential	--	54	50	67	1.1	1.2	3.2
SB-1-001	2 - residential	800 N ALAMEDA ST	94	20	71	0.5	1.0	2.6
SB-1-002	2 - residential	1250 N MAIN ST	109	20	69	0.8	1.1	2.9
SB-1-003	2 - residential	--	664	50	65	0.2	1.4	3.6
SB-1-004	2 - residential	--	718	50	65	0.2	1.4	3.6
SB-1-005	2 - residential	--	738	50	65	0.2	1.4	3.6
SB-1-006	2 - residential	2414 FERNLEAF ST	729	50	64	0.2	1.5	3.9
SB-1-007	2 - residential	2422 FERNLEAF ST	729	50	64	0.2	1.5	3.9
SB-1-008	2 - residential	2422 FERNLEAF ST	717	50	62	0.4	1.7	4.4
SB-1-009	2 - residential	--	681	50	62	0.4	1.7	4.4
SB-1-010	2 - residential	2434 GATEWOOD ST	683	50	62	0.4	1.7	4.4
SB-1-011	2 - residential	--	650	50	62	0.4	1.7	4.4
SB-1-012	2 - residential	2434 GATEWOOD ST	654	50	62	0.4	1.7	4.4
SB-1-013	2 - residential	--	631	50	62	0.4	1.7	4.4
SB-1-014	2 - residential	2444 HARWOOD ST	654	50	62	0.4	1.7	4.4
SB-1-015	2 - residential	2444 HARWOOD ST	632	50	62	0.4	1.7	4.4
SB-1-016	2 - residential	2452 SHOREDALE AVE	623	50	61	0.5	1.9	4.7
SB-1-017	2 - residential	2452 SHOREDALE AVE	601	50	61	0.5	1.9	4.7
SB-1-018	2 - residential	2452 MEADOWVALE AVE	564	50	61	0.6	1.9	4.7
SB-1-019	2 - residential	2452 MEADOWVALE AVE	556	50	61	0.6	1.9	4.7
SB-1-020	2 - residential	2444 RIVERDALE AVE	512	50	61	0.6	1.9	4.7
SB-1-021	2 - residential	--	512	50	61	0.6	1.9	4.7
SB-1-022	2 - residential	2428 GLOVER PL	544	50	61	0.6	1.9	4.7
SB-1-023	2 - residential	2428 GLOVER PL	498	50	61	0.6	1.9	4.7

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
SB-1-024	2 - residential	2910 KNOX AVE	713	60	59	0.7	2.2	5.4
SB-1-025	2 - residential	3051 N COOLIDGE AVE	537	60	61	0.7	2.0	5.0
SB-1-026	2 - residential	2993 ALLESANDRO ST	487	60	61	0.7	2.0	5.0
NB-2-001	2 - residential	--	77	60	69	0.6	1.1	2.9
NB-2-002	2 - residential	--	65	60	70	0.7	1.1	2.9
NB-2-003	2 - residential	--	57	60	70	0.9	1.0	2.8
NB-2-004	2 - residential	--	87	60	69	0.8	1.2	3.1
NB-2-005	2 - residential	--	80	60	69	0.9	1.2	3.1
NB-2-006	2 - residential	--	48	60	71	0.8	1.0	2.6
NB-2-007	2 - residential	--	49	60	71	0.7	1.0	2.6
NB-2-008	2 - residential	--	77	60	69	0.6	1.1	2.9
NB-2-009	2 - residential	--	56	60	70	0.6	1.0	2.8
NB-2-010	2 - residential	--	61	60	70	0.6	1.0	2.8
NB-2-011	2 - residential	1843 GARDENA AVE	106	60	68	0.6	1.2	3.2
NB-2-012	2 - residential	1839 GARDENA AVE	53	60	71	0.6	1.0	2.8
NB-2-013	2 - residential	1835 GARDENA AVE	48	60	71	0.6	1.0	2.6
NB-2-014	2 - residential	1831 GARDENA AVE	48	60	71	0.6	1.0	2.6
NB-2-015	2 - residential	1827 GARDENA AVE	64	60	70	0.6	1.1	2.9
NB-2-016	2 - residential	1823 GARDENA AVE	110	60	68	0.6	1.2	3.2
NB-2-017	2 - residential	1821 GARDENA AVE	136	60	67	0.6	1.3	3.4
NB-2-018	2 - residential	1817 GARDENA AVE	49	60	71	0.6	1.0	2.6
NB-2-019	2 - residential	1910 S BRAND BLVD	49	60	71	0.6	1.0	2.6
NB-2-020	2 - residential	1932 GARDENA AVE	306	60	59	0.8	2.2	5.4
NB-2-021	2 - residential	1928 GARDENA AVE	308	60	59	0.8	2.2	5.4
NB-2-022	2 - residential	1924 GARDENA AVE	295	60	59	0.9	2.2	5.4

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
NB-2-023	2 - residential	1920 GARDENA AVE	311	60	59	0.8	2.2	5.4
NB-2-024	2 - residential	1908 GARDENA AVE	301	60	59	0.8	2.2	5.4
NB-2-025	2 - residential	1904 GARDENA AVE	308	60	59	0.8	2.2	5.4
NB-2-026	2 - residential	1900 GARDENA AVE	320	60	59	0.8	2.2	5.4
NB-2-027	2 - residential	1900 GARDENA AVE	322	60	59	0.8	2.2	5.4
NB-2-028	2 - residential	1836 GARDENA AVE	327	60	59	0.8	2.2	5.4
NB-2-029	2 - residential	1832 GARDENA AVE	329	60	59	0.8	2.2	5.4
NB-2-030	2 - residential	1830 GARDENA AVE A	331	60	59	0.8	2.2	5.4
NB-2-031	2 - residential	1826 GARDENA AVE	330	60	59	0.8	2.2	5.4
NB-2-032	2 - residential	1820 GARDENA AVE	336	60	59	0.8	2.2	5.4
NB-2-033	2 - residential	1818 GARDENA AVE	338	60	59	0.8	2.2	5.4
NB-2-034	2 - residential	1814 GARDENA AVE	339	60	59	0.8	2.2	5.4
NB-2-035	2 - residential	1814 GARDENA AVE	334	60	59	0.8	2.2	5.4
NB-2-036	2 - residential	1910 S BRAND BLVD	285	60	59	0.9	2.2	5.4
NB-2-037	2 - residential	1760 GARDENA AVE	373	60	59	0.7	2.4	5.8
NB-2-038	2 - residential	1616 GARDENA AVE	362	79	59	1.5	2.2	5.4
NB-2-039	2 - residential	1642 S CENTRAL AVE	376	79	59	1.5	2.2	5.4
NB-2-040	2 - residential	1642 S CENTRAL AVE	342	79	59	1.6	2.2	5.4
NB-2-041	2 - residential	--	44	79	72	0.7	1.0	2.6
NB-2-042	2 - residential	615 W HARVARD ST	728	79	64	0.5	1.5	3.9
NB-2-043	2 - residential	650 HAWTHORNE ST	628	79	64	0.5	1.5	3.9
NB-2-044	2 - residential	--	674	79	64	0.5	1.5	3.9
NB-2-045	2 - residential	632 HAWTHORNE ST	756	79	64	0.4	1.5	3.9
NB-2-046	2 - residential	756 W CALIFORNIA AVE	394	79	64	0.3	1.5	3.9
NB-2-047	2 - residential	5426 SAN FERNANDO RD	350	79	64	0.4	1.5	3.9

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
SB-2-001	2 - residential	3029 LA CLEDE AVE	222	60	65	0.6	1.5	3.9
SB-2-002	2 - residential	3037 LA CLEDE AVE UNIT 1	237	60	65	0.6	1.5	3.9
SB-2-003	2 - residential	3037 LA CLEDE AVE UNIT 1	244	60	65	0.6	1.5	3.9
SB-2-004	2 - residential	3045 LA CLEDE AVE	257	60	65	0.5	1.5	3.9
SB-2-005	2 - residential	2830 FLETCHER DR	247	60	65	0.3	1.5	3.9
SB-2-006	2 - residential	2830 FLETCHER DR	266	60	65	0.3	1.5	3.9
SB-2-007	2 - residential	2830 FLETCHER DR	257	60	65	0.3	1.5	3.9
SB-2-008	2 - residential	3023 LA CLEDE AVE	334	60	65	0.4	1.5	3.9
SB-2-009	2 - residential	3029 LA CLEDE AVE	329	60	65	0.2	1.5	3.9
SB-2-010	2 - residential	3033 LA CLEDE AVE	332	60	65	0.2	1.5	3.9
SB-2-011	2 - residential	3037 LA CLEDE AVE UNIT 1	351	60	65	0.2	1.5	3.9
SB-2-012	2 - residential	3037 LA CLEDE AVE UNIT 1	347	60	65	0.2	1.5	3.9
SB-2-013	2 - residential	2830 FLETCHER DR	359	60	65	0.1	1.5	3.9
SB-2-014	2 - residential	3112 CASITAS AVE	251	60	61	0.7	2.0	5.0
SB-2-015	2 - residential	3116 CASITAS AVE	246	60	61	0.7	2.0	5.0
SB-2-016	2 - residential	3120 CASITAS AVE	247	60	61	0.7	2.0	5.0
SB-2-017	2 - residential	3124 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-018	2 - residential	3126 CASITAS AVE	247	60	61	0.7	2.0	5.0
SB-2-019	2 - residential	3132 CASITAS AVE	253	60	61	0.7	2.0	5.0
SB-2-020	2 - residential	3136 CASITAS AVE	246	60	61	0.7	2.0	5.0
SB-2-021	2 - residential	3140 CASITAS AVE	246	60	61	0.7	2.0	5.0
SB-2-022	2 - residential	3144 CASITAS AVE	247	60	61	0.7	2.0	5.0
SB-2-023	2 - residential	3148 CASITAS AVE	247	60	61	0.7	2.0	5.0

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
SB-2-024	2 - residential	3152 CASITAS AVE	248	60	61	0.7	2.0	5.0
SB-2-025	2 - residential	3154 CASITAS AVE	257	60	61	0.7	2.0	5.0
SB-2-026	2 - residential	3160 CASITAS AVE	247	60	61	0.7	2.0	5.0
SB-2-027	2 - residential	3164 CASITAS AVE	247	60	61	0.7	2.0	5.0
SB-2-028	2 - residential	3168 CASITAS AVE	247	60	61	0.7	2.0	5.0
SB-2-029	2 - residential	3172 CASITAS AVE	247	60	61	0.7	2.0	5.0
SB-2-030	2 - residential	3174 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-031	2 - residential	3180 CASITAS AVE	253	60	61	0.7	2.0	5.0
SB-2-032	2 - residential	3184 CASITAS AVE	252	60	61	0.7	2.0	5.0
SB-2-033	2 - residential	3190 CASITAS AVE	246	60	61	0.7	2.0	5.0
SB-2-034	2 - residential	3190 CASITAS AVE	246	60	61	0.7	2.0	5.0
SB-2-035	2 - residential	3204 CASITAS AVE	248	60	61	0.7	2.0	5.0
SB-2-036	2 - residential	3208 CASITAS AVE	249	60	61	0.7	2.0	5.0
SB-2-037	2 - residential	3212 CASITAS AVE	286	60	61	0.6	2.0	5.0
SB-2-038	2 - residential	3216 CASITAS AVE	251	60	61	0.7	2.0	5.0
SB-2-039	2 - residential	3220 CASITAS AVE	249	60	61	0.7	2.0	5.0
SB-2-040	2 - residential	3224 CASITAS AVE	251	60	61	0.7	2.0	5.0
SB-2-041	2 - residential	3228 CASITAS AVE	256	60	61	0.7	2.0	5.0
SB-2-042	2 - residential	3234 W CASITAS AVE	256	60	61	0.7	2.0	5.0
SB-2-043	2 - residential	3238 W KAZAZ LANE	242	60	61	0.7	2.0	5.0
SB-2-044	2 - residential	3240 W KAZAZ LANE	242	60	61	0.7	2.0	5.0
SB-2-045	2 - residential	3242 W KAZAZ LANE	242	60	61	0.7	2.0	5.0
SB-2-046	2 - residential	3244 W KAZAZ LANE	242	60	61	0.7	2.0	5.0
SB-2-047	2 - residential	3248 W KAZAZ LANE	241	60	61	0.7	2.0	5.0
SB-2-048	2 - residential	3252 W KAZAZ LANE	241	60	61	0.7	2.0	5.0

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
SB-2-049	2 - residential	3256 W KAZAZ LANE	241	60	61	0.7	2.0	5.0
SB-2-050	2 - residential	3260 W KAZAZ LANE	241	60	61	0.7	2.0	5.0
SB-2-051	2 - residential	--	241	60	61	0.7	2.0	5.0
SB-2-052	2 - residential	--	241	60	61	0.7	2.0	5.0
SB-2-053	2 - residential	--	241	60	61	0.7	2.0	5.0
SB-2-054	2 - residential	--	241	60	61	0.7	2.0	5.0
SB-2-055	2 - residential	3278 CASITAS AVE	241	60	61	0.7	2.0	5.0
SB-2-056	2 - residential	3284 CASITAS AVE	259	60	61	0.7	2.0	5.0
SB-2-057	2 - residential	3284 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-058	2 - residential	3238 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-059	2 - residential	3240 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-060	2 - residential	3242 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-061	2 - residential	3244 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-062	2 - residential	3248 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-063	2 - residential	3252 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-064	2 - residential	3256 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-065	2 - residential	3260 W KAZAZ LANE	316	60	61	0.4	2.0	5.0
SB-2-066	2 - residential	--	316	60	61	0.4	2.0	5.0
SB-2-067	2 - residential	--	315	60	61	0.4	2.0	5.0
SB-2-068	2 - residential	--	315	60	61	0.4	2.0	5.0
SB-2-069	2 - residential	--	315	60	61	0.4	2.0	5.0
SB-2-070	2 - residential	--	315	60	61	0.4	2.0	5.0
SB-2-071	2 - residential	3278 CASITAS AVE	315	60	61	0.4	2.0	5.0
SB-2-072	2 - residential	3302 CASITAS AVE APT # 02	290	60	61	0.6	2.0	5.0
SB-2-073	2 - residential	3304 CASITAS AVE	257	60	61	0.7	2.0	5.0

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SB-2-074	2 - residential	3310 CASITAS AVE	254	60	61	0.7	2.0	5.0
SB-2-075	2 - residential	3314 CASITAS AVE	251	60	61	0.7	2.0	5.0
SB-2-076	2 - residential	3318 CASITAS AVE	257	60	61	0.7	2.0	5.0
SB-2-077	2 - residential	3322 CASITAS AVE	245	60	61	0.7	2.0	5.0
SB-2-078	2 - residential	3324 CASITAS AVE	255	60	61	0.7	2.0	5.0
SB-2-079	2 - residential	3330 CASITAS AVE	255	60	61	0.7	2.0	5.0
SB-2-080	2 - residential	3334 CASITAS AVE	257	60	61	0.7	2.0	5.0
SB-2-081	2 - residential	3338 CASITAS AVE	254	60	61	0.7	2.0	5.0
SB-2-082	2 - residential	3340 CASITAS AVE	254	60	61	0.7	2.0	5.0
SB-2-083	2 - residential	3346 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-084	2 - residential	3350 CASITAS AVE	262	60	61	0.7	2.0	5.0
SB-2-085	2 - residential	3354 CASITAS AVE	257	60	61	0.7	2.0	5.0
SB-2-086	2 - residential	3358 CASITAS AVE	301	60	61	0.6	2.0	5.0
SB-2-087	2 - residential	3362 CASITAS AVE	257	60	61	0.7	2.0	5.0
SB-2-088	2 - residential	3366 CASITAS AVE	257	60	61	0.7	2.0	5.0
SB-2-089	2 - residential	3370 CASITAS AVE	259	60	61	0.7	2.0	5.0
SB-2-090	2 - residential	3374 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-091	2 - residential	3380 CASITAS AVE	255	60	61	0.7	2.0	5.0
SB-2-092	2 - residential	3380 CASITAS AVE	256	60	61	0.7	2.0	5.0
SB-2-093	2 - residential	3406 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-094	2 - residential	3406 CASITAS AVE	313	60	61	0.4	2.0	5.0
SB-2-095	2 - residential	3410 CASITAS AVE	250	60	61	0.7	2.0	5.0
SB-2-096	2 - residential	3418 CASITAS AVE	261	60	61	0.7	2.0	5.0
SB-2-097	2 - residential	3422 CASITAS AVE	256	60	61	0.7	2.0	5.0
SB-2-098	2 - residential	3426 CASITAS AVE	255	60	61	0.7	2.0	5.0

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SB-2-099	2 - residential	3432 CASITAS AVE	257	60	61	1.3	2.0	5.0
SB-2-100	2 - residential	3438 CASITAS AVE	256	60	61	1.3	2.0	5.0
SB-2-101	2 - residential	3444 CASITAS AVE	256	60	61	1.3	2.0	5.0
SB-2-102	2 - residential	3448 CASITAS AVE	256	60	61	1.3	2.0	5.0
SB-2-103	2 - residential	3452 CASITAS AVE	259	60	61	1.2	2.0	5.0
SB-2-104	2 - residential	3460 CASITAS AVE	260	60	61	1.2	2.0	5.0
SB-2-105	2 - residential	3464 CASITAS AVE	259	60	61	0.7	2.0	5.0
SB-2-106	2 - residential	3502 CASITAS AVE	257	60	61	0.7	2.0	5.0
SB-2-107	2 - residential	3506 CASITAS AVE	256	60	61	0.7	2.0	5.0
SB-2-108	2 - residential	3512 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-109	2 - residential	3518 CASITAS AVE	249	60	61	0.7	2.0	5.0
SB-2-110	2 - residential	3522 CASITAS AVE	258	60	61	0.7	2.0	5.0
SB-2-111	2 - residential	3528 CASITAS AVE	259	60	61	0.7	2.0	5.0
SB-2-112	2 - residential	3534 CASITAS AVE	262	60	61	0.7	2.0	5.0
SB-2-113	2 - residential	3534 CASITAS AVE	265	60	61	0.7	2.0	5.0
SB-2-114	2 - residential	3519 CASITAS AVE	39	60	72	0.6	0.8	2.5
SB-2-115	2 - residential	3450 SENECA CT	196	60	61	0.7	1.9	4.7
SB-2-116	2 - residential	3450 SENECA CT	208	60	61	0.7	1.9	4.7
SB-2-117	2 - residential	3450 SENECA CT	212	60	61	0.7	1.9	4.7
SB-2-118	2 - residential	3641 SENECA AVE	241	60	61	0.6	1.9	4.7
SB-2-119	2 - residential	3703 SENECA AVE	187	60	61	0.8	1.9	4.7
SB-2-120	2 - residential	3707 SENECA AVE	187	60	61	0.8	1.9	4.7
SB-2-121	2 - residential	3713 SENECA AVE	209	60	61	0.7	1.9	4.7
SB-2-122	2 - residential	3721 W SENECA AVE	185	60	61	0.8	1.9	4.7
SB-2-123	2 - residential	3723 SENECA AVE	184	60	61	0.8	1.9	4.7

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SB-2-124	2 - residential	3729 SENECA AVE	183	60	61	0.8	1.9	4.7
SB-2-125	2 - residential	3733 SENECA AVE	187	60	61	0.8	1.9	4.7
SB-2-126	2 - residential	3737 SENECA AVE	181	60	61	0.8	1.9	4.7
SB-2-127	2 - residential	3745 SENECA AVE	182	60	61	0.8	1.9	4.7
SB-2-128	2 - residential	3749 SENECA AVE	179	60	61	0.8	1.9	4.7
SB-2-129	2 - residential	3803 SENECA AVE	178	60	61	0.8	1.9	4.7
SB-2-130	2 - residential	3807 SENECA AVE	181	60	61	0.8	1.9	4.7
SB-2-131	2 - residential	3811 SENECA AVE	177	60	61	0.8	1.9	4.7
SB-2-132	2 - residential	3817 SENECA AVE	177	60	61	0.8	1.9	4.7
SB-2-133	2 - residential	2856 LOS FELIZ PL	177	60	61	0.8	1.9	4.7
SB-2-134	2 - residential	2856 LOS FELIZ PL	176	79	61	1.0	1.9	4.7
SB-2-135	2 - residential	2856 LOS FELIZ PL	176	79	61	0.9	1.9	4.7
SB-2-136	2 - residential	2856 LOS FELIZ PL	175	79	61	1.0	1.9	4.7
SB-2-137	2 - residential	2856 LOS FELIZ PL	182	79	61	0.9	1.9	4.7
SB-2-138	2 - residential	2856 LOS FELIZ PL	175	79	61	1.0	1.9	4.7
SB-2-139	2 - residential	2856 LOS FELIZ PL	176	79	61	1.0	1.9	4.7
SB-2-140	2 - residential	2856 LOS FELIZ PL	176	79	61	1.0	1.9	4.7
SB-2-141	2 - residential	2856 LOS FELIZ PL	175	79	61	1.0	1.9	4.7
SB-2-142	2 - residential	2856 LOS FELIZ PL	175	79	61	1.0	1.9	4.7
SB-2-143	2 - residential	2856 LOS FELIZ PL	177	79	61	0.9	1.9	4.7
SB-2-144	2 - residential	3867 SENECA AVE	177	79	61	0.9	1.9	4.7
SB-2-145	2 - residential	3871 SENECA AVE	176	79	61	1.0	1.9	4.7
SB-2-146	2 - residential	3877 SENECA AVE	175	79	61	1.0	1.9	4.7
SB-2-147	2 - residential	3903 SENECA AVE	175	79	61	1.0	1.9	4.7
SB-2-148	2 - residential	3907 SENECA AVE	176	79	61	0.9	1.9	4.7

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SB-2-149	2 - residential	3913 SENECA AVE	177	79	61	0.9	1.9	4.7
SB-2-150	2 - residential	3917 SENECA AVE	176	79	61	1.0	1.9	4.7
SB-2-151	2 - residential	3921 SENECA AVE	175	79	61	1.0	1.9	4.7
SB-2-152	2 - residential	3925 SENECA AVE	175	79	61	1.0	1.9	4.7
SB-2-153	2 - residential	3929 SENECA AVE	178	79	61	0.9	1.9	4.7
SB-2-154	2 - residential	3933 SENECA AVE	176	79	61	1.0	1.9	4.7
SB-2-155	2 - residential	3935 SENECA AVE	176	79	61	1.0	1.9	4.7
SB-2-156	2 - residential	3941 SENECA AVE	176	79	61	1.0	1.9	4.7
SB-2-157	2 - residential	3943 SENECA AVE	176	79	61	1.0	1.9	4.7
SB-2-158	2 - residential	3949 SENECA AVE	184	79	61	0.9	1.9	4.7
SB-2-159	2 - residential	3953 SENECA AVE	176	79	61	1.0	1.9	4.7
SB-2-160	2 - residential	3957 SENECA AVE	176	79	62	1.0	1.9	4.7
SB-2-161	2 - residential	3961 SENECA AVE	177	79	62	1.0	1.9	4.7
SB-2-162	2 - residential	3965 SENECA AVE	246	79	61	0.8	1.9	4.7
SB-2-163	2 - residential	2870 LOS FELIZ BLVD	176	79	62	1.0	1.9	4.7
SB-2-164	2 - residential	4174 WILLIMET ST	271	79	67	0.5	1.3	3.4
SB-2-165	2 - residential	4174 WILLIMET ST	238	79	67	0.5	1.3	3.4
SB-2-166	2 - residential	4178 CHEVY CHASE DR	194	79	70	0.4	1.0	2.8
SB-2-167	2 - residential	4168 WILLIMET ST	315	79	67	0.3	1.3	3.4
SB-2-168	2 - residential	4168 WILLIMET ST	290	79	67	0.3	1.3	3.4
SB-2-169	2 - residential	4168 WILLIMET ST	330	79	67	0.2	1.3	3.4
SB-2-170	2 - residential	4413 LA CLEDE AVE	347	79	67	0.2	1.3	3.4
SB-2-171	2 - residential	4170 CHEVY CHASE DR	335	79	67	0.2	1.3	3.4
SB-2-172	2 - residential	4160 CHEVY CHASE DR	346	79	67	0.3	1.3	3.4
SB-2-173	2 - residential	4152 BAYWOOD ST	283	79	67	0.4	1.3	3.4

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SB-2-174	2 - residential	4152 BAYWOOD ST	233	79	67	0.5	1.3	3.4
SB-2-175	2 - residential	4137 BAYWOOD ST	229	79	67	0.5	1.3	3.4
SB-2-176	2 - residential	4138 SEQUOIA ST	241	79	67	0.5	1.3	3.4
SB-2-177	2 - residential	4138 SEQUOIA ST	238	79	67	0.5	1.3	3.4
SB-2-178	2 - residential	4146 BAYWOOD ST	321	79	67	0.3	1.3	3.4
SB-2-179	2 - residential	4146 BAYWOOD ST	289	79	67	0.3	1.3	3.4
SB-2-180	2 - residential	4142 BAYWOOD ST	333	79	67	0.2	1.3	3.4
SB-2-181	2 - residential	4142 BAYWOOD ST	375	79	67	0.1	1.3	3.4
SB-2-182	2 - residential	4132 SEQUOIA ST	286	79	67	0.4	1.3	3.4
SB-2-183	2 - residential	4132 SEQUOIA ST	276	79	67	0.4	1.3	3.4
SB-2-184	2 - residential	4132 SEQUOIA ST	347	79	67	0.2	1.3	3.4
SB-2-185	2 - residential	4116 GOODWIN AVE	347	79	67	0.3	1.3	3.4
SB-2-186	2 - residential	4116 GOODWIN AVE	306	79	67	0.3	1.3	3.4
SB-2-187	2 - residential	4112 GOODWIN AVE	353	79	67	0.2	1.3	3.4
NB-3-001	2 - residential	5636 SAN FERNANDO STE. 101	125	79	72	0.6	1.0	2.6
NB-3-002	2 - residential	874 GRANGE ST	249	79	65	0.6	1.4	3.6
NB-3-003	2 - residential	874 GRANGE ST	296	79	65	0.4	1.4	3.6
NB-3-004	2 - residential	870 GRANGE ST	345	79	65	0.2	1.4	3.6
NB-3-005	2 - residential	866 GRANGE ST	395	79	66	0.7	1.4	3.6
NB-3-006	2 - residential	--	443	79	65	0.6	1.4	3.6
NB-3-007	2 - residential	--	491	79	65	0.6	1.4	3.6
NB-3-008	2 - residential	--	544	79	65	0.5	1.4	3.6
NB-3-009	2 - residential	709 DALE AVE	250	79	66	1.1	1.4	3.6
NB-3-010	2 - residential	709 DALE AVE	327	79	65	0.4	1.4	3.6
NB-3-011	2 - residential	715 DALE AVE	254	79	66	1.1	1.4	3.6

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NB-3-012	2 - residential	719 DALE AVE	282	79	66	1.0	1.4	3.6
NB-3-013	2 - residential	721 DALE AVE	255	79	65	0.6	1.4	3.6
NB-3-014	2 - residential	725 DALE AVE	253	79	65	0.6	1.4	3.6
NB-3-015	2 - residential	729 DALE AVE	251	79	65	0.7	1.5	3.9
NB-3-016	2 - residential	733 DALE AVE	254	79	65	0.7	1.5	3.9
NB-3-017	2 - residential	737 DALE AVE	249	79	65	0.7	1.5	3.9
NB-3-018	2 - residential	741 DALE AVE	254	79	65	0.7	1.5	3.9
NB-3-019	2 - residential	745 DALE AVE	249	79	65	0.7	1.5	3.9
NB-3-020	2 - residential	749 DALE AVE	248	79	65	0.7	1.5	3.9
NB-3-021	2 - residential	718 HIGHLAND AVE	248	79	65	0.7	1.5	3.9
NB-3-022	2 - residential	718 HIGHLAND AVE	248	79	65	0.7	1.5	3.9
NB-3-023	2 - residential	910 OMAR ST	249	79	65	0.7	1.5	3.9
NB-3-024	2 - residential	910 OMAR ST	305	79	65	0.4	1.5	3.9
NB-3-025	2 - residential	910 OMAR ST	357	79	65	0.3	1.5	3.9
NB-3-026	2 - residential	910 OMAR ST	257	79	65	0.7	1.5	3.9
NB-3-027	2 - residential	--	482	79	65	0.7	1.5	3.9
NB-3-028	2 - residential	--	458	79	65	0.7	1.5	3.9
NB-3-029	2 - residential	720 KELLOGG AVE	406	79	65	0.8	1.5	3.9
NB-3-030	2 - residential	720 KELLOGG AVE	332	79	65	0.6	1.5	3.9
NB-3-031	2 - residential	720 KELLOGG AVE	354	79	65	0.4	1.5	3.9
NB-3-032	2 - residential	725 KELLOGG AVE	246	79	65	0.8	1.5	3.9
NB-3-033	2 - residential	725 KELLOGG AVE	246	79	65	0.8	1.5	3.9
NB-3-034	2 - residential	810 PELANCONI AVE	246	79	65	0.9	1.5	3.9
NB-3-035	2 - residential	810 PELANCONI AVE	296	79	65	0.6	1.5	3.9
NB-3-036	2 - residential	814 PELANCONI AVE	349	79	65	0.3	1.5	3.9

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NB-3-037	2 - residential	810 PELANCONI AVE	249	79	65	1.0	1.5	3.9
NB-3-038	2 - residential	810 PELANCONI AVE	305	79	65	0.6	1.5	3.9
NB-3-039	2 - residential	810 NORTON AVE	251	79	65	1.0	1.5	3.9
NB-3-040	2 - residential	810 NORTON AVE	297	79	65	0.6	1.5	3.9
NB-3-041	2 - residential	814 NORTON AVE	350	79	65	0.4	1.5	3.9
NB-3-042	2 - residential	810 NORTON AVE	247	79	65	0.9	1.5	3.9
NB-3-043	2 - residential	810 NORTON AVE	297	79	65	0.6	1.5	3.9
NB-3-044	2 - residential	814 NORTON AVE	348	79	65	0.3	1.5	3.9
NB-3-045	2 - residential	934 ZOOK DR	251	79	65	0.8	1.5	3.9
NB-3-046	2 - residential	938 ZOOK DR	248	79	65	0.8	1.5	3.9
NB-3-047	2 - residential	944 ZOOK DR	248	79	65	0.8	1.5	3.9
NB-3-048	2 - residential	948 ZOOK DR	248	79	65	0.7	1.5	3.9
NB-3-049	2 - residential	1000 ZOOK DR	250	79	65	0.7	1.5	3.9
NB-3-050	2 - residential	1006 ZOOK DR	247	79	65	0.7	1.5	3.9
NB-3-051	2 - residential	1010 ZOOK DR	253	79	65	0.7	1.5	3.9
NB-3-052	2 - residential	1014 ZOOK DR	252	79	65	0.7	1.5	3.9
NB-3-053	2 - residential	1020 ZOOK DR	266	79	65	0.7	1.5	3.9
NB-3-054	2 - residential	1022 ZOOK DR	249	79	65	0.8	1.5	3.9
NB-3-055	2 - residential	1026 ZOOK DR	251	79	65	0.8	1.5	3.9
NB-3-056	2 - residential	1032 ZOOK DR	248	79	65	0.8	1.5	3.9
NB-3-057	2 - residential	1036 ZOOK DR	248	79	65	0.8	1.5	3.9
NB-3-058	2 - residential	1040 ZOOK DR	255	79	65	0.9	1.5	3.9
NB-3-059	2 - residential	1044 ZOOK DR	247	79	65	1.0	1.5	3.9
NB-3-060	2 - residential	1044 ZOOK DR	247	79	65	1.0	1.5	3.9
NB-3-061	2 - residential	1012 WILLARD AVE	355	79	65	0.4	1.5	3.9

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NB-3-062	2 - residential	6206 SAN FERNANDO RD	232	79	65	0.8	1.5	3.9
NB-3-063	2 - residential	321 S 001 ST	457	79	73	0.1	0.8	2.5
NB-3-064	2 - residential	1100 LELAND WAY	351	79	65	0.5	1.5	3.9
NB-3-065	2 - residential	1100 LELAND WAY	351	79	65	0.5	1.5	3.9
NB-3-066	2 - residential	1106 LELAND WAY	398	79	65	0.2	1.5	3.9
NB-3-067	2 - residential	1100 LELAND WAY	378	79	65	0.2	1.5	3.9
NB-3-068	2 - residential	1106 LELAND WAY	299	79	65	0.6	1.5	3.9
NB-3-069	2 - residential	1110 LELAND WAY	302	79	65	0.6	1.5	3.9
NB-3-070	2 - residential	1116 BROADWAY	302	79	65	0.6	1.5	3.9
NB-3-071	2 - residential	1200 BROADWAY	300	79	65	0.6	1.5	3.9
NB-3-072	2 - residential	1200 BROADWAY	336	79	65	0.5	1.5	3.9
NB-3-073	2 - residential	1200 BROADWAY	373	79	65	0.5	1.5	3.9
NB-3-074	2 - residential	--	415	79	65	0.4	1.5	3.9
NB-3-075	2 - residential	--	434	79	65	0.4	1.5	3.9
NB-3-076	2 - residential	--	453	79	65	0.4	1.5	3.9
NB-3-077	2 - residential	1206 LELAND WAY	331	79	65	0.5	1.5	3.9
NB-3-078	2 - residential	1210 LELAND WAY	331	79	65	0.5	1.5	3.9
NB-3-079	2 - residential	1214 LELAND WAY	325	79	65	0.5	1.5	3.9
NB-3-080	2 - residential	1216 LELAND WAY	325	79	65	0.5	1.5	3.9
NB-3-081	2 - residential	1222 LELAND WAY	321	79	65	0.5	1.5	3.9
NB-3-082	2 - residential	1224 LELAND WAY	321	79	65	0.5	1.5	3.9
NB-3-083	2 - residential	1226 LELAND WAY	321	79	65	0.5	1.5	3.9
NB-3-084	2 - residential	1230 LELAND WAY	319	79	65	0.5	1.5	3.9
NB-3-085	2 - residential	1300 LELAND WAY	320	79	65	0.5	1.5	3.9
NB-3-086	2 - residential	1312 LELAND WAY	319	79	65	0.5	1.5	3.9

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NB-3-087	2 - residential	1318 LELAND WAY	317	79	65	0.6	1.5	3.9
NB-3-088	2 - residential	1320 LELAND WAY	313	79	65	0.6	1.5	3.9
NB-3-089	2 - residential	1326 LELAND WAY	313	79	65	0.6	1.5	3.9
NB-3-090	2 - residential	1326 LELAND WAY	310	79	65	0.6	1.5	3.9
NB-3-091	2 - residential	1406 LELAND WAY	316	79	65	0.6	1.5	3.9
NB-3-092	2 - residential	1410 LELAND WAY	314	79	65	0.6	1.5	3.9
NB-3-093	2 - residential	1414 LELAND WAY	314	79	65	0.6	1.5	3.9
NB-3-094	2 - residential	1416 LELAND WAY	314	79	65	0.6	1.5	3.9
NB-3-095	2 - residential	1420 LELAND WAY	314	79	65	0.6	1.5	3.9
NB-3-096	2 - residential	1500 LELAND WAY	317	79	65	0.6	1.5	3.9
NB-3-097	2 - residential	1504 LELAND WAY	318	79	65	0.5	1.5	3.9
NB-3-098	2 - residential	1521 BROADWAY	317	79	65	0.6	1.5	3.9
NB-3-099	2 - residential	1521 BROADWAY	317	79	65	0.6	1.5	3.9
NB-3-100	2 - residential	--	458	79	65	0.4	1.5	3.9
NB-3-101	2 - residential	--	424	79	65	0.4	1.5	3.9
NB-3-102	2 - residential	--	389	79	65	0.5	1.5	3.9
NB-3-103	2 - residential	1534 BROADWAY	366	79	65	0.5	1.5	3.9
NB-3-104	2 - residential	1540 BROADWAY	329	79	65	0.5	1.5	3.9
NB-3-105	2 - residential	1540 BROADWAY	320	79	65	0.5	1.5	3.9
NB-3-106	2 - residential	1730 ROGERS PL	390	79	65	0.5	1.5	3.9
NB-3-107	2 - residential	1730 ROGERS PL	344	79	65	0.5	1.5	3.9
NB-3-108	2 - residential	1623 KEELER ST	383	79	65	0.5	1.5	3.9
NB-3-109	2 - residential	1623 KEELER ST	392	79	65	0.5	1.5	3.9
NB-3-110	2 - residential	--	415	79	65	0.4	1.5	3.9
NB-3-111	2 - residential	--	467	79	65	0.4	1.5	3.9

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NB-3-112	2 - residential	1700 LANDIS ST	422	79	65	0.4	1.5	3.9
NB-3-113	2 - residential	1700 LANDIS ST	412	79	65	0.4	1.5	3.9
NB-3-114	2 - residential	--	450	79	65	0.4	1.5	3.9
NB-3-115	2 - residential	--	490	79	65	0.4	1.5	3.9
NB-3-116	2 - residential	1715 LANDIS ST	433	79	65	0.4	1.5	3.9
NB-3-117	2 - residential	1719 LANDIS ST	442	79	65	0.4	1.5	3.9
NB-3-118	2 - residential	1719 LANDIS ST	480	79	65	0.4	1.5	3.9
NB-3-119	2 - residential	1723 LANDIS ST 204	506	79	65	0.4	1.5	3.9
NB-3-120	2 - residential	--	638	79	65	0.3	1.5	3.9
NB-3-121	2 - residential	--	624	79	65	0.3	1.5	3.9
NB-3-122	2 - residential	1810 JACKSON ST	583	79	65	0.3	1.5	3.9
NB-3-123	2 - residential	1810 JACKSON ST	583	79	65	0.3	1.5	3.9
NB-3-124	2 - residential	--	622	79	65	0.3	1.5	3.9
NB-3-125	2 - residential	--	671	79	65	0.3	1.5	3.9
NB-3-126	2 - residential	1819 JACKSON ST	566	79	65	0.3	1.5	3.9
NB-3-127	2 - residential	--	595	79	65	0.3	1.5	3.9
NB-3-128	2 - residential	--	645	79	65	0.3	1.5	3.9
NB-3-129	2 - residential	2045 MORGAN AVE	523	79	65	0.3	1.5	3.9
NB-3-130	2 - residential	--	569	79	65	0.3	1.5	3.9
NB-3-131	2 - residential	1825 CHURCH ST	421	79	65	0.4	1.5	3.9
NB-3-132	2 - residential	--	452	79	65	0.4	1.5	3.9
NB-3-133	2 - residential	1928 N PARISH PL	415	79	65	0.4	1.5	3.9
NB-3-134	2 - residential	--	439	79	65	0.4	1.5	3.9
NB-3-135	2 - residential	--	498	79	65	0.4	1.5	3.9
NB-3-136	2 - residential	1951 N PARISH PL	383	79	65	0.5	1.5	3.9

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NB-3-137	2 - residential	1951 N PARISH PL	407	79	65	0.4	1.5	3.9
NB-3-138	2 - residential	--	422	79	65	0.4	1.5	3.9
NB-3-139	2 - residential	--	471	79	65	0.4	1.5	3.9
NB-3-140	2 - residential	2208 PEYTON AVE	413	79	65	0.4	1.5	3.9
NB-3-141	2 - residential	2212 PEYTON AVE	381	79	65	0.5	1.5	3.9
NB-3-142	2 - residential	2216 PEYTON AVE	392	79	65	0.5	1.5	3.9
NB-3-143	2 - residential	2212 PEYTON AVE	431	79	65	0.4	1.5	3.9
NB-3-144	2 - residential	2220 PEYTON AVE	372	79	65	0.5	1.5	3.9
NB-3-145	2 - residential	--	429	79	65	0.4	1.5	3.9
NB-3-146	2 - residential	2300 PEYTON AVE	363	79	65	0.5	1.5	3.9
NB-3-147	2 - residential	--	351	79	65	0.5	1.5	3.9
NB-3-148	2 - residential	2316 PEYTON AVE	325	79	65	0.5	1.5	3.9
NB-3-149	2 - residential	2312 PEYTON AVE	378	79	65	0.5	1.5	3.9
NB-3-150	2 - residential	2201 N KEYSTONE ST	330	79	65	0.5	1.5	3.9
NB-3-151	2 - residential	2201 N KEYSTONE ST	339	79	65	0.5	1.5	3.9
NB-3-152	2 - residential	2201 N KEYSTONE ST	408	79	65	0.4	1.5	3.9
NB-3-153	2 - residential	2205 N KEYSTONE ST	462	79	65	0.4	1.5	3.9
NB-3-154	2 - residential	2207 N KEYSTONE ST	521	79	65	0.3	1.5	3.9
NB-3-155	2 - residential	2211 N KEYSTONE ST	576	79	65	0.3	1.5	3.9
NB-3-156	2 - residential	2329 N LINCOLN ST	351	79	65	0.5	1.5	3.9
NB-3-157	2 - residential	2329 N LINCOLN ST	390	79	65	0.5	1.5	3.9
NB-3-158	2 - residential	--	457	79	65	0.2	1.5	3.9
NB-3-159	2 - residential	--	458	79	65	0.2	1.5	3.9
NB-3-160	2 - residential	2326 N BRIGHTON ST	396	79	65	0.5	1.5	3.9
NB-3-161	2 - residential	2326 N BRIGHTON ST	432	79	65	0.4	1.5	3.9

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							moderate	severe (significant for CEQA)
NB-3-162	2 - residential	2330 N BRIGHTON ST	475	79	65	0.4	1.5	3.9
NB-3-163	2 - residential	--	643	79	65	0.1	1.5	3.9
NB-3-164	2 - residential	--	565	79	65	0.3	1.5	3.9
NB-3-165	2 - residential	--	611	79	65	0.3	1.5	3.9
NB-3-166	2 - residential	2401 N BRIGHTON ST	644	79	65	0.1	1.5	3.9
NB-3-167	2 - residential	2414 N BUENA VISTA ST	496	79	65	0.4	1.5	3.9
NB-3-168	2 - residential	--	545	79	65	0.3	1.5	3.9
NB-3-169	2 - residential	--	652	79	65	0.3	1.5	3.9
NB-3-170	2 - residential	--	703	79	65	0.3	1.5	3.9
NB-3-171	2 - residential	2470 N BUENA VISTA ST	732	79	65	0.3	1.5	3.9
NB-3-172	2 - residential	2470 N BUENA VISTA ST	783	79	65	0.2	1.5	3.9
NB-3-173	2 - residential	2470 N BUENA VISTA ST	810	79	65	0.2	1.5	3.9
NB-3-174	2 - residential	2492 N BUENA VISTA ST	855	79	65	0.2	1.5	3.9
NB-3-175	2 - residential	2503 N BUENA VISTA ST	722	79	65	0.3	1.5	3.9
NB-3-176	2 - residential	2511 N BUENA VISTA ST	759	79	65	0.2	1.5	3.9
NB-3-177	2 - residential	2624 N FREDERIC ST	734	79	65	0.3	1.5	3.9
NB-3-178	2 - residential	2632 N FREDERIC ST	759	79	65	0.2	1.5	3.9
NB-3-179	2 - residential	2632 N FREDERIC ST	815	79	65	0.2	1.5	3.9
NB-3-180	2 - residential	2930 N SAN FERNANDO BLVD	134	79	65	1.2	1.5	3.9
NB-3-181	2 - residential	--	448	79	62	0.7	1.7	4.4
NB-3-182	2 - residential	--	412	79	62	0.8	1.7	4.4
NB-3-183	2 - residential	3500 N SAN FERNANDO BLVD	240	79	68	0.2	1.2	3.2
NB-3-184	2 - residential	7510 N CLAYBECK AVE	303	79	62	0.6	1.7	4.4
NB-3-185	2 - residential	7510 N CLAYBECK AVE	220	79	68	0.2	1.2	3.1

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NB-3-186	2 - residential	7510 N CLAYBECK AVE	261	79	62	0.6	1.7	4.4
NB-3-187	2 - residential	7510 N CLAYBECK AVE	333	79	62	0.4	1.7	4.4
NB-3-188	2 - residential	7522 N CLAYBECK AVE	298	79	62	0.4	1.7	4.4
NB-3-189	2 - residential	7522 N CLAYBECK AVE	335	79	62	0.4	1.7	4.4
NB-3-190	2 - residential	7410 SAN FERNANDO RD	222	79	68	0.2	1.2	3.1
NB-3-191	2 - residential	7522 N CLAYBECK AVE	373	79	62	0.3	1.7	4.4
NB-3-192	2 - residential	7542 DELIA AVE	260	79	62	0.7	1.7	4.4
NB-3-193	2 - residential	7542 DELIA AVE	320	79	62	0.6	1.7	4.4
NB-3-194	2 - residential	7542 DELIA AVE	359	79	62	0.4	1.7	4.4
NB-3-195	2 - residential	7548 DELIA AVE	368	79	62	0.4	1.7	4.4
NB-3-196	2 - residential	7548 DELIA AVE	317	79	62	0.6	1.7	4.4
NB-3-197	2 - residential	7548 DELIA AVE	366	79	62	0.5	1.7	4.4
NB-3-198	2 - residential	--	239	79	63	0.9	1.7	4.4
NB-3-199	2 - residential	7564 GREG AVE	377	79	62	0.6	1.7	4.4
NB-3-200	2 - residential	7570 GREG AVE	311	79	63	0.8	1.7	4.4
NB-3-201	2 - residential	7530 SAN FERNANDO RD	191	79	69	0.4	1.1	2.9
NB-3-202	2 - residential	7570 GREG AVE	375	79	62	0.5	1.7	4.4
NB-3-203	2 - residential	7536 SAN FERNANDO RD	286	79	63	0.9	1.7	4.4
NB-3-204	2 - residential	7614 ARCOLA AVE	283	79	63	0.7	1.7	4.4
NB-3-205	2 - residential	7542 SAN FERNANDO RD	215	79	69	0.4	1.2	3.1
NB-3-206	2 - residential	7614 ARCOLA AVE	256	79	63	1.1	1.7	4.4
NB-3-207	2 - residential	7620 ARCOLA AVE	349	79	62	0.6	1.7	4.4
NB-3-208	2 - residential	7620 ARCOLA AVE	279	79	63	1.0	1.7	4.4
NB-3-209	2 - residential	7633 ARCOLA AVE	230	79	68	0.4	1.2	3.1
NB-3-210	2 - residential	7624 ARCOLA AVE	332	79	62	0.6	1.7	4.4

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NB-3-211	2 - residential	7628 ARCOLA AVE	357	79	62	0.6	1.7	4.4
NB-3-212	2 - residential	7642 SANCOLA AVE	232	79	63	1.2	1.7	4.4
NB-3-213	2 - residential	7642 SANCOLA AVE	264	79	63	0.8	1.7	4.4
NB-3-214	2 - residential	7646 SANCOLA AVE	241	79	63	1.0	1.6	4.1
NB-3-215	2 - residential	7642 SANCOLA AVE	286	79	63	0.7	1.7	4.4
NB-3-216	2 - residential	7646 SANCOLA AVE	317	79	62	0.6	1.7	4.4
NB-3-217	2 - residential	7646 SANCOLA AVE	266	79	63	1.0	1.7	4.4
NB-3-218	2 - residential	7646 SANCOLA AVE	366	79	62	0.6	1.7	4.4
NB-3-219	2 - residential	7646 SANCOLA AVE	322	79	62	0.6	1.7	4.4
NB-3-220	2 - residential	7703 SANCOLA AVE	229	79	68	0.4	1.2	3.1
NB-3-221	2 - residential	7676 SANCOLA AVE	369	79	62	0.6	1.7	4.4
NB-3-222	2 - residential	7664 FERNCOLA AVE	252	79	63	1.1	1.7	4.4
NB-3-223	2 - residential	7664 FERNCOLA AVE	288	79	63	0.8	1.7	4.4
NB-3-224	2 - residential	7714 FERNCOLA AVE	235	79	68	0.4	1.2	3.1
NB-3-225	2 - residential	7714 FERNCOLA AVE	328	79	62	0.7	1.7	4.4
NB-3-226	2 - residential	7714 FERNCOLA AVE	258	79	63	1.2	1.7	4.4
NB-3-227	2 - residential	7714 FERNCOLA AVE	368	79	62	0.6	1.7	4.4
NB-3-228	2 - residential	7714 FERNCOLA AVE	291	79	63	1.1	1.7	4.4
NB-3-229	2 - residential	7718 FERNCOLA AVE	356	79	63	0.7	1.7	4.4
NB-3-230	2 - residential	10314 STAGG ST	231	79	68	0.5	1.2	3.1
NB-3-231	2 - residential	10314 STAGG ST	253	79	63	1.1	1.7	4.4
NB-3-232	2 - residential	10320 STAGG ST	229	79	68	0.5	1.2	3.1
NB-3-233	2 - residential	10320 STAGG ST	233	79	68	0.5	1.2	3.1
NB-3-234	2 - residential	10314 STAGG ST	314	79	63	0.9	1.7	4.4
NB-3-235	2 - residential	7752 ARVILLA AVE	314	79	63	1.1	1.7	4.4

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NB-3-236	2 - residential	7759 ARVILLA AVE	233	79	68	0.4	1.2	3.1
NB-3-237	2 - residential	7752 ARVILLA AVE	341	79	63	0.7	1.7	4.4
NB-3-238	2 - residential	7756 ARVILLA AVE	371	79	63	0.7	1.7	4.4
NB-3-239	2 - residential	7806 LEDGE AVE	231	79	68	0.4	1.2	3.1
NB-3-240	2 - residential	7806 LEDGE AVE	270	79	63	0.8	1.7	4.4
NB-3-241	2 - residential	7810 LEDGE AVE	230	79	68	0.4	1.2	3.1
NB-3-242	2 - residential	7766 SAN FERNANDO RD	110	79	73	0.1	0.8	2.5
NB-3-243	2 - residential	7810 LEDGE AVE	326	79	63	0.7	1.7	4.4
NB-3-244	2 - residential	7810 LEDGE AVE	257	79	63	1.1	1.7	4.4
NB-3-245	2 - residential	7810 LEDGE AVE	349	79	62	0.6	1.7	4.4
NB-3-246	2 - residential	7766 SAN FERNANDO RD	176	79	69	0.4	1.1	2.9
NB-3-247	2 - residential	7810 LEDGE AVE	286	79	63	1.0	1.7	4.4
NB-3-248	2 - residential	7766 SAN FERNANDO RD	187	79	64	1.1	1.5	3.9
NB-3-249	2 - residential	7812 LEDGE AVE	317	79	62	0.7	1.7	4.4
NB-3-250	2 - residential	7816 LEDGE AVE	347	79	62	0.6	1.7	4.4
NB-3-251	2 - residential	10889 CANTARA ST	242	79	68	0.5	1.2	3.1
NB-3-252	2 - residential	10871 CANTARA ST	365	79	63	0.9	1.7	4.4
NB-3-253	2 - residential	10877 CANTARA ST	334	79	63	1.0	1.7	4.4
NB-3-254	2 - residential	10881 CANTARA ST	302	79	63	1.1	1.7	4.4
NB-3-255	2 - residential	10889 CANTARA ST	283	79	67	0.4	1.2	3.2
NB-3-256	2 - residential	10916 CROCKETT ST	246	79	68	0.5	1.2	3.2
NB-3-257	2 - residential	10924 CROCKETT ST	230	79	68	0.4	1.2	3.1
NB-3-258	2 - residential	10928 CROCKETT ST	267	79	68	0.4	1.2	3.2
NB-3-259	2 - residential	10932 CROCKETT ST	251	79	68	0.4	1.2	3.2
NB-3-260	2 - residential	10934 CROCKETT ST	233	79	68	0.4	1.2	3.1

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NB-3-261	2 - residential	10942 CROCKETT ST	230	79	68	0.4	1.2	3.1
NB-3-262	2 - residential	10946 CROCKETT ST	232	79	68	0.4	1.2	3.1
NB-3-263	2 - residential	10950 CROCKETT ST	232	79	68	0.4	1.2	3.1
NB-3-264	2 - residential	10956 CROCKETT ST	231	79	68	0.4	1.2	3.1
NB-3-265	2 - residential	10960 CROCKETT ST	233	79	68	0.4	1.2	3.1
NB-3-266	2 - residential	10966 CROCKETT ST	235	79	68	0.4	1.2	3.1
NB-3-267	2 - residential	10966 CROCKETT ST	254	79	68	0.4	1.2	3.2
SB-3-001	2 - residential	2210 N BRIGHTON ST	313	79	65	0.2	1.5	3.9
SB-3-002	2 - residential	2218 N BRIGHTON ST	306	79	65	0.2	1.5	3.9
SB-3-003	2 - residential	2220 N BRIGHTON ST	245	79	65	0.4	1.5	3.9
SB-3-004	2 - residential	2219 N BRIGHTON ST	373	79	65	0.2	1.5	3.9
SB-3-005	2 - residential	2226 N BUENA VISTA ST	331	79	65	0.2	1.5	3.9
SB-3-006	2 - residential	2220 N BRIGHTON ST	248	79	65	0.4	1.5	3.9
SB-3-007	2 - residential	2226 N BUENA VISTA ST	293	79	65	0.3	1.5	3.9
SB-3-008	2 - residential	2226 N BUENA VISTA ST	372	79	65	0.2	1.5	3.9
SB-3-009	2 - residential	2226 N BUENA VISTA ST	315	79	65	0.2	1.5	3.9
SB-3-010	2 - residential	2226 N BUENA VISTA ST	250	79	65	0.4	1.5	3.9
SB-3-011	2 - residential	2239 N BUENA VISTA ST	389	79	65	0.2	1.5	3.9
SB-3-012	2 - residential	2246 N FREDERIC ST	350	79	65	0.2	1.5	3.9
SB-3-013	2 - residential	2246 N FREDERIC ST	297	79	65	0.3	1.5	3.9
SB-3-014	2 - residential	2246 N FREDERIC ST	408	79	65	0.2	1.5	3.9
SB-3-015	2 - residential	2246 N FREDERIC ST	324	79	65	0.2	1.5	3.9
SB-3-016	2 - residential	2255 N BUENA VISTA ST	242	79	65	0.4	1.5	3.9
SB-3-017	2 - residential	2255 N BUENA VISTA ST	306	79	65	0.2	1.5	3.9
SB-3-018	2 - residential	2255 N BUENA VISTA ST	248	79	65	0.4	1.5	3.9

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SB-3-019	2 - residential	2514 N NAOMI ST	346	79	65	0.2	1.5	3.9
SB-3-020	2 - residential	2514 N NAOMI ST	303	79	65	0.3	1.5	3.9
SB-3-021	2 - residential	2529 N SAN FERNANDO BLVD	121	79	65	1.3	1.5	3.9
SB-3-022	2 - residential	2526 N NAOMI ST	245	79	65	0.4	1.5	3.9
SB-3-023	2 - residential	10730 STRATHERN ST	361	79	62	0.5	1.7	4.4
SB-3-024	2 - residential	10730 STRATHERN ST	339	79	62	0.6	1.7	4.4
SB-3-025	2 - residential	10730 STRATHERN ST	300	79	62	0.6	1.7	4.4
SB-3-026	2 - residential	10730 STRATHERN ST	301	79	62	0.7	1.7	4.4
SB-3-027	2 - residential	10730 STRATHERN ST	208	79	63	1.5	1.7	4.4
SB-3-028	2 - residential	10765 STRATHERN ST	126	79	71	0.8	1.0	2.6
SB-3-029	2 - residential	10820 WHITE ST	341	79	62	0.6	1.7	4.4
SB-3-030	2 - residential	10820 WHITE ST	294	79	63	0.9	1.7	4.4
SB-3-031	2 - residential	10816 WHITE ST	155	79	70	0.7	1.0	2.8
SB-3-032	2 - residential	10930 RATNER ST	342	79	62	0.6	1.7	4.4
SB-3-033	2 - residential	10930 RATNER ST	243	79	63	1.1	1.7	4.4
SB-3-034	2 - residential	10932 RATNER ST	346	79	63	0.8	1.7	4.4
SB-3-035	2 - residential	11027 CANTARA ST	242	79	63	1.1	1.7	4.4
SB-3-036	2 - residential	11044 BURTON ST	306	79	63	0.9	1.7	4.4
SB-3-037	2 - residential	11046 BURTON ST	337	79	62	0.6	1.7	4.4
SB-3-038	2 - residential	11046 BURTON ST	359	79	62	0.6	1.7	4.4
SB-3-039	2 - residential	11051 BURTON ST	237	79	63	1.2	1.7	4.4
SB-3-040	2 - residential	11061 BURTON ST	246	79	63	1.1	1.7	4.4
SB-3-041	2 - residential	11061 BURTON ST	252	79	63	1.1	1.7	4.4
SB-3-042	2 - residential	8265 CASE AVE	354	79	62	0.6	1.7	4.4
SB-3-043	2 - residential	8265 CASE AVE	363	79	62	0.6	1.7	4.4

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SB-3-044	2 - residential	11061 BURTON ST	242	79	63	1.1	1.7	4.4
SB-3-045	2 - residential	8269 CASE AVE	340	79	62	0.6	1.7	4.4
SB-3-046	2 - residential	8278 MARMAY PL	325	79	62	0.6	1.7	4.4
SB-3-047	2 - residential	8269 CASE AVE	242	79	63	1.1	1.7	4.4
SB-3-048	2 - residential	8278 MARMAY PL	332	79	63	0.8	1.7	4.4
SB-3-049	2 - residential	8278 MARMAY PL	206	79	69	0.4	1.2	3.1
SB-3-050	2 - residential	11136 ROSCOE BLVD	355	79	62	0.6	1.7	4.4
SB-3-051	2 - residential	11114 ROSCOE BLVD	196	79	69	0.3	1.2	3.1
SB-3-052	2 - residential	11118 ROSCOE BLVD	222	79	63	1.1	1.7	4.4
SB-3-053	2 - residential	11126 ROSCOE BLVD	297	79	63	0.8	1.7	4.4
SB-3-054	2 - residential	11122 ROSCOE BLVD	240	79	63	1.0	1.7	4.4
SB-3-055	2 - residential	11126 ROSCOE BLVD	272	79	63	0.9	1.7	4.4
SB-3-056	2 - residential	11145 ROSCOE BLVD	328	79	62	0.7	1.7	4.4
SB-3-057	2 - residential	8391 SAN FERNANDO RD	134	79	71	0.8	1.0	2.8
SB-3-058	2 - residential	11224 DORA ST	320	79	63	0.9	1.7	4.4
SB-3-059	2 - residential	11216 DORA ST	243	79	68	0.7	1.2	3.1
SB-3-060	2 - residential	11228 DORA ST	360	79	62	0.4	1.7	4.4
SB-3-061	2 - residential	11224 DORA ST	321	79	62	0.6	1.7	4.4
SB-3-062	2 - residential	11220 DORA ST	282	79	63	1.0	1.7	4.4
SB-3-063	2 - residential	11216 DORA ST	242	79	68	0.4	1.2	3.1
NB-4-001	2 - residential	12538 BROMWICH ST	317	79	62	1.0	1.9	4.7
NB-4-002	2 - residential	9980 SAN FERNANDO RD	174	79	68	0.3	1.2	3.1
NB-4-003	2 - residential	9980 SAN FERNANDO RD	262	79	62	1.2	1.7	4.4
NB-4-004	2 - residential	12538 BROMWICH ST	321	79	61	0.9	1.9	4.7
NB-4-005	2 - residential	10016 SAN FERNANDO RD	107	79	71	1.0	1.0	2.8

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NB-4-006	2 - residential	12538 BROMWICH ST	375	79	62	0.7	1.9	4.7
NB-4-007	2 - residential	10016 SAN FERNANDO RD	261	79	62	1.3	1.9	4.7
NB-4-008	2 - residential	12548 CORRENTI ST	327	79	62	0.8	1.9	4.7
NB-4-009	2 - residential	12542 CORRENTI ST	371	79	62	0.7	1.9	4.7
NB-4-010	2 - residential	10028 SAN FERNANDO RD	114	79	71	1.0	1.0	2.8
NB-4-011	2 - residential	10028 SAN FERNANDO RD	261	79	62	1.3	1.9	4.7
NB-4-012	2 - residential	12548 CORRENTI ST	319	79	62	0.8	1.9	4.7
NB-4-013	2 - residential	12542 CORRENTI ST	375	79	62	0.7	1.9	4.7
NB-4-014	2 - residential	--	223	79	67	0.5	1.2	3.2
NB-4-015	2 - residential	--	263	79	62	1.3	1.9	4.7
NB-4-016	2 - residential	12608 WINGO ST	317	79	62	0.8	1.9	4.7
NB-4-017	2 - residential	12602 WINGO ST	374	79	62	0.7	1.9	4.7
NB-4-018	2 - residential	10078 SAN FERNANDO RD	268	79	62	1.3	1.9	4.7
NB-4-019	2 - residential	12608 WINGO ST	316	79	62	1.1	1.9	4.7
NB-4-020	2 - residential	12602 WINGO ST	374	79	62	0.7	1.9	4.7
NB-4-021	2 - residential	10108 SAN FERNANDO RD	168	79	69	1.0	1.2	3.1
NB-4-022	2 - residential	10114 SAN FERNANDO RD	259	79	62	1.5	1.7	4.4
NB-4-023	2 - residential	12609 WINGO ST	317	79	62	1.3	1.9	4.7
NB-4-024	2 - residential	12636 OSBORNE ST	374	79	62	0.8	1.9	4.7
NB-4-025	2 - residential	--	545	79	65	0.7	1.5	3.9
NB-4-026	2 - residential	--	518	79	65	0.7	1.5	3.9
NB-4-027	2 - residential	--	492	79	65	0.8	1.4	3.6
NB-4-028	2 - residential	--	469	79	65	0.8	1.4	3.6
NB-4-029	2 - residential	--	443	79	65	0.9	1.4	3.6
NB-4-030	2 - residential	--	419	79	65	0.9	1.4	3.6

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NB-4-031	2 - residential	--	271	79	65	0.9	1.4	3.6
NB-4-032	2 - residential	--	311	79	65	0.7	1.5	3.9
NB-4-033	2 - residential	10668 SUTTER AVE	311	79	65	0.7	1.5	3.9
NB-4-034	2 - residential	10676 SUTTER AVE	283	79	65	0.7	1.5	3.9
NB-4-035	2 - residential	10676 SUTTER AVE	353	79	65	0.6	1.5	3.9
NB-4-036	2 - residential	10714 SUTTER AVE	291	79	65	0.6	1.5	3.9
NB-4-037	2 - residential	10718 SUTTER AVE	290	79	65	0.6	1.5	3.9
NB-4-038	2 - residential	10726 SUTTER AVE	290	79	65	0.6	1.5	3.9
NB-4-039	2 - residential	10726 SUTTER AVE	275	79	65	0.6	1.5	3.9
NB-4-040	2 - residential	10752 SUTTER AVE	273	79	65	0.6	1.5	3.9
NB-4-041	2 - residential	10758 SUTTER AVE	269	79	65	0.6	1.5	3.9
NB-4-042	2 - residential	10760 SUTTER AVE	283	79	65	0.6	1.5	3.9
NB-4-043	2 - residential	10768 SUTTER AVE	272	79	65	0.6	1.5	3.9
NB-4-044	2 - residential	10772 SUTTER AVE	293	79	65	0.6	1.5	3.9
NB-4-045	2 - residential	10774 SUTTER AVE	291	79	65	0.6	1.5	3.9
NB-4-046	2 - residential	10778 SUTTER AVE	275	79	65	0.7	1.5	3.9
NB-4-047	2 - residential	10778 SUTTER AVE	276	79	65	0.7	1.5	3.9
NB-4-048	2 - residential	10808 SUTTER AVE	271	79	65	0.7	1.5	3.9
NB-4-049	2 - residential	10810 SUTTER AVE	273	79	65	0.7	1.5	3.9
NB-4-050	2 - residential	10810 SUTTER AVE	276	79	65	0.8	1.5	3.9
NB-4-051	2 - residential	10852 SUTTER AVE	273	79	65	0.8	1.5	3.9
NB-4-052	2 - residential	10858 SUTTER AVE	273	79	65	0.8	1.5	3.9
NB-4-053	2 - residential	10858 SUTTER AVE	277	79	65	0.7	1.5	3.9
NB-4-054	2 - residential	10864 SUTTER AVE	273	79	65	0.7	1.5	3.9
NB-4-055	2 - residential	10868 SUTTER AVE	272	79	65	0.7	1.5	3.9

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NB-4-056	2 - residential	10872 SUTTER AVE	284	79	65	0.6	1.5	3.9
NB-4-057	2 - residential	10876 SUTTER AVE	278	79	65	0.6	1.5	3.9
NB-4-058	2 - residential	10880 SUTTER AVE	279	79	65	0.6	1.5	3.9
NB-4-059	2 - residential	10886 SUTTER AVE	277	79	65	0.6	1.5	3.9
NB-4-060	2 - residential	10886 SUTTER AVE	282	79	65	0.6	1.5	3.9
NB-4-061	2 - residential	10908 SUTTER AVE	275	79	65	0.6	1.5	3.9
NB-4-062	2 - residential	10910 SUTTER AVE	273	79	65	0.6	1.5	3.9
NB-4-063	2 - residential	10920 SUTTER AVE	284	79	65	0.6	1.5	3.9
NB-4-064	2 - residential	10922 SUTTER AVE	278	79	65	0.6	1.5	3.9
NB-4-065	2 - residential	10924 SUTTER AVE	282	79	65	0.6	1.5	3.9
NB-4-066	2 - residential	10928 SUTTER AVE	283	79	65	0.6	1.5	3.9
NB-4-067	2 - residential	10928 SUTTER AVE	275	79	65	0.6	1.5	3.9
NB-4-068	2 - residential	10928 SUTTER AVE	328	79	65	0.5	1.5	3.9
NB-4-069	2 - residential	10952 SUTTER AVE	274	79	65	0.6	1.5	3.9
NB-4-070	2 - residential	10954 SUTTER AVE	336	79	65	0.5	1.5	3.9
NB-4-071	2 - residential	--	336	79	65	0.5	1.5	3.9
NB-4-072	2 - residential	10960 SUTTER AVE	350	79	65	0.5	1.5	3.9
NB-4-073	2 - residential	10968 SUTTER AVE	275	79	65	0.6	1.5	3.9
NB-4-074	2 - residential	10970 SUTTER AVE	275	79	65	0.6	1.5	3.9
NB-4-075	2 - residential	10970 SUTTER AVE	278	79	65	0.6	1.5	3.9
NB-4-076	2 - residential	11010 SUTTER AVE	272	79	65	0.6	1.5	3.9
NB-4-077	2 - residential	11016 SUTTER AVE	277	79	65	0.6	1.5	3.9
NB-4-078	2 - residential	11018 SUTTER AVE	269	79	65	0.6	1.5	3.9
NB-4-079	2 - residential	11020 SUTTER AVE	268	79	65	0.6	1.5	3.9
NB-4-080	2 - residential	11026 SUTTER AVE	273	79	65	0.6	1.5	3.9

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NB-4-081	2 - residential	11026 SUTTER AVE	285	79	65	0.6	1.5	3.9
NB-4-082	2 - residential	60 JESSIE ST	126	79	76	0.3	0.4	2.2
NB-4-083	2 - residential	100 JESSIE ST	336	79	67	0.3	1.3	3.4
NB-4-084	2 - residential	108 JESSIE ST	405	79	67	0.6	1.3	3.4
NB-4-085	2 - residential	116 JESSIE ST	485	79	67	0.6	1.3	3.4
NB-4-086	2 - residential	--	535	79	67	0.5	1.3	3.4
NB-4-087	2 - residential	--	356	79	67	0.4	1.3	3.4
NB-4-088	2 - residential	1425 1ST ST	263	79	67	0.5	1.3	3.4
NB-4-089	2 - residential	146 N HUBBARD AVE	441	79	67	0.3	1.3	3.4
NB-4-090	2 - residential	12231 WILLOWBEND LN	273	79	67	0.6	1.3	3.4
NB-4-091	2 - residential	12245 HILLSDALE AVE	274	79	67	0.5	1.3	3.4
NB-4-092	2 - residential	12245 HILLSDALE AVE	286	60	67	0.8	1.3	3.4
NB-4-093	2 - residential	12267 WINDMERE AVE	460	60	67	0.4	1.3	3.4
NB-4-094	2 - residential	14630 TUNDRA DR	283	60	67	0.7	1.3	3.4
NB-4-095	2 - residential	14630 TUNDRA DR	210	60	67	0.9	1.3	3.4
NB-4-096	2 - residential	14630 TUNDRA DR	175	60	67	1.1	1.2	3.2
NB-4-097	2 - residential	12304 SAN FERNANDO RD	130	60	72	0.6	1.0	2.6
NB-4-098	2 - residential	12306 SAN FERNANDO RD	131	60	72	0.6	1.0	2.6
NB-4-099	2 - residential	12318 SAN FERNANDO RD	128	60	72	0.6	1.0	2.6
NB-4-100	2 - residential	12318 SAN FERNANDO RD	229	60	67	0.5	1.3	3.4
NB-4-101	2 - residential	12318 SAN FERNANDO RD	127	60	72	0.6	1.0	2.6
NB-4-102	2 - residential	12320 SAN FERNANDO RD	284	60	67	0.4	1.3	3.4
NB-4-103	2 - residential	12324 SAN FERNANDO RD	168	60	71	0.6	1.0	2.8
NB-4-104	2 - residential	12320 SAN FERNANDO RD	329	60	67	0.2	1.3	3.4
NB-4-105	2 - residential	12328 SAN FERNANDO RD	152	60	71	0.6	1.0	2.6

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NB-4-106	2 - residential	12318 SAN FERNANDO RD	278	60	67	0.4	1.3	3.4
NB-4-107	2 - residential	12324 SAN FERNANDO RD	280	60	67	0.4	1.3	3.4
NB-4-108	2 - residential	12336 SAN FERNANDO RD	128	60	72	0.6	1.0	2.6
NB-4-109	2 - residential	12328 SAN FERNANDO RD	269	60	67	0.4	1.3	3.4
NB-4-110	2 - residential	12452 SAN FERNANDO RD	226	60	69	0.4	1.1	2.9
NB-4-111	2 - residential	14850 ASTORIA ST	276	60	67	0.5	1.3	3.4
NB-4-112	2 - residential	14844 ASTORIA ST	329	60	67	0.3	1.3	3.4
NB-4-113	2 - residential	12508 SAN FERNANDO RD	133	60	77	0.3	0.3	2.1
NB-4-114	2 - residential	12514 SAN FERNANDO RD	132	60	77	0.3	0.3	2.1
NB-4-115	2 - residential	12514 SAN FERNANDO RD	210	60	70	0.4	1.1	2.9
NB-4-116	2 - residential	12514 SAN FERNANDO RD	260	60	67	0.6	1.3	3.4
NB-4-117	2 - residential	12514 SAN FERNANDO RD	133	60	77	0.2	0.3	2.1
NB-4-118	2 - residential	12520 SAN FERNANDO RD	131	60	77	0.2	0.3	2.1
NB-4-119	2 - residential	12514 SAN FERNANDO RD	313	60	67	0.8	1.3	3.4
NB-4-120	2 - residential	12514 SAN FERNANDO RD	363	60	67	0.3	1.3	3.4
NB-4-121	2 - residential	12520 SAN FERNANDO RD	238	60	67	0.5	1.3	3.4
NB-4-122	2 - residential	12534 SAN FERNANDO RD	174	60	75	0.2	0.4	2.2
NB-4-123	2 - residential	12540 SAN FERNANDO RD	226	60	74	0.2	0.5	2.3
NB-4-124	2 - residential	12550 SAN FERNANDO RD	135	60	76	0.2	0.3	2.1
NB-4-125	2 - residential	12560 SAN FERNANDO RD	137	60	76	0.2	0.3	2.1
NB-4-126	2 - residential	12566 SAN FERNANDO RD	142	60	76	0.2	0.3	2.1
NB-4-127	2 - residential	12566 SAN FERNANDO RD	142	60	76	0.2	0.3	2.1
NB-4-128	2 - residential	12600 SAN FERNANDO RD UNIT 104	147	60	76	0.2	0.3	2.1
NB-4-129	2 - residential	12616 SAN FERNANDO RD	129	60	77	0.2	0.3	2.1
NB-4-130	2 - residential	12620 SAN FERNANDO RD	138	60	76	0.2	0.3	2.1

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NB-4-131	2 - residential	12620 SAN FERNANDO RD	152	60	76	0.2	0.4	2.2
NB-4-132	2 - residential	14960 POLK ST	138	60	76	0.2	0.3	2.1
NB-4-133	2 - residential	12620 SAN FERNANDO RD	293	60	67	0.8	1.3	3.4
NB-4-134	2 - residential	14960 POLK ST	164	60	71	0.8	1.0	2.8
NB-4-135	2 - residential	12632 SAN FERNANDO RD	279	60	67	0.5	1.3	3.4
NB-4-136	2 - residential	14954 POLK ST	211	60	70	0.4	1.1	2.9
NB-4-137	2 - residential	14950 POLK ST	256	60	67	0.5	1.3	3.4
NB-4-138	2 - residential	14946 POLK ST	303	60	67	0.3	1.3	3.4
NB-4-139	2 - residential	14940 POLK ST	350	60	67	0.3	1.3	3.4
NB-4-140	2 - residential	14959 POLK ST	127	60	77	0.3	0.3	2.1
NB-4-141	2 - residential	14959 POLK ST	176	60	70	0.4	1.0	2.8
NB-4-142	2 - residential	14955 POLK ST	228	60	67	0.7	1.3	3.4
NB-4-143	2 - residential	14951 POLK ST	278	60	67	0.4	1.3	3.4
NB-4-144	2 - residential	14947 POLK ST	322	60	67	0.3	1.3	3.4
NB-4-145	2 - residential	14941 POLK ST	376	60	67	0.2	1.3	3.4
NB-4-146	2 - residential	14994 NURMI ST	128	60	77	0.2	0.3	2.1
NB-4-147	2 - residential	14994 NURMI ST	187	60	70	0.4	1.0	2.8
NB-4-148	2 - residential	14988 NURMI ST	247	60	67	0.5	1.3	3.4
NB-4-149	2 - residential	14982 NURMI ST	305	60	67	0.3	1.3	3.4
NB-4-150	2 - residential	14976 NURMI ST	365	60	67	0.3	1.3	3.4
NB-4-151	2 - residential	15030 OSWALD ST	127	60	77	0.2	0.3	2.1
NB-4-152	2 - residential	15030 OSWALD ST	187	60	70	0.3	1.0	2.8
NB-4-153	2 - residential	15024 OSWALD ST	246	60	67	0.5	1.3	3.4
NB-4-154	2 - residential	15018 OSWALD ST	303	60	67	0.3	1.3	3.4
NB-4-155	2 - residential	15012 OSWALD ST	364	60	67	0.2	1.3	3.4

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NB-4-156	2 - residential	15030 OSWALD ST	127	60	77	0.2	0.3	2.1
NB-4-157	2 - residential	15030 OSWALD ST	183	60	70	0.3	1.0	2.8
NB-4-158	2 - residential	15024 OSWALD ST	243	60	67	0.5	1.3	3.4
NB-4-159	2 - residential	15018 OSWALD ST	305	60	67	0.3	1.3	3.4
NB-4-160	2 - residential	15012 OSWALD ST	364	60	67	0.2	1.3	3.4
NB-4-161	2 - residential	12740 SAN FERNANDO RD	122	60	77	0.2	0.3	2.1
NB-4-162	2 - residential	12740 SAN FERNANDO RD	183	60	70	0.3	1.0	2.8
NB-4-163	2 - residential	12740 SAN FERNANDO RD	246	60	67	0.4	1.3	3.4
NB-4-164	2 - residential	12740 SAN FERNANDO RD	305	60	67	0.3	1.3	3.4
NB-4-165	2 - residential	12740 SAN FERNANDO RD	363	60	67	0.2	1.3	3.4
NB-4-166	2 - residential	15600 ROXFORD ST	69	60	79	**0.3**	0.2	1.5
NB-4-167	2 - residential	15853 OLDEN ST	347	60	62	0.8	1.9	4.7
NB-4-168	2 - residential	--	365	60	62	1.0	1.9	4.7
NB-4-169	2 - residential	16250 FILBERT ST	58	60	63	1.5	1.7	4.4
SB-4-001	2 - residential	8934 LANKERSHIM BLVD	121	79	69	0.5	1.1	2.9
SB-4-002	2 - residential	9043 SAN FERNANDO RD	118	79	69	0.5	1.1	2.9
SB-4-003	2 - residential	9024 ILEX AVE	330	79	63	0.4	1.6	4.1
SB-4-004	2 - residential	9024 ILEX AVE	278	79	63	0.5	1.6	4.1
SB-4-005	2 - residential	9044 ILEX AVE	260	79	63	0.5	1.6	4.1
SB-4-006	2 - residential	9050 ILEX AVE	255	79	63	0.5	1.6	4.1
SB-4-007	2 - residential	9050 ILEX AVE	254	79	63	0.6	1.6	4.1
SB-4-008	2 - residential	9072 ILEX AVE	333	79	63	0.5	1.6	4.1
SB-4-009	2 - residential	11824 ART ST	277	79	63	0.5	1.6	4.1
SB-4-010	2 - residential	11824 ART ST	345	79	63	0.3	1.6	4.1
SB-4-011	2 - residential	11824 ART ST	294	79	63	0.4	1.6	4.1

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
SB-4-012	2 - residential	11820 ART ST	246	79	63	0.6	1.6	4.1
SB-4-013	2 - residential	11816 ART ST	195	79	63	0.7	1.6	4.1
SB-4-014	2 - residential	9175 SAN FERNANDO RD	324	79	63	0.5	1.6	4.1
SB-4-015	2 - residential	11825 ART ST	230	79	63	0.7	1.6	4.1
SB-4-016	2 - residential	9158 TELFAIR AVE	335	79	63	0.9	1.6	4.1
SB-4-017	2 - residential	--	469	79	63	1.2	1.6	4.1
SB-4-018	2 - residential	--	510	79	63	0.6	1.6	4.1
SB-4-019	2 - residential	--	470	79	63	1.1	1.6	4.1
SB-4-020	2 - residential	--	470	79	63	1.1	1.6	4.1
SB-4-021	2 - residential	--	470	79	63	1.1	1.6	4.1
SB-4-022	2 - residential	--	471	79	63	1.0	1.6	4.1
SB-4-023	2 - residential	--	469	79	63	1.0	1.6	4.1
SB-4-024	2 - residential	--	471	79	63	1.0	1.6	4.1
SB-4-025	2 - residential	9390 ILEX AVE	267	79	66	1.0	1.3	3.4
SB-4-026	2 - residential	9394 ILEX AVE	267	79	66	0.6	1.4	3.6
SB-4-027	2 - residential	9404 ILEX AVE	265	79	63	0.9	1.6	4.1
SB-4-028	2 - residential	9449 SAN FERNANDO RD	301	79	63	0.8	1.6	4.1
SB-4-029	2 - residential	9449 SAN FERNANDO RD	124	79	74	0.4	0.5	2.3
SB-4-030	2 - residential	9420 EL DORADO AVE	283	79	71	0.3	1.0	2.8
SB-4-031	2 - residential	9420 EL DORADO AVE	126	79	74	0.4	0.5	2.3
SB-4-032	2 - residential	9483 SAN FERNANDO RD	439	79	63	1.0	1.6	4.1
SB-4-033	2 - residential	12118 TRUESDALE ST	384	79	63	1.1	1.6	4.1
SB-4-034	2 - residential	12118 TRUESDALE ST	334	79	63	0.7	1.6	4.1
SB-4-035	2 - residential	12118 TRUESDALE ST	271	79	63	0.9	1.6	4.1
SB-4-036	2 - residential	12542 DEBELL ST	395	79	63	0.6	1.6	4.1

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SB-4-037	2 - residential	12538 DEBELL ST	366	79	63	0.7	1.6	4.1
SB-4-038	2 - residential	12536 DEBELL ST	333	79	63	0.7	1.6	4.1
SB-4-039	2 - residential	12532 DEBELL ST	356	79	63	0.7	1.6	4.1
SB-4-040	2 - residential	12530 DEBELL ST	361	79	63	0.6	1.6	4.1
SB-4-041	2 - residential	12530 DEBELL ST	335	79	63	0.6	1.6	4.1
SB-4-042	2 - residential	12570 BROMWICH ST	358	79	63	0.5	1.6	4.1
SB-4-043	2 - residential	12570 BROMWICH ST	304	79	63	0.8	1.6	4.1
SB-4-044	2 - residential	12566 BROMWICH ST	255	79	63	0.9	1.6	4.1
SB-4-045	2 - residential	9961 SAN FERNANDO RD	137	79	74	0.3	0.6	2.4
SB-4-046	2 - residential	9971 SAN FERNANDO RD	164	79	73	0.4	0.8	2.5
SB-4-047	2 - residential	12570 BROMWICH ST	353	79	63	0.5	1.6	4.1
SB-4-048	2 - residential	12570 BROMWICH ST	303	79	63	0.8	1.6	4.1
SB-4-049	2 - residential	12566 BROMWICH ST	257	79	63	0.9	1.6	4.1
SB-4-050	2 - residential	9958 ILEX AVE	377	79	63	0.6	1.6	4.1
SB-4-051	2 - residential	9966 ILEX AVE	354	79	63	0.7	1.6	4.1
SB-4-052	2 - residential	9972 ILEX AVE	369	79	63	0.7	1.6	4.1
SB-4-053	2 - residential	10002 ILEX AVE	360	79	63	0.7	1.6	4.1
SB-4-054	2 - residential	10008 ILEX AVE	354	79	63	0.7	1.6	4.1
SB-4-055	2 - residential	10014 ILEX AVE	353	79	63	0.7	1.6	4.1
SB-4-056	2 - residential	10020 ILEX AVE	353	79	63	0.7	1.6	4.1
SB-4-057	2 - residential	10020 ILEX AVE	354	79	63	0.7	1.6	4.1
SB-4-058	2 - residential	10036 ILEX AVE	376	79	63	0.7	1.6	4.1
SB-4-059	2 - residential	--	364	79	63	0.7	1.6	4.1
SB-4-060	2 - residential	--	553	79	63	0.5	1.6	4.1
SB-4-061	2 - residential	--	500	79	63	1.1	1.6	4.1

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SB-4-062	2 - residential	--	555	79	63	0.5	1.6	4.1
SB-4-063	2 - residential	--	503	79	63	1.1	1.6	4.1
SB-4-064	2 - residential	12824 KAMLOOPS ST	403	79	63	0.7	1.6	4.1
SB-4-065	2 - residential	12824 KAMLOOPS ST	353	79	63	0.7	1.6	4.1
SB-4-066	2 - residential	12824 KAMLOOPS ST	353	79	63	0.5	1.6	4.1
SB-4-067	2 - residential	12824 KAMLOOPS ST	305	79	63	0.8	1.6	4.1
SB-4-068	2 - residential	12820 KAMLOOPS ST	255	79	63	1.0	1.6	4.1
SB-4-069	2 - residential	12846 KELOWNA ST	355	79	63	0.5	1.6	4.1
SB-4-070	2 - residential	12846 KELOWNA ST	318	79	63	0.8	1.6	4.1
SB-4-071	2 - residential	12842 KELOWNA ST	253	79	63	1.0	1.6	4.1
SB-4-072	2 - residential	12846 KELOWNA ST	359	79	63	0.5	1.6	4.1
SB-4-073	2 - residential	12846 KELOWNA ST	304	79	63	0.6	1.6	4.1
SB-4-074	2 - residential	12842 KELOWNA ST	257	79	63	0.9	1.6	4.1
SB-4-075	2 - residential	10225 SAN FERNANDO RD	129	79	74	0.4	0.6	2.4
SB-4-076	2 - residential	12876 KAGEL CANYON ST	353	79	63	0.5	1.6	4.1
SB-4-077	2 - residential	12876 KAGEL CANYON ST	307	79	63	0.6	1.6	4.1
SB-4-078	2 - residential	12872 KAGEL CANYON ST	257	79	63	0.9	1.6	4.1
SB-4-079	2 - residential	12876 KAGEL CANYON ST	353	79	63	0.5	1.6	4.1
SB-4-080	2 - residential	12876 KAGEL CANYON ST	310	79	63	0.6	1.6	4.1
SB-4-081	2 - residential	12872 KAGEL CANYON ST	259	79	63	0.9	1.6	4.1
SB-4-082	2 - residential	12922 GOLETA ST	270	79	63	0.9	1.6	4.1
SB-4-083	2 - residential	12922 GOLETA ST	331	79	63	0.5	1.6	4.1
SB-4-084	2 - residential	12922 GOLETA ST	265	79	63	0.8	1.6	4.1
SB-4-085	2 - residential	12916 GOLETA ST	127	79	74	0.2	0.6	2.4
SB-4-086	2 - residential	12950 GLAMIS ST	322	79	63	0.4	1.6	4.1

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SB-4-087	2 - residential	12950 GLAMIS ST	269	79	63	0.6	1.6	4.1
SB-4-088	2 - residential	12950 GLAMIS ST	322	79	63	0.4	1.6	4.1
SB-4-089	2 - residential	12950 GLAMIS ST	264	79	63	0.6	1.6	4.1
SB-4-090	2 - residential	13002 GARBER ST	127	79	74	0.2	0.6	2.4
SB-4-091	2 - residential	13002 GARBER ST	342	79	63	0.4	1.6	4.1
SB-4-092	2 - residential	13002 GARBER ST	292	79	63	0.4	1.6	4.1
SB-4-093	2 - residential	12988 GARBER ST	242	79	63	0.7	1.6	4.1
SB-4-094	2 - residential	13022 TERRA BELLA ST	345	79	63	0.4	1.6	4.1
SB-4-095	2 - residential	13022 TERRA BELLA ST	292	79	63	0.5	1.6	4.1
SB-4-096	2 - residential	13018 TERRA BELLA ST	242	79	63	0.7	1.6	4.1
SB-4-097	2 - residential	13022 TERRA BELLA ST	342	79	63	0.5	1.6	4.1
SB-4-098	2 - residential	13022 TERRA BELLA ST	292	79	63	0.5	1.6	4.1
SB-4-099	2 - residential	13018 TERRA BELLA ST	246	79	63	0.9	1.6	4.1
SB-4-100	2 - residential	10434 ILEX AVE	349	79	63	0.5	1.6	4.1
SB-4-101	2 - residential	10434 ILEX AVE	269	79	63	0.9	1.6	4.1
SB-4-102	2 - residential	10520 ILEX AVE	266	79	63	0.9	1.6	4.1
SB-4-103	2 - residential	10526 ILEX AVE	266	79	63	0.9	1.6	4.1
SB-4-104	2 - residential	10526 ILEX AVE	266	79	63	0.9	1.6	4.1
SB-4-105	2 - residential	10556 ILEX AVE	319	79	63	0.8	1.6	4.1
SB-4-106	2 - residential	--	123	79	74	0.4	0.5	2.3
SB-4-107	2 - residential	10570 ILEX AVE	152	79	73	0.5	0.6	2.4
SB-4-108	2 - residential	10576 ILEX AVE	325	79	63	1.0	1.6	4.1
SB-4-109	2 - residential	10626 ILEX AVE	276	79	65	0.7	1.5	3.9
SB-4-110	2 - residential	10630 ILEX AVE	308	79	65	0.6	1.5	3.9
SB-4-111	2 - residential	10636 ILEX AVE	280	79	65	0.7	1.5	3.9

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SB-4-112	2 - residential	10640 ILEX AVE	267	79	65	0.7	1.5	3.9
SB-4-113	2 - residential	10646 ILEX AVE	266	79	65	0.7	1.5	3.9
SB-4-114	2 - residential	10650 ILEX AVE	324	79	65	0.6	1.5	3.9
SB-4-115	2 - residential	10656 ILEX AVE	266	79	65	0.7	1.5	3.9
SB-4-116	2 - residential	10656 ILEX AVE	206	79	71	0.5	1.0	2.8
SB-4-117	2 - residential	10660 ILEX AVE	266	79	65	0.7	1.5	3.9
SB-4-118	2 - residential	10666 ILEX AVE	308	79	65	0.6	1.5	3.9
SB-4-119	2 - residential	10672 ILEX AVE	268	79	65	0.6	1.5	3.9
SB-4-120	2 - residential	10666 ILEX AVE	123	79	73	0.5	0.8	2.5
SB-4-121	2 - residential	10676 ILEX AVE	328	79	65	0.5	1.5	3.9
SB-4-122	2 - residential	10680 ILEX AVE	266	79	65	0.7	1.5	3.9
SB-4-123	2 - residential	10700 ILEX AVE	273	79	65	0.6	1.5	3.9
SB-4-124	2 - residential	10706 ILEX AVE	275	79	65	0.6	1.5	3.9
SB-4-125	2 - residential	10708 ILEX AVE	276	79	65	0.6	1.5	3.9
SB-4-126	2 - residential	10710 ILEX AVE	266	79	65	0.7	1.5	3.9
SB-4-127	2 - residential	10716 ILEX AVE	308	79	65	0.6	1.5	3.9
SB-4-128	2 - residential	10716 ILEX AVE	267	79	65	0.7	1.5	3.9
SB-4-129	2 - residential	13322 PINNEY ST	329	79	65	0.6	1.5	3.9
SB-4-130	2 - residential	10859 SAN FERNANDO RD	428	79	65	0.4	1.5	3.9
SB-4-131	2 - residential	10830 ILEX AVE	428	79	65	0.4	1.5	3.9
SB-4-132	2 - residential	10838 ILEX AVE	321	79	65	0.5	1.5	3.9
SB-4-133	2 - residential	10844 ILEX AVE	323	79	65	0.5	1.5	3.9
SB-4-134	2 - residential	10850 ILEX AVE	324	79	65	0.5	1.5	3.9
SB-4-135	2 - residential	10858 ILEX AVE	338	79	65	0.5	1.5	3.9
SB-4-136	2 - residential	10858 ILEX AVE	325	79	65	0.5	1.5	3.9

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SB-4-137	2 - residential	--	378	79	65	0.3	1.5	3.9
SB-4-138	2 - residential	--	341	79	65	0.4	1.5	3.9
SB-4-139	2 - residential	13458 FILMORE ST	276	79	65	0.6	1.5	3.9
SB-4-140	2 - residential	13476 LOUVRE ST	306	79	65	0.4	1.5	3.9
SB-4-141	2 - residential	13476 LOUVRE ST	249	79	65	0.7	1.5	3.9
SB-4-142	2 - residential	13476 LOUVRE ST	263	79	65	0.6	1.5	3.9
SB-4-143	2 - residential	13522 WEIDNER ST	341	79	62	0.7	1.9	4.7
SB-4-144	2 - residential	13522 WEIDNER ST	327	79	62	0.8	1.9	4.7
SB-4-145	2 - residential	13522 WEIDNER ST	266	79	62	1.2	1.9	4.7
SB-4-146	2 - residential	13525 WEIDNER ST	365	79	62	0.7	1.9	4.7
SB-4-147	2 - residential	13521 WEIDNER ST	264	79	62	1.3	1.9	4.7
SB-4-148	2 - residential	13525 WEIDNER ST	364	79	62	0.7	1.9	4.7
SB-4-149	2 - residential	13525 WEIDNER ST	312	79	62	1.1	1.9	4.7
SB-4-150	2 - residential	--	599	79	62	1.2	1.9	4.7
SB-4-151	2 - residential	--	600	79	62	1.2	1.9	4.7
SB-4-152	2 - residential	--	523	79	62	1.3	1.9	4.7
SB-4-153	2 - residential	12151 SAN FERNANDO RD	405	79	67	0.3	1.3	3.4
SB-4-154	2 - residential	12171 SAN FERNANDO RD	379	60	67	0.3	1.3	3.4
SB-4-155	2 - residential	12181 SAN FERNANDO RD	373	60	67	0.3	1.3	3.4
SB-4-156	2 - residential	--	346	60	67	0.3	1.3	3.4
SB-4-157	2 - residential	14710 BLEEKER ST	392	60	67	0.5	1.3	3.4
SB-4-158	2 - residential	14710 BLEEKER ST	244	60	67	0.8	1.3	3.4
SB-4-159	2 - residential	--	224	60	67	0.9	1.3	3.4
SB-4-160	2 - residential	--	128	60	72	0.6	1.0	2.6
SB-4-161	2 - residential	12357 SAN FERNANDO RD	358	60	67	0.1	1.3	3.4

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SB-4-162	2 - residential	12357 SAN FERNANDO RD	331	60	67	0.1	1.3	3.4
SB-4-163	2 - residential	12357 SAN FERNANDO RD	304	60	67	0.2	1.3	3.4
SB-4-164	2 - residential	12357 SAN FERNANDO RD	277	60	67	0.2	1.3	3.4
SB-4-165	2 - residential	12357 SAN FERNANDO RD	250	60	67	0.3	1.3	3.4
SB-4-166	2 - residential	12357 SAN FERNANDO RD	223	60	69	0.2	1.1	2.9
SB-4-167	2 - residential	12357 SAN FERNANDO RD	196	60	70	0.3	1.1	2.9
SB-4-168	2 - residential	12357 SAN FERNANDO RD	169	60	70	0.3	1.0	2.8
SB-4-169	2 - residential	12357 SAN FERNANDO RD	130	60	72	0.6	1.0	2.6
SB-4-170	2 - residential	--	374	60	67	0.1	1.3	3.4
SB-4-171	2 - residential	--	347	60	67	0.2	1.3	3.4
SB-4-172	2 - residential	--	320	60	67	0.2	1.3	3.4
SB-4-173	2 - residential	--	293	60	67	0.4	1.3	3.4
SB-4-174	2 - residential	--	266	60	67	0.4	1.3	3.4
SB-4-175	2 - residential	--	196	60	70	0.6	1.1	2.9
SB-4-176	2 - residential	--	347	60	67	0.2	1.3	3.4
SB-4-177	2 - residential	--	279	60	67	0.4	1.3	3.4
SB-4-178	2 - residential	--	196	60	70	0.6	1.1	2.9
SB-4-179	2 - residential	--	279	60	67	0.4	1.3	3.4
SB-4-180	2 - residential	--	196	60	70	0.6	1.1	2.9
SB-4-181	2 - residential	--	279	60	67	0.4	1.3	3.4
SB-4-182	2 - residential	--	196	60	70	0.6	1.1	2.9
SB-4-183	2 - residential	--	352	60	67	0.2	1.3	3.4
SB-4-184	2 - residential	--	263	60	67	0.4	1.3	3.4
SB-4-185	2 - residential	14915 BERG ST	331	60	67	0.1	1.3	3.4
SB-4-186	2 - residential	14915 BERG ST	304	60	67	0.2	1.3	3.4

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SB-4-187	2 - residential	12405 SAN FERNANDO RD	277	60	67	0.2	1.3	3.4
SB-4-188	2 - residential	12405 SAN FERNANDO RD	250	60	67	0.3	1.3	3.4
SB-4-189	2 - residential	12405 SAN FERNANDO RD	223	60	69	0.2	1.1	2.9
SB-4-190	2 - residential	12405 SAN FERNANDO RD	196	60	70	0.3	1.1	2.9
SB-4-191	2 - residential	12405 SAN FERNANDO RD	169	60	70	0.3	1.0	2.8
SB-4-192	2 - residential	12405 SAN FERNANDO RD	130	60	72	0.6	1.0	2.6
SB-4-193	2 - residential	14915 BERG ST	322	60	67	0.4	1.3	3.4
SB-4-194	2 - residential	14915 BERG ST	133	60	76	0.2	0.3	2.1
SB-4-195	2 - residential	14915 BERG ST	113	60	77	0.3	0.3	2.0
SB-4-196	2 - residential	14929 ASTORIA ST	413	60	67	0.3	1.3	3.4
SB-4-197	2 - residential	14923 ASTORIA ST	354	60	67	0.4	1.3	3.4
SB-4-198	2 - residential	14972 ORO GRANDE ST	351	60	67	0.4	1.3	3.4
SB-4-199	2 - residential	14972 ORO GRANDE ST	338	60	67	0.3	1.3	3.4
SB-4-200	2 - residential	14972 ORO GRANDE ST	128	60	77	0.2	0.3	2.1
SB-4-201	2 - residential	14972 ORO GRANDE ST	413	60	67	0.3	1.3	3.4
SB-4-202	2 - residential	12507 SAN FERNANDO RD	376	60	67	0.5	1.3	3.4
SB-4-203	2 - residential	14968 PADDOCK ST	270	60	68	0.3	1.2	3.1
SB-4-204	2 - residential	14973 PADDOCK ST	325	60	68	0.3	1.2	3.2
SB-4-205	2 - residential	12641 SAN FERNANDO RD	143	60	76	0.3	0.3	2.1
SB-4-206	2 - residential	12651 SAN FERNANDO RD	380	60	67	0.4	1.3	3.4
SB-4-207	2 - residential	12667 SAN FERNANDO RD	143	60	76	0.3	0.3	2.1
SB-4-208	2 - residential	15062 NURMI ST	378	60	67	0.3	1.3	3.4
SB-4-209	2 - residential	15062 NURMI ST	325	60	68	0.3	1.2	3.2
SB-4-210	2 - residential	12725 SAN FERNANDO RD	378	60	67	0.3	1.3	3.4
SB-4-211	2 - residential	15069 NURMI ST	377	60	67	0.3	1.3	3.4

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SB-4-212	2 - residential	12713 SAN FERNANDO RD	326	60	68	0.3	1.2	3.2
SB-4-213	2 - residential	12713 SAN FERNANDO RD	278	60	68	0.3	1.2	3.1
SB-4-214	2 - residential	12725 SAN FERNANDO RD	142	60	71	0.6	1.0	2.6
SB-4-215	2 - residential	12733 SAN FERNANDO RD	379	60	67	0.5	1.3	3.4
SB-4-216	2 - residential	15150 REX ST	391	60	67	0.3	1.3	3.4
SB-4-217	2 - residential	15150 REX ST	343	60	67	0.3	1.3	3.4
SB-4-218	2 - residential	15151 REX ST	338	60	67	0.3	1.3	3.4
SB-4-219	2 - residential	15150 REX ST	140	60	71	0.6	1.0	2.6
SB-4-220	2 - residential	15151 REX ST	141	60	71	0.6	1.0	2.6
SB-4-221	2 - residential	15151 REX ST	338	60	67	0.3	1.3	3.4
SB-4-222	2 - residential	12783 SAN FERNANDO RD	139	60	71	0.6	1.0	2.6
SB-4-223	2 - residential	15202 RYAN ST	339	60	67	0.3	1.3	3.4
SB-4-224	2 - residential	15215 RYAN ST	339	60	67	0.3	1.3	3.4
SB-4-225	2 - residential	12831 SAN FERNANDO RD	142	60	71	0.6	1.0	2.6
SB-4-226	2 - residential	15224 EL CASCO ST	338	60	67	0.3	1.3	3.4
SB-4-227	2 - residential	15224 EL CASCO ST	366	60	67	0.3	1.3	3.4
SB-4-228	2 - residential	15224 EL CASCO ST	141	60	71	0.6	1.0	2.6
SB-4-229	2 - residential	15224 LA VALLE ST	374	60	64	0.4	1.6	4.1
SB-4-230	2 - residential	15224 LA VALLE ST	326	60	64	0.6	1.6	4.1
SB-4-231	2 - residential	15220 LA VALLE ST	279	60	64	0.7	1.6	4.1
SB-4-232	2 - residential	15224 LA VALLE ST	372	60	64	0.4	1.6	4.1
SB-4-233	2 - residential	15224 LA VALLE ST	327	60	64	0.6	1.6	4.1
SB-4-234	2 - residential	15220 LA VALLE ST	278	60	64	0.7	1.5	3.9
SB-4-235	2 - residential	12871 SAN FERNANDO RD	138	60	76	0.2	0.3	2.1
SB-4-236	2 - residential	15324 BLEDSOE ST	372	60	64	0.5	1.6	4.1

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SB-4-237	2 - residential	15324 BLEDSOE ST	324	60	64	0.8	1.5	3.9
SB-4-238	2 - residential	15320 BLEDSOE ST	279	60	64	0.8	1.5	3.9
SB-4-239	2 - residential	15324 BLEDSOE ST	326	60	64	0.8	1.5	3.9
SB-4-240	2 - residential	15320 BLEDSOE ST	279	60	64	0.9	1.5	3.9
SB-4-241	2 - residential	12883 SAN FERNANDO RD	141	60	76	0.2	0.3	2.1
SB-4-242	2 - residential	12883 SAN FERNANDO RD	141	60	76	0.2	0.3	2.1
SB-4-243	2 - residential	12883 SAN FERNANDO RD	141	60	76	0.3	0.3	2.1
SB-4-244	2 - residential	12883 SAN FERNANDO RD	140	60	76	0.3	0.3	2.1
SB-4-245	2 - residential	15450 EL CAJON ST	281	60	64	0.9	1.5	3.9
SB-4-246	2 - residential	12917 SAN FERNANDO RD	138	60	73	0.5	0.6	2.4
SB-4-247	2 - residential	15444 EL CAJON ST	341	60	64	0.4	1.6	4.1
SB-4-248	2 - residential	15444 EL CAJON ST	286	60	64	0.7	1.5	3.9
SB-4-249	2 - residential	15444 EL CAJON ST	280	60	64	0.7	1.6	4.1
SB-4-250	2 - residential	12953 SAN FERNANDO RD	139	60	76	0.2	0.3	2.1
SB-4-251	2 - residential	15522 COBALT ST	357	60	64	0.5	1.6	4.1
SB-4-252	2 - residential	15522 COBALT ST	362	60	64	0.5	1.6	4.1
SB-4-253	2 - residential	15522 COBALT ST	138	60	76	0.2	0.3	2.1
SB-4-254	2 - residential	15522 COBALT ST	161	60	76	0.2	0.4	2.2
SB-4-255	2 - residential	15324 BLEDSOE ST	372	60	64	0.5	1.6	4.1
SB-4-256	2 - residential	13059 SAN FERNANDO RD	142	60	71	0.6	1.0	2.6
SB-4-257	2 - residential	13026 EVELINA ST	357	60	64	0.5	1.6	4.1
SB-4-258	2 - residential	15521 SANDRA LN	362	60	64	0.5	1.6	4.1
SB-4-259	2 - residential	15522 SANDRA LN	167	60	75	0.2	0.4	2.2
SB-4-260	2 - residential	15521 SANDRA LN	363	60	64	0.5	1.6	4.1
SB-4-261	2 - residential	15521 SANDRA LN	138	60	76	0.2	0.3	2.1

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SB-4-262	2 - residential	15622 LARKSPUR ST	141	60	76	0.2	0.3	2.1
SB-4-263	2 - residential	15622 LARKSPUR ST	362	60	64	0.5	1.6	4.1
SB-4-264	2 - residential	15622 LARKSPUR ST	261	60	74	0.2	0.6	2.4
SB-4-265	2 - residential	15622 LA MESA ST	351	60	64	0.4	1.6	4.1
SB-4-266	2 - residential	15622 LA MESA ST	305	60	64	0.6	1.6	4.1
SB-4-267	2 - residential	15622 LA MESA ST	346	60	64	0.4	1.6	4.1
SB-4-268	2 - residential	15622 LA MESA ST	302	60	64	0.7	1.6	4.1
SB-4-269	2 - residential	15706 ROXFORD ST	338	60	64	0.7	1.5	3.9
SB-4-270	2 - residential	15706 ROXFORD ST	340	60	64	0.7	1.5	3.9
SB-4-271	2 - residential	15722 KADOTA ST	340	60	64	0.7	1.5	3.9
SB-4-272	2 - residential	15722 KADOTA ST	341	60	64	0.5	1.6	4.1
SB-4-273	2 - residential	15722 KADOTA ST	295	60	64	0.8	1.5	3.9
SB-4-274	2 - residential	13183 SAN FERNANDO RD	120	60	74	0.5	0.6	2.4
SB-4-275	2 - residential	15824 MONTE ST	343	60	64	0.4	1.6	4.1
SB-4-276	2 - residential	15824 MONTE ST	293	60	64	0.7	1.6	4.1
NB-5-001	2 - residential	23508 PINE ST	120	30	71	0.7	1.0	2.8
NB-5-002	2 - residential	23508 PINE ST	197	30	69	0.7	1.2	3.1
NB-5-003	2 - residential	23616 PINE ST	310	30	67	0.7	1.3	3.4
NB-5-004	2 - residential	23616 PINE ST	232	30	68	0.7	1.2	3.1
NB-5-005	2 - residential	23634 PINE ST	105	30	72	0.9	1.0	2.6
NB-5-006	2 - residential	23634 PINE ST	252	30	68	0.4	1.2	3.2
NB-5-007	2 - residential	23654 PINE ST	289	30	67	0.9	1.2	3.2
NB-5-008	2 - residential	23654 PINE ST	447	30	65	0.8	1.4	3.6
NB-5-009	2 - residential	23956 NEWHALL AVE	439	30	64	0.9	1.6	4.1
NB-5-010	2 - residential	--	445	30	64	0.9	1.6	4.1

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NB-5-011	2 - residential	--	496	30	64	0.8	1.6	4.1
NB-5-012	2 - residential	--	445	30	64	0.9	1.6	4.1
NB-5-013	2 - residential	--	499	30	64	0.9	1.6	4.1
NB-5-014	2 - residential	--	441	30	64	1.0	1.6	4.1
NB-5-015	2 - residential	--	444	30	64	0.6	1.6	4.1
NB-5-016	2 - residential	--	443	30	64	0.6	1.6	4.1
NB-5-017	2 - residential	--	243	30	67	0.6	1.2	3.2
NB-5-018	2 - residential	--	301	30	66	0.5	1.3	3.4
NB-5-019	2 - residential	24047 ARCH ST	243	30	67	0.6	1.2	3.2
NB-5-020	2 - residential	24049 ARCH ST	270	30	67	0.6	1.3	3.4
NB-5-021	2 - residential	24053 ARCH ST	270	30	67	0.6	1.3	3.4
NB-5-022	2 - residential	24057 ARCH ST	270	30	67	0.6	1.3	3.4
NB-5-023	2 - residential	24059 ARCH ST	271	30	72	0.4	1.0	2.6
NB-5-024	2 - residential	22404 3RD ST	270	30	72	0.4	1.0	2.6
NB-5-025	2 - residential	22404 3RD ST	271	30	72	0.4	1.0	2.6
NB-5-026	2 - residential	24110 PINE ST	113	30	76	0.4	0.4	2.2
NB-5-027	2 - residential	24114 PINE ST	113	30	76	0.4	0.4	2.2
NB-5-028	2 - residential	24109 ARCH ST	254	30	67	0.5	1.2	3.2
NB-5-029	2 - residential	24118 PINE ST	112	30	76	0.3	0.4	2.2
NB-5-030	2 - residential	24111 ARCH ST	256	30	67	0.5	1.2	3.2
NB-5-031	2 - residential	24122 PINE ST	113	30	76	0.3	0.4	2.2
NB-5-032	2 - residential	24115 ARCH ST	243	30	67	0.5	1.2	3.2
NB-5-033	2 - residential	24117 ARCH ST	243	30	67	0.5	1.2	3.2
NB-5-034	2 - residential	24122 PINE ST	106	30	76	0.3	0.4	2.2
NB-5-035	2 - residential	24127 ARCH ST	255	30	67	0.5	1.2	3.2

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NB-5-036	2 - residential	24127 ARCH ST	264	30	67	0.4	1.3	3.4
NB-5-037	2 - residential	24142 PINE ST	110	30	76	0.3	0.4	2.2
NB-5-038	2 - residential	24148 PINE ST	112	30	76	0.3	0.4	2.2
NB-5-039	2 - residential	24143 ARCH ST	242	30	67	0.4	1.2	3.2
NB-5-040	2 - residential	--	100	30	76	0.3	0.3	2.1
NB-5-041	2 - residential	--	100	30	76	0.3	0.3	2.1
NB-5-042	2 - residential	24147 ARCH ST	242	30	67	0.4	1.2	3.2
NB-5-043	2 - residential	24155 ARCH ST	240	30	67	0.4	1.2	3.2
NB-5-044	2 - residential	22416 5TH ST	109	30	76	0.3	0.4	2.2
NB-5-045	2 - residential	22408 5TH ST	243	30	67	0.4	1.2	3.2
NB-5-046	2 - residential	22408 5TH ST	238	30	67	0.4	1.2	3.2
NB-5-047	2 - residential	22408 5TH ST	301	30	66	0.4	1.3	3.4
NB-5-048	2 - residential	24209 ARCH ST	243	30	67	0.4	1.2	3.2
NB-5-049	2 - residential	24200 PINE ST	100	30	76	0.3	0.3	2.1
NB-5-050	2 - residential	24209 ARCH ST	242	30	67	0.4	1.2	3.2
NB-5-051	2 - residential	24223 ARCH ST	254	30	67	0.4	1.2	3.2
NB-5-052	2 - residential	--	243	30	67	0.4	1.2	3.2
NB-5-053	2 - residential	24227 ARCH ST	245	30	67	0.4	1.2	3.2
NB-5-054	2 - residential	24227 ARCH ST	245	30	67	0.4	1.2	3.2
NB-5-055	2 - residential	24242 PINE ST	112	30	76	0.3	0.4	2.2
NB-5-056	2 - residential	24244 PINE ST	112	30	76	0.3	0.4	2.2
NB-5-057	2 - residential	24246 PINE ST	112	30	76	0.3	0.4	2.2
NB-5-058	2 - residential	24248 PINE ST	112	30	76	0.3	0.4	2.2
NB-5-059	2 - residential	24245 ARCH ST	280	30	67	0.4	1.3	3.4
NB-5-060	2 - residential	24254 PINE ST	112	30	76	0.3	0.4	2.2

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							moderate	severe (significant for CEQA)
NB-5-061	2 - residential	24256 PINE ST	111	30	76	0.3	0.4	2.2
NB-5-062	2 - residential	24251 ARCH ST	242	30	67	0.4	1.2	3.2
NB-5-063	2 - residential	24258 PINE ST	110	30	76	0.3	0.4	2.2
NB-5-064	2 - residential	24262 PINE ST	110	30	76	0.3	0.4	2.2
NB-5-065	2 - residential	24257 ARCH ST	242	30	67	0.5	1.2	3.2
NB-5-066	2 - residential	24270 PINE ST	110	30	76	0.3	0.4	2.2
NB-5-067	2 - residential	24261 ARCH ST	241	30	67	0.5	1.2	3.2
NB-5-068	2 - residential	24265 ARCH ST	239	30	67	0.5	1.2	3.2
NB-5-069	2 - residential	24270 PINE ST	104	30	76	0.4	0.4	2.2
NB-5-070	2 - residential	24269 ARCH ST	239	30	67	0.5	1.2	3.2
NB-5-071	2 - residential	24273 ARCH ST	239	30	67	0.5	1.2	3.2
NB-5-072	2 - residential	24273 ARCH ST	239	30	67	0.6	1.2	3.2
NB-5-073	2 - residential	--	442	30	64	1.1	1.6	4.1
NB-5-074	2 - residential	--	640	70	63	0.7	1.6	4.1
NB-5-075	2 - residential	25313 HEATHER VALE ST	722	70	67	0.2	1.3	3.4
NB-5-076	2 - residential	--	460	70	69	0.2	1.2	3.1
NB-5-077	2 - residential	22804 RED BLUFF CT	399	70	69	0.2	1.1	2.9
NB-5-078	2 - residential	22805 RED BLUFF CT	291	70	70	0.2	1.0	2.8
NB-5-079	2 - residential	22803 RED BLUFF CT	236	70	71	0.2	1.0	2.6
NB-5-080	2 - residential	22803 RED BLUFF CT	227	70	72	0.2	1.0	2.6
NB-5-081	2 - residential	25311 ROLLING GREENS WAY	269	70	71	0.1	1.0	2.8
NB-5-082	2 - residential	25313 ROLLING GREENS WAY	207	70	72	0.2	1.0	2.6
NB-5-083	2 - residential	25315 ROLLING GREENS WAY	176	70	73	0.2	0.8	2.5

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NB-5-084	2 - residential	25317 ROLLING GREENS WAY	152	70	73	0.2	0.6	2.4
NB-5-085	2 - residential	25317 ROLLING GREENS WAY	108	70	75	0.2	0.5	2.3
NB-5-086	2 - residential	22719 FLOWER FIELDS AVE	271	70	71	0.1	1.0	2.8
NB-5-087	2 - residential	22719 FLOWER FIELDS AVE	319	70	70	0.1	1.0	2.8
NB-5-088	2 - residential	--	72	70	79	0.0	0.2	1.5
NB-5-089	2 - residential	22744 SUNDANCE CREEK DR	123	70	74	0.1	0.5	2.3
NB-5-090	2 - residential	--	194	70	72	0.1	0.8	2.5
NB-5-091	2 - residential	--	56	70	81	0.0	0.1	1.2
NB-5-092	2 - residential	--	244	70	71	0.1	1.0	2.6
NB-5-093	2 - residential	--	108	70	75	0.2	0.5	2.3
NB-5-094	2 - residential	25407 SILVER CREST CT	301	70	70	0.1	1.0	2.8
NB-5-095	2 - residential	--	51	70	77	0.2	0.3	2.1
NB-5-096	2 - residential	25402 SILVER CREST CT	353	70	70	0.1	1.1	2.9
NB-5-097	2 - residential	--	192	70	72	0.2	0.8	2.5
NB-5-098	2 - residential	22756 SHADOW CLIFF CT	56	70	81	**0.2**	0.1	1.2
NB-5-099	2 - residential	25402 PYRAMID PEAK DR	286	70	71	0.1	1.0	2.8
NB-5-100	2 - residential	22755 SHADOW CLIFF CT	63	70	80	**0.2**	0.1	1.2
NB-5-101	2 - residential	25402 PYRAMID PEAK DR	203	70	72	0.2	0.8	2.5
NB-5-102	2 - residential	22711 SUNDANCE CREEK DR	344	70	70	0.1	1.1	2.9
NB-5-103	2 - residential	22754 LITTLE FALL CT	73	70	79	0.2	0.2	1.5
NB-5-104	2 - residential	25402 PYRAMID PEAK DR	289	70	71	0.1	1.0	2.8
NB-5-105	2 - residential	25412 PYRAMID PEAK DR	216	70	72	0.2	1.0	2.6
NB-5-106	2 - residential	22755 LITTLE FALL CT	77	70	79	0.2	0.2	1.5

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NB-5-107	2 - residential	25422 PYRAMID PEAK DR	216	70	72	0.2	1.0	2.6
NB-5-108	2 - residential	25440 PARKWOOD LN	316	70	70	0.1	1.0	2.8
NB-5-109	2 - residential	22754 LENNON CT	76	70	79	0.2	0.2	1.5
NB-5-110	2 - residential	22703 MORRISSEY WAY	286	70	71	0.1	1.0	2.8
NB-5-111	2 - residential	22753 MORRISSEY WAY	169	70	73	0.2	0.8	2.5
NB-5-112	2 - residential	22753 MORRISSEY WAY	75	70	79	0.2	0.2	1.5
NB-5-113	2 - residential	--	475	70	68	0.3	1.2	3.1
NB-5-114	2 - residential	--	574	70	68	0.3	1.2	3.2
NB-5-115	2 - residential	25403 CALCUTTA PASS LN	423	70	69	0.4	1.2	3.1
NB-5-116	2 - residential	23109 DRAYTON ST	305	70	70	0.2	1.0	2.8
NB-5-117	2 - residential	21710 GOLDEN TRIANGLE RD	369	39	71	0.2	1.0	2.8
NB-5-118	2 - residential	26840 ISABELLA PKWY	218	39	71	0.4	1.0	2.8
NB-5-119	2 - residential	26870 CLAUDETTE ST NO 702	213	39	71	0.4	1.0	2.8
NB-5-120	2 - residential	26870 CLAUDETTE ST NO 702	236	39	71	0.6	1.0	2.8
NB-5-121	2 - residential	--	236	39	71	0.6	1.0	2.8
NB-5-122	2 - residential	26840 ISABELLA PKWY	241	39	70	0.4	1.0	2.8
NB-5-123	2 - residential	--	265	39	70	0.5	1.0	2.8
NB-5-124	2 - residential	26970 RAINBOW GLEN DR	213	39	71	0.4	1.0	2.8
NB-5-125	2 - residential	20039 GILBERT DR	402	39	56	2.6	2.9	6.6
NB-5-126	2 - residential	--	211	39	63	1.0	1.6	4.1
NB-5-127	2 - residential	--	51	39	69	0.9	1.1	2.9
NB-5-128	2 - residential	--	68	39	68	0.9	1.2	3.1
NB-5-129	2 - residential	--	294	39	57	1.4	2.9	6.6
NB-5-130	2 - residential	--	278	39	57	1.5	2.6	6.2

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NB-5-131	2 - residential	--	49	39	70	0.9	1.1	2.9
NB-5-132	2 - residential	19630 BRUCES PL	117	39	66	0.9	1.4	3.6
NB-5-133	2 - residential	--	280	39	57	1.4	2.6	6.2
NB-5-134	2 - residential	--	71	39	68	0.9	1.2	3.1
NB-5-135	2 - residential	--	237	39	58	1.4	2.6	6.2
NB-5-136	2 - residential	--	205	39	59	1.4	2.4	5.8
NB-5-137	2 - residential	--	48	39	70	0.9	1.1	2.9
NB-5-138	2 - residential	--	270	39	57	1.4	2.6	6.2
NB-5-139	2 - residential	--	287	39	57	1.4	2.6	6.2
NB-5-140	2 - residential	--	71	39	68	0.9	1.2	3.2
NB-5-141	2 - residential	--	47	39	70	0.9	1.1	2.9
NB-5-142	2 - residential	--	287	39	57	1.4	2.6	6.2
NB-5-143	2 - residential	19630 BRUCES PL	158	39	65	1.1	1.5	3.9
NB-5-144	2 - residential	26502 ROYAL VISTA CT	476	39	64	0.7	1.5	3.9
NB-5-145	2 - residential	NOT A SENSITIVE RECEIVER	256	55			#N/A	#N/A
NB-5-146	2 - residential	27140 SIERRA HWY	605	55	72	0.0	0.8	2.5
NB-5-147	2 - residential	--	165	55	78	0.1	0.2	1.8
NB-5-148	2 - residential	--	332	55	75	0.0	0.4	2.2
NB-5-149	2 - residential	18432 OAK CANYON RD	274	55	76	0.0	0.4	2.2
NB-5-150	2 - residential	--	137	55	79	0.1	0.2	1.8
NB-5-151	2 - residential	18440 OAK CANYON RD	356	55	75	0.0	0.5	2.3
NB-5-152	2 - residential	18434 OAK CANYON RD	148	55	79	0.1	0.2	1.8
NB-5-153	2 - residential	18341 OAKMONT DR	241	55	77	0.1	0.3	2.1
NB-5-154	2 - residential	18335 OAKMONT DR	319	79	75	0.1	0.4	2.2
NB-5-155	2 - residential	18325 OAKMONT DR	303	79	76	0.1	0.4	2.2

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NB-5-156	2 - residential	18311 OAKMONT DR	454	79	74	0.1	0.6	2.4
NB-5-157	2 - residential	18307 OAKMONT DR	285	79	76	0.1	0.4	2.2
NB-5-158	2 - residential	18301 OAKMONT DR	261	79	76	0.1	0.3	2.1
NB-5-159	2 - residential	18217 FLYNN DR NO 113	295	79	76	0.0	0.4	2.2
NB-5-160	2 - residential	18135 ERIK CT NO 274	272	79	69	0.2	1.2	3.1
NB-5-161	2 - residential	18123 ERIK CT NO 357	262	79	69	0.2	1.2	3.1
NB-5-162	2 - residential	18111 ERIK CT NO 443	265	79	69	0.2	1.2	3.1
NB-5-163	2 - residential	18018 FLYNN DR 5804	346	79	67	0.2	1.2	3.2
NB-5-164	2 - residential	27256 MARISA DR	114	79	72	0.1	0.8	2.5
NB-5-165	2 - residential	27256 MARISA DR	113	79	72	0.1	0.8	2.5
NB-5-166	2 - residential	17721 BENTLEY MANOR PL	671	79	64	0.2	1.5	3.9
NB-5-167	2 - residential	--	533	79	65	0.2	1.4	3.6
NB-5-168	2 - residential	17715 BIRKEWOOD CT	440	79	66	0.2	1.3	3.4
NB-5-169	2 - residential	17715 BIRKEWOOD CT	308	79	68	0.1	1.2	3.2
NB-5-170	2 - residential	17715 BIRKEWOOD CT	105	79	72	0.2	0.8	2.5
NB-5-171	2 - residential	27327 WILLOW OAK CT	170	79	64	0.6	1.5	3.9
NB-5-172	2 - residential	27312 WILLOW OAK CT	227	79	63	0.7	1.6	4.1
NB-5-173	2 - residential	27312 WILLOW OAK CT	334	79	55	1.3	3.2	7.1
NB-5-174	2 - residential	27312 WILLOW OAK CT	203	79	64	0.6	1.6	4.1
NB-5-175	2 - residential	17401 BLUE ASPEN LN	303	79	55	1.3	3.2	7.1
NB-5-176	2 - residential	17401 BLUE ASPEN LN	187	79	57	2.5	2.9	6.6
NB-5-177	2 - residential	17401 BLUE ASPEN LN	229	79	55	1.6	3.2	7.1
NB-5-178	2 - residential	17384 BLUE ASPEN LN	311	79	55	1.3	3.2	7.1
NB-5-179	2 - residential	17384 BLUE ASPEN LN	237	79	55	1.4	3.2	7.1
NB-5-180	2 - residential	27334 ENGLISH OAK CT	99	79	67	0.5	1.3	3.4

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NB-5-181	2 - residential	27303 ENGLISH IVY LN	291	79	55	1.3	3.2	7.1
NB-5-182	2 - residential	27303 ENGLISH IVY LN	220	79	55	1.5	3.2	7.1
NB-5-183	2 - residential	27309 ENGLISH IVY LN	220	79	63	0.5	1.6	4.1
NB-5-184	2 - residential	27315 ENGLISH IVY LN	214	79	63	0.5	1.6	4.1
NB-5-185	2 - residential	27321 ENGLISH IVY LN	224	79	63	0.5	1.6	4.1
NB-5-186	2 - residential	27327 ENGLISH IVY LN	225	79	63	0.5	1.6	4.1
NB-5-187	2 - residential	27333 ENGLISH IVY LN	230	79	63	0.5	1.6	4.1
NB-5-188	2 - residential	27339 ENGLISH IVY LN	230	79	63	0.5	1.6	4.1
NB-5-189	2 - residential	27345 ENGLISH IVY LN	232	79	63	0.5	1.7	4.4
NB-5-190	2 - residential	27351 ENGLISH IVY LN	228	79	63	0.5	1.6	4.1
NB-5-191	2 - residential	27405 ENGLISH IVY LN	228	79	63	0.6	1.6	4.1
NB-5-192	2 - residential	--	227	79	63	0.6	1.6	4.1
NB-5-193	2 - residential	--	224	79	63	0.6	1.6	4.1
NB-5-194	2 - residential	--	223	79	63	0.6	1.6	4.1
NB-5-195	2 - residential	--	223	79	63	0.6	1.6	4.1
NB-5-196	2 - residential	--	233	79	63	0.6	1.6	4.1
NB-5-197	2 - residential	--	255	79	63	0.6	1.7	4.4
NB-5-198	2 - residential	--	290	79	62	0.6	1.7	4.4
NB-5-199	2 - residential	--	326	79	62	0.6	1.9	4.7
NB-5-200	2 - residential	--	361	79	61	0.6	1.9	4.7
NB-5-201	2 - residential	--	387	79	61	0.6	2.0	5.0
NB-5-202	2 - residential	--	404	75	61	0.6	2.0	5.0
NB-5-203	2 - residential	--	473	75	56	1.6	3.2	7.1
NB-5-204	2 - residential	16810 LOST CANYON RD	324	75	62	0.6	1.9	4.7
NB-5-205	2 - residential	27803 LORJEN RD	659	75	55	1.5	3.5	7.6

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NB-5-206	2 - residential	16600 ROAD RUNNER RD	77	75	68	0.6	1.2	3.2
NB-5-207	2 - residential	27803 LORJEN RD	710	75	54	1.5	3.5	7.6
NB-5-208	2 - residential	16600 ROAD RUNNER RD	645	75	55	1.5	3.5	7.6
NB-5-209	2 - residential	16600 ROAD RUNNER RD	275	75	62	0.6	1.7	4.4
NB-5-210	2 - residential	27803 LORJEN RD	758	75	54	1.5	3.8	8.2
NB-5-211	2 - residential	16510 ROAD RUNNER RD	376	75	61	0.6	1.9	4.7
NB-5-212	2 - residential	16510 ROAD RUNNER RD	158	75	73	0.1	0.6	2.4
NB-5-213	2 - residential	28050 SAND CANYON RD	1103	75	59	0.3	2.2	5.4
NB-5-214	2 - residential	28050 SAND CANYON RD	1085	75	59	0.3	2.2	5.4
NB-5-215	2 - residential	28050 SAND CANYON RD	1004	75	59	0.2	2.2	5.4
NB-5-216	2 - residential	28050 SAND CANYON RD	1061	75	59	0.3	2.2	5.4
NB-5-217	2 - residential	16085 COMET WAY	1072	75	59	0.3	2.2	5.4
NB-5-218	2 - residential	16075 COMET WAY	1079	75	59	0.3	2.2	5.4
NB-5-219	2 - residential	16069 COMET WAY	1119	75	59	0.3	2.2	5.4
NB-5-220	2 - residential	28050 SAND CANYON RD	327	75	65	0.4	1.5	3.9
NB-5-221	2 - residential	28445 OAK SPRING CANYON RD	678	75	62	0.5	1.9	4.7
NB-5-222	2 - residential	15940 WHITEWATER CANYON RD	597	75	62	0.5	1.7	4.4
NB-5-223	2 - residential	28445 OAK SPRING CANYON RD	332	75	65	0.3	1.5	3.9
NB-5-224	2 - residential	28445 OAK SPRING CANYON RD	114	75	70	0.6	1.1	2.9
NB-5-225	2 - residential	28456 OAK SPRING CANYON RD	128	75	69	0.6	1.1	2.9
SB-5-001	2 - residential	14748 SAN FERNANDO RD	61	45	75	0.2	0.4	2.2
SB-5-002	2 - residential	22508 6TH ST	121	30	73	0.5	0.6	2.4
SB-5-003	2 - residential	24606 SPRUCE ST	256	70	67	0.4	1.2	3.2

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SB-5-004	2 - residential	24612 SPRUCE ST	256	70	67	0.4	1.2	3.2
SB-5-005	2 - residential	24616 SPRUCE ST	262	70	67	0.8	1.2	3.2
SB-5-006	2 - residential	24620 SPRUCE ST	257	70	67	0.8	1.2	3.2
SB-5-007	2 - residential	24626 SPRUCE ST	257	70	67	0.4	1.2	3.2
SB-5-008	2 - residential	24626 SPRUCE ST	261	70	67	0.4	1.3	3.4
SB-5-009	2 - residential	24642 SPRUCE ST	265	70	67	0.4	1.3	3.4
SB-5-010	2 - residential	24646 SPRUCE ST	266	70	67	0.4	1.3	3.4
SB-5-011	2 - residential	24652 SPRUCE ST	257	70	67	0.4	1.2	3.2
SB-5-012	2 - residential	24660 SPRUCE ST	268	70	67	0.5	1.3	3.4
SB-5-013	2 - residential	24652 SPRUCE ST	237	70	70	0.4	1.0	2.8
SB-5-014	2 - residential	24706 SPRUCE ST	318	70	66	0.5	1.3	3.4
SB-5-015	2 - residential	24712 SPRUCE ST	317	70	66	0.5	1.3	3.4
SB-5-016	2 - residential	24718 SPRUCE ST	347	70	66	0.5	1.4	3.6
SB-5-017	2 - residential	24724 SPRUCE ST	355	70	66	0.5	1.4	3.6
SB-5-018	2 - residential	--	349	70	66	0.5	1.4	3.6
SB-5-019	2 - residential	24736 SPRUCE ST	349	70	66	0.5	1.4	3.6
SB-5-020	2 - residential	24742 SPRUCE ST	343	70	66	0.5	1.4	3.6
SB-5-021	2 - residential	24746 SPRUCE ST	333	70	66	0.5	1.4	3.6
SB-5-022	2 - residential	24752 SPRUCE ST	333	70	66	0.4	1.4	3.6
SB-5-023	2 - residential	24752 SPRUCE ST	353	70	66	0.4	1.4	3.6
SB-5-024	2 - residential	--	140	70	73	0.5	0.8	2.5
SB-5-025	2 - residential	22743 15TH ST	433	70	61	1.3	1.9	4.7
SB-5-026	2 - residential	22743 15TH ST	426	70	61	1.3	1.9	4.7
SB-5-027	2 - residential	24934 WALNUT ST	414	70	61	0.7	2.0	5.0
SB-5-028	2 - residential	24938 WALNUT ST	355	70	62	0.7	1.9	4.7

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SB-5-029	2 - residential	24938 WALNUT ST	309	70	62	0.6	1.7	4.4
SB-5-030	2 - residential	--	141	70	69	0.5	1.2	3.1
SB-5-031	2 - residential	25000 WALNUT ST	614	70	59	1.1	2.2	5.4
SB-5-032	2 - residential	25006 WALNUT ST	452	70	61	1.0	2.0	5.0
SB-5-033	2 - residential	25016 WALNUT ST	425	70	61	1.0	2.0	5.0
SB-5-034	2 - residential	25032 WALNUT ST	416	70	61	1.0	2.0	5.0
SB-5-035	2 - residential	25052 WALNUT ST	417	70	61	0.9	2.0	5.0
SB-5-036	2 - residential	25032 WALNUT ST	625	70	59	0.6	2.2	5.4
SB-5-037	2 - residential	25052 WALNUT ST	606	70	59	0.5	2.2	5.4
SB-5-038	2 - residential	22940 16TH ST	419	70	61	0.9	2.0	5.0
SB-5-039	2 - residential	22940 16TH ST	602	70	59	0.9	2.2	5.4
SB-5-040	2 - residential	22940 16TH ST	642	70	59	0.5	2.4	5.8
SB-5-041	2 - residential	22940 16TH ST	574	70	59	0.5	2.2	5.4
SB-5-042	2 - residential	22940 16TH ST	514	70	60	0.9	2.2	5.4
SB-5-043	2 - residential	22963 16TH ST	616	70	59	0.9	2.2	5.4
SB-5-044	2 - residential	22971 16TH STREET	615	70	59	0.9	2.2	5.4
SB-5-045	2 - residential	22971 16TH STREET	468	70	60	0.9	2.0	5.0
SB-5-046	2 - residential	--	635	70	59	0.5	2.4	5.8
SB-5-047	2 - residential	--	468	70	60	0.9	2.0	5.0
SB-5-048	2 - residential	25124 WALNUT ST	599	70	59	0.9	2.2	5.4
SB-5-049	2 - residential	25124 WALNUT ST	468	70	60	0.9	2.0	5.0
SB-5-050	2 - residential	25142 WALNUT ST	488	70	60	0.9	2.0	5.0
SB-5-051	2 - residential	25146 WALNUT ST	589	70	59	0.9	2.2	5.4
SB-5-052	2 - residential	25148 WALNUT ST	589	70	59	0.9	2.2	5.4
SB-5-053	2 - residential	25160 WALNUT STREET	615	70	59	0.9	2.2	5.4

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SB-5-054	2 - residential	25160 WALNUT STREET	614	70	59	1.0	2.2	5.4
SB-5-055	2 - residential	26200 HOLLYWOOD CT	145	70	73	0.4	0.8	2.5
SB-5-056	2 - residential	26200 HOLLYWOOD CT	157	70	73	0.6	0.8	2.5
SB-5-057	2 - residential	22119 PROPELLO DR	535	39	69	0.1	1.2	3.1
SB-5-058	2 - residential	22082 PROPELLO DR	352	39	73	0.1	0.6	2.4
SB-5-059	2 - residential	22030 PROPELLO DR	267	39	73	0.1	0.6	2.4
SB-5-060	2 - residential	21871 MOVEO DR	273	39	73	0.1	0.6	2.4
SB-5-061	2 - residential	21871 MOVEO DR	245	39	73	0.1	0.6	2.4
SB-5-062	2 - residential	21871 MOVEO DR	221	39	73	0.1	0.6	2.4
SB-5-063	2 - residential	21871 MOVEO DR	216	39	73	0.1	0.6	2.4
SB-5-064	2 - residential	21872 MOVEO DR	216	39	73	0.1	0.6	2.4
SB-5-065	2 - residential	21872 MOVEO DR	226	39	74	0.2	0.6	2.4
SB-5-066	2 - residential	21872 MOVEO DR	226	39	74	0.2	0.6	2.4
SB-5-067	2 - residential	21871 MOVEO DR	227	39	74	0.2	0.6	2.4
SB-5-068	2 - residential	21871 MOVEO DR	225	39	74	0.2	0.6	2.4
SB-5-069	2 - residential	26247 PRIMA WAY	350	39	71	0.1	1.0	2.8
SB-5-070	2 - residential	26244 PRIMA WAY	320	39	71	0.2	1.0	2.6
SB-5-071	2 - residential	21758 BENE DR	372	39	70	0.1	1.0	2.8
SB-5-072	2 - residential	1st ROW CANDELLA DR	206	39	74	0.2	0.6	2.4
SB-5-073	2 - residential	21758 BENE DR	371	39	70	0.1	1.0	2.8
SB-5-074	2 - residential	1st ROW CANDELLA DR	196	39	74	0.2	0.6	2.4
SB-5-075	2 - residential	1st ROW CANDELLA DR	361	39	71	0.1	1.0	2.8
SB-5-076	2 - residential	1st ROW CANDELLA DR	194	39	74	0.3	0.6	2.4
SB-5-077	2 - residential	1st ROW CANDELLA DR	159	39	74	0.3	0.6	2.4
SB-5-078	2 - residential	21613 SOLEDAD CANYON RD	206	39	74	0.3	0.6	2.4

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SB-5-079	2 - residential	21425 SOLEDAD CANYON RD	211	39	74	0.2	0.6	2.4
SB-5-080	2 - residential	--	372	39	73	0.1	0.6	2.4
SB-5-081	2 - residential	20462 DELIGHT ST	175	39	72	0.6	1.0	2.6
SB-5-082	2 - residential	20401 SOLEDAD CANYON RD	177	39	72	0.4	1.0	2.6
SB-5-083	2 - residential	20401 SOLEDAD CANYON RD	185	39	72	0.4	1.0	2.6
SB-5-084	2 - residential	20401 SOLEDAD CANYON RD	232	39	71	0.2	1.0	2.8
SB-5-085	2 - residential	--	188	39	71	0.4	1.0	2.6
SB-5-086	2 - residential	--	355	39	69	0.2	1.2	3.1
SB-5-087	2 - residential	--	55	55	83	0.1	0.1	1.2
SB-5-088	2 - residential	18402 JAKES WAY	112	55	80	0.1	0.2	1.5
SB-5-089	2 - residential	18400 SANDY DR	302	55	75	0.0	0.4	2.2
SB-5-090	2 - residential	27314 FAHREN CT	169	79	78	0.1	0.2	1.8
SB-5-091	2 - residential	27314 FAHREN CT	170	79	78	0.1	0.2	1.8
SB-5-092	2 - residential	27321 ROCK ROSE LN	170	79	78	0.1	0.2	1.8
SB-5-093	2 - residential	18231 JAKES WAY	170	79	78	0.1	0.2	1.8
SB-5-094	2 - residential	18210 SANDY DR	177	79	71	0.3	1.0	2.8
SB-5-095	2 - residential	17902 SANDY DR	122	79	72	0.1	1.0	2.6
SB-5-096	2 - residential	17902 SANDY DR	109	79	72	0.1	0.8	2.5
SB-5-097	2 - residential	17808 DEANA LN	89	79	73	0.1	0.6	2.4
SB-5-098	2 - residential	17808 DEANA LN	384	79	67	0.2	1.3	3.4
SB-5-099	2 - residential	27513 MARTA LN	101	79	73	0.2	0.8	2.5
SB-5-100	2 - residential	27513 MARTA LN	268	79	68	0.1	1.2	3.1
SB-5-101	2 - residential	27513 MARTA LN	290	79	68	0.1	1.2	3.1

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SB-5-102	2 - residential	27513 MARTA LN	108	79	72	0.2	0.8	2.5
SB-5-103	2 - residential	27536 MARTA LN	147	79	71	0.2	1.0	2.6
SB-5-104	2 - residential	17602 HARRIS WAY	149	79	71	0.2	1.0	2.8
SB-5-105	2 - residential	17550 HARRIS WAY	153	79	71	0.2	1.0	2.8
SB-5-106	2 - residential	17527 HARRIS WAY	159	79	71	0.2	1.0	2.8
SB-5-107	2 - residential	27606 SPENCER CT	510	79	66	0.2	1.4	3.6
SB-5-108	2 - residential	--	599	75	55	1.5	3.5	7.6
SB-5-109	2 - residential	--	533	75	55	1.5	3.2	7.1
SB-5-110	2 - residential	--	469	75	56	1.5	3.2	7.1
SB-5-111	2 - residential	28105 LA VEDA AVE	413	75	57	1.5	2.9	6.6
SB-5-112	2 - residential	28105 LA VEDA AVE	345	75	61	0.6	1.9	4.7
SB-5-113	2 - residential	28105 LA VEDA AVE	281	75	62	0.6	1.7	4.4
SB-5-114	2 - residential	28101 LA VEDA AVE	158	75	65	0.6	1.5	3.9
SB-5-115	2 - residential	28100 LA VEDA AVE	252	75	63	0.6	1.7	4.4
SB-5-116	2 - residential	28110 LA VEDA AVE	294	75	57	0.9	2.6	6.2
SB-5-117	2 - residential	28110 LA VEDA AVE	380	75	57	1.5	2.9	6.6
SB-5-118	2 - residential	--	449	75	56	1.5	2.9	6.6
SB-5-119	2 - residential	--	536	75	55	1.5	3.2	7.1
SB-5-120	2 - residential	--	604	75	55	1.5	3.5	7.6
SB-5-121	2 - residential	16530 LOST CANYON RD	302	75	73	0.1	0.6	2.4
SB-5-122	2 - residential	28128 SAND CANYON RD	283	75	73	0.0	0.8	2.5
SB-5-123	2 - residential	28128 SAND CANYON RD	104	75	73	0.2	0.6	2.4
SB-5-124	2 - residential	28128 SAND CANYON RD	167	75	67	0.3	1.2	3.2
SB-5-125	2 - residential	16472 LOST CANYON RD	282	75	65	0.3	1.4	3.6
SB-5-126	2 - residential	--	413	75	63	0.3	1.6	4.1

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SB-5-127	2 - residential	16426 LOST CANYON RD	199	75	67	0.3	1.3	3.4
SB-5-128	2 - residential	16426 LOST CANYON RD	196	75	67	0.3	1.3	3.4
SB-5-129	2 - residential	16424 LOST CANYON RD	354	75	64	0.3	1.5	3.9
SB-5-130	2 - residential	16320 LOST CANYON RD	421	75	63	0.3	1.6	4.1
SB-5-131	2 - residential	16320 LOST CANYON RD	102	75	70	0.3	1.1	2.9
SB-5-132	2 - residential	--	106	75	69	0.3	1.1	2.9
SB-5-133	2 - residential	16226 LOST CANYON RD	310	75	65	0.4	1.5	3.9
SB-5-134	2 - residential	16220 LOST CANYON RD	118	75	69	0.3	1.2	3.1
SB-5-135	2 - residential	16214 LOST CANYON RD	226	75	66	0.4	1.3	3.4
SB-5-136	2 - residential	16202 LOST CANYON RD	226	75	66	0.2	1.4	3.6
SB-5-137	2 - residential	16160 LOST CANYON RD	210	75	66	0.2	1.3	3.4
SB-5-138	2 - residential	16160 LOST CANYON RD	263	75	65	0.2	1.4	3.6
SB-5-139	2 - residential	16154 LOST CANYON RD	275	75	65	0.2	1.4	3.6
SB-5-140	2 - residential	16146 LOST CANYON RD	360	75	64	0.2	1.6	4.1
SB-5-141	2 - residential	16166 LOST CANYON RD	118	75	69	0.3	1.2	3.1
SB-5-142	2 - residential	16146 LOST CANYON RD	169	75	67	0.4	1.2	3.2
SB-5-143	2 - residential	28504 COLHARY CT	314	75	65	0.2	1.5	3.9
SB-5-144	2 - residential	28503 COLHARY CT	137	75	68	0.4	1.2	3.1
SB-5-145	2 - residential	28504 COLHARY CT	242	75	66	0.2	1.4	3.6
SB-5-146	2 - residential	28501 COLHARY CT	144	75	68	0.4	1.2	3.1
SB-5-147	2 - residential	--	152	39	68	0.7	1.2	3.2
SB-5-148	2 - residential	VAC/SOLEDAD CYN RD/VIC LANG STA	198	34	68	0.2	1.2	3.1
SB-5-149	2 - residential	--	319	34	68	0.3	1.2	3.1
NB-6-001	2 - residential	--	141	34	72	0.2	0.8	2.5
NB-6-002	2 - residential	--	273	34	71	0.2	1.0	2.6

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NB-6-003	2 - residential	--	709	34	70	0.1	1.0	2.8
NB-6-004	2 - residential	9927 1/2 SOLEDAD CANYON RD	140	34	72	0.3	1.0	2.6
NB-6-005	2 - residential	9927 SOLEDAD CANYON RD	540	34	71	0.1	1.0	2.6
NB-6-006	2 - residential	9316 SOLEDAD CANYON RD	1086	34	63	0.2	1.7	4.4
NB-6-007	2 - residential	VAC/SOLEDAD CYN RD/VIC BRIGGS RD	569	34	66	0.2	1.4	3.6
NB-6-008	2 - residential	9316 SOLEDAD CANYON RD	920	34	64	0.1	1.6	4.1
NB-6-009	2 - residential	9142 SOLEDAD CANYON RD	832	34	66	0.1	1.4	3.6
NB-6-010	2 - residential	9140 SOLEDAD CANYON RD	661	34	70	0.1	1.1	2.9
NB-6-011	2 - residential	--	101	34	73	0.3	0.6	2.4
NB-6-012	2 - residential	--	107	34	73	0.3	0.6	2.4
NB-6-013	2 - residential	7601 SOLEDAD CYN RD	380	34	67	0.3	1.2	3.2
NB-6-014	2 - residential	--	161	34	71	0.3	1.0	2.6
NB-6-015	2 - residential	--	167	34	71	0.3	1.0	2.6
NB-6-016	2 - residential	7650 SOLEDAD CANYON RD	693	34	65	0.2	1.5	3.9
NB-6-017	2 - residential	29303 OLSON RD	182	35	71	0.3	1.0	2.8
NB-6-018	2 - residential	HEFFNER RD AT SOLEDAD CYN RD	632	35	65	0.2	1.4	3.6
NB-6-019	2 - residential	4700 CROWN VALLEY RD	157	35	71	0.3	1.0	2.6
NB-6-020	2 - residential	VAC/VIC SOLEDAD CYN RD	339	39	68	0.3	1.2	3.2
NB-6-021	2 - residential	VAC/VIC SOLEDAD CYN RD	209	39	70	0.1	1.1	2.9
NB-6-022	2 - residential	30380 ARRASTRE CANYON RD	895	39	60	0.3	2.2	5.4
NB-6-023	2 - residential	VAC/PLATZ RD/VIC NETTIE RD	465	39	62	0.6	1.7	4.4
NB-6-024	2 - residential	3550 SECLUSION PL	719	39	62	0.5	1.9	4.7
NB-6-025	2 - residential	3555 SECLUSION PL	555	39	62	0.6	1.9	4.7

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NB-6-026	2 - residential	32580 ALISO CANYON RD	146	39	73	0.3	0.6	2.4
NB-6-027	2 - residential	32580 ALISO CANYON RD	254	39	73	0.2	0.6	2.4
NB-6-028	2 - residential	32548 ALISO CANYON RD	130	39	73	0.2	0.6	2.4
NB-6-029	2 - residential	32548 ALISO CANYON RD	269	39	73	0.1	0.6	2.4
NB-6-030	2 - residential	32538 ALISO CANYON RD	112	39	73	0.3	0.6	2.4
NB-6-031	2 - residential	32530 ALISO CANYON RD	94	39	74	0.3	0.6	2.4
NB-6-032	2 - residential	2231 DOLORES PL	611	39	73	0.0	0.6	2.4
NB-6-033	2 - residential	32463 PETES WY	627	39	73	0.0	0.6	2.4
NB-6-034	2 - residential	1575 CARSON MESA RD	140	39	73	0.1	0.6	2.4
NB-6-035	2 - residential	--	230	39	73	0.1	0.6	2.4
NB-6-036	2 - residential	856 FORESTON DR	1007	39	65	0.1	1.4	3.6
NB-6-037	2 - residential	823 FORESTON DR	471	39	69	0.1	1.2	3.1
NB-6-038	2 - residential	VAC/FORESTON DR(DRT)/VIC RIMSIDE	853	39	66	0.1	1.4	3.6
NB-6-039	2 - residential	821 FORESTON DR	967	39	65	0.1	1.4	3.6
NB-6-040	2 - residential	809 FORESTON DR	660	39	67	0.1	1.2	3.2
NB-6-041	2 - residential	756 FORESTON DR	1115	39	65	0.1	1.5	3.9
NB-6-042	2 - residential	741 FORESTON DR	1253	39	64	0.1	1.5	3.9
NB-6-043	2 - residential	900 CARSON MESA RD	528	39	68	0.1	1.2	3.1
NB-6-044	2 - residential	892 W CARSON MESA RD	404	75	69	0.1	1.1	2.9
NB-6-045	2 - residential	892 W CARSON MESA RD	829	75	66	0.1	1.3	3.4
NB-6-046	2 - residential	790 CARSON MESA RD	826	75	66	0.1	1.3	3.4
NB-6-047	2 - residential	790 CARSON MESA RD	631	75	67	0.1	1.2	3.2
NB-6-048	2 - residential	711 CARSON MESA RD	149	49	64	0.8	1.6	4.1
NB-6-049	2 - residential	1000 CARSON MESA RD	1010	49	59	0.3	2.4	5.8
NB-6-050	2 - residential	34855 ROUGH RD	322	49	63	0.4	1.6	4.1

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NB-6-051	2 - residential	1721 CARSON MESA RD	881	49	59	0.4	2.4	5.8
NB-6-052	2 - residential	35205 SMALL RD	530	49	59	0.6	2.2	5.4
NB-6-053	2 - residential	35225 SMALL RD	457	49	59	0.7	2.2	5.4
NB-6-054	2 - residential	35245 SMALL RD	474	49	59	0.7	2.2	5.4
NB-6-055	2 - residential	35320 SMALL RD	813	49	59	0.4	2.4	5.8
NB-6-056	2 - residential	35320 SMALL RD	570	49	59	0.6	2.2	5.4
NB-6-057	2 - residential	2074 OLD NADEAU RD	609	49	59	0.5	2.2	5.4
SB-6-001	2 - residential	11561 SOLEDAD CANYON RD	195	34	71	0.2	1.0	2.6
SB-6-002	2 - residential	VAC/VIC SOLEDAD CYN RD/PACIFIC	307	34	67	0.3	1.3	3.4
SB-6-003	2 - residential	--	207	35	70	0.2	1.1	2.9
SB-6-004	2 - residential	5301 SOLEDAD CANYON RD	299	35	68	0.3	1.2	3.1
SB-6-005	2 - residential	5255 SOLEDAD CANYON RD	539	35	66	0.2	1.4	3.6
SB-6-006	2 - residential	5255 SOLEDAD CANYON RD	620	35	65	0.2	1.4	3.6
SB-6-007	2 - residential	VAC/VIC SOLEDAD CYN RD/RAVENNA D	516	35	66	0.2	1.3	3.4
SB-6-008	2 - residential	VIC SOLEDAD CYN RD/CROWN VLY	162	39	71	0.3	1.0	2.6
SB-6-009	2 - residential	3651 SOLEDAD CANYON RD	566	39	64	0.3	1.6	4.1
SB-6-010	2 - residential	3639 SOLEDAD CANYON RD	352	39	65	0.4	1.5	3.9
SB-6-010	2 - residential	3591 SOLEDAD CANYON RD	389	39	66	0.3	1.3	3.4
SB-6-011	2 - residential	4050 ACTON AVE	422	39	66	0.3	1.3	3.4
SB-6-011	2 - residential	3591 SOLEDAD CANYON RD	472	39	65	0.3	1.5	3.9
SB-6-012	2 - residential	3620 SOLEDAD CANYON RD	166	39	73	0.1	0.6	2.4
SB-6-014	2 - residential	31625 2ND ST	407	39	66	0.3	1.3	3.4
SB-6-016	2 - residential	3435 SOLEDAD CANYON RD	399	39	66	0.4	1.3	3.4

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SB-6-017	2 - residential	3413 SOLEDAD CANYON RD	281	39	74	0.1	0.6	2.4
SB-6-018	2 - residential	VAC/SOLEDAD CYN RD/VIC 9TH ST	360	39	69	0.2	1.1	2.9
SB-6-019	2 - residential	3413 SOLEDAD CANYON RD	557	39	62	0.7	1.9	4.7
SB-6-020	2 - residential	31813 CROWN VALLEY RD	379	39	69	0.2	1.1	2.9
SB-6-021	2 - residential	31813 CROWN VALLEY RD	546	39	62	0.7	1.9	4.7
SB-6-022	2 - residential	--	571	39	62	0.6	1.9	4.7
SB-6-023	2 - residential	--	446	39	62	0.7	1.7	4.4
SB-6-024	2 - residential	VAC/SMITH AVE/GILLESPIE AVE	625	0	62	0.5	1.9	4.7
SB-6-025	2 - residential	VAC/SMITH AVE/GILLESPIE AVE	661	0	62	0.5	1.9	4.7
SB-6-026	2 - residential	VAC/SMITH AVE/GILLESPIE AVE	732	0	62	0.4	1.9	4.7
SB-6-027	2 - residential	VAC/SMITH AVE/GILLESPIE AVE	344	0	62	0.8	1.7	4.4
SB-6-028	2 - residential	VAC/SYRACUSE AVE/VIC CROWN VLY R	887	0	57	0.9	2.6	6.2
SB-6-029	2 - residential	32223 FALCONGATE AVE	650	0	58	0.6	2.4	5.8
SB-6-030	2 - residential	32451 MICHIGAN AVE	697	0	58	0.6	2.4	5.8
SB-6-031	2 - residential	2897 SOLEDAD CANYON RD	243	0	66	0.3	1.4	3.6
SB-6-032	2 - residential	2897 SOLEDAD CANYON RD	201	0	66	0.4	1.4	3.6
SB-6-033	2 - residential	32451 MICHIGAN AVE	831	0	57	0.3	2.6	6.2
SB-6-034	2 - residential	2883 SOLEDAD CANYON RD	232	0	66	0.3	1.4	3.6
SB-6-035	2 - residential	2875 SOLEDAD CYN RD	338	0	65	0.2	1.4	3.6
SB-6-036	2 - residential	32320 MICHIGAN AVE	733	0	57	0.4	2.6	6.2
SB-6-037	2 - residential	2835 SOLEDAD CANYON RD	197	0	66	0.4	1.4	3.6
SB-6-038	2 - residential	2835 SOLEDAD CANYON RD	224	0	66	0.4	1.4	3.6

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SB-6-039	2 - residential	32320 MICHIGAN AVE	841	0	57	0.3	2.9	6.6
SB-6-040	2 - residential	2910 SACRAMENTO AVE	502	0	65	0.1	1.4	3.6
SB-6-041	2 - residential	2910 SACRAMENTO AVE	362	0	65	0.2	1.4	3.6
SB-6-042	2 - residential	32235 OHIO AVE	579	0	65	0.1	1.4	3.6
SB-6-043	2 - residential	32235 OHIO AVE	435	0	65	0.1	1.4	3.6
SB-6-044	2 - residential	32235 OHIO AVE	310	0	65	0.3	1.4	3.6
SB-6-045	2 - residential	32235 OHIO AVE	649	0	65	0.1	1.4	3.6
SB-6-046	2 - residential	32235 OHIO AVE	461	0	65	0.1	1.4	3.6
SB-6-047	2 - residential	32235 OHIO AVE	294	0	65	0.3	1.4	3.6
SB-6-048	2 - residential	32214 INDIANA AVE	702	0	65	0.1	1.4	3.6
SB-6-049	2 - residential	32214 INDIANA AVE	348	0	66	0.3	1.4	3.6
SB-6-050	2 - residential	32214 INDIANA AVE	629	0	65	0.2	1.4	3.6
SB-6-051	2 - residential	32256 INDIANA AVE	702	0	65	0.2	1.4	3.6
SB-6-052	2 - residential	2680 KASHMERE CANYON RD	817	0	73	0.0	0.6	2.4
SB-6-053	2 - residential	2733 SACRAMENTO AVE	744	0	73	0.0	0.6	2.4
SB-6-054	2 - residential	2733 SACRAMENTO AVE	687	0	73	0.0	0.6	2.4
SB-6-055	2 - residential	--	610	0	73	0.0	0.6	2.4
SB-6-056	2 - residential	32500 SADDLE PEAK CT	439	0	73	0.1	0.6	2.4
SB-6-057	2 - residential	2610 KASHMERE CANYON RD	439	0	73	0.1	0.6	2.4
SB-6-058	2 - residential	2610 KASHMERE CANYON RD	272	0	73	0.1	0.6	2.4
SB-6-059	2 - residential	2655 KASHMERE CANYON RD	573	0	73	0.0	0.6	2.4
SB-6-060	2 - residential	2570 PALAMINO DR	364	0	73	0.1	0.6	2.4
SB-6-061	2 - residential	2655 KASHMERE CANYON RD	559	0	73	0.0	0.6	2.4

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SB-6-062	2 - residential	2570 PALAMINO DR	216	0	73	0.1	0.6	2.4
SB-6-063	2 - residential	2655 KASHMERE CANYON RD	520	0	73	0.0	0.6	2.4
SB-6-064	2 - residential	2560 PALOMINO DR	251	0	73	0.1	0.6	2.4
SB-6-065	2 - residential	2540 BRIDLE PATH DR	477	0	73	0.0	0.6	2.4
SB-6-066	2 - residential	2550 PALOMINO DR	319	0	73	0.1	0.6	2.4
SB-6-067	2 - residential	2530 BRIDLE PATH DR	460	0	73	0.1	0.6	2.4
SB-6-068	2 - residential	--	557	0	73	0.1	0.6	2.4
SB-6-069	2 - residential	2531 SOLEDAD CANYON RD	816	0	73	0.0	0.6	2.4
SB-6-070	2 - residential	VAC/COR SOLEDAD CYN RD/SANTIAGO	240	0	73	0.1	0.6	2.4
SB-6-071	2 - residential	32643 GEM WY	572	0	73	0.0	0.6	2.4
SB-6-072	2 - residential	VAC/SANTIAGO RD/VIC ACCORD PL	115	0	73	0.2	0.6	2.4
SB-6-073	2 - residential	32940 OLD MINER RD	877	0	61	0.2	1.9	4.7
SB-6-074	2 - residential	32924 OLD MINER RD	800	0	61	0.3	1.9	4.7
SB-6-075	2 - residential	32906 OLD MINER RD	743	0	61	0.3	1.9	4.7
SB-6-076	2 - residential	32835 CHANTADA AVE	759	0	61	0.3	1.9	4.7
SB-6-077	2 - residential	32815 CHANTADA AVE	669	0	61	0.3	1.9	4.7
SB-6-078	2 - residential	VAC/TINDALL AVE/VIC SOLEDAD CYN	802	0	61	0.3	1.9	4.7
SB-6-079	2 - residential	32820 TINDALL AVE	508	0	61	0.4	1.9	4.7
SB-6-080	2 - residential	32835 LISTIE AVE	625	0	61	0.3	1.9	4.7
SB-6-081	2 - residential	32915 LISTIE AVE	703	0	61	0.3	1.9	4.7
SB-6-082	2 - residential	32806 LISTIE AVE	378	0	62	0.5	1.9	4.7
SB-6-083	2 - residential	32920 JOSHUA AVE	898	0	61	0.2	1.9	4.7
SB-6-084	2 - residential	32821 HORNDEAN AVE	656	0	61	0.3	1.9	4.7

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SB-6-085	2 - residential	32920 JOSHUA AVE	885	0	61	0.2	1.9	4.7
SB-6-086	2 - residential	1547 SOLEDAD CANYON RD	382	0	62	0.5	1.9	4.7
SB-6-087	2 - residential	33017 MALINTA AVE	646	0	61	0.3	1.9	4.7
SB-6-088	2 - residential	33017 MALINTA AVE	1024	0	73	0.0	0.6	2.4
SB-6-089	2 - residential	33032 MALINTA AVE	907	0	73	0.0	0.6	2.4
SB-6-090	2 - residential	1414 SOLEDAD CYN RD	108	0	73	0.1	0.6	2.4
SB-6-091	2 - residential	1414 SOLEDAD CYN RD	192	0	73	0.1	0.6	2.4
SB-6-092	2 - residential	1380 SOLEDAD CANYON RD	225	0	73	0.1	0.6	2.4
SB-6-093	2 - residential	33100 MALINTA AVE	1006	0	73	0.0	0.6	2.4
SB-6-094	2 - residential	1625 TORTUGA ST	878	0	73	0.0	0.6	2.4
SB-6-095	2 - residential	1245 SOLEDAD CANYON RD	894	0	73	0.0	0.6	2.4
SB-6-096	2 - residential	1222 SOLEDAD CANYON RD	564	0	73	0.0	0.6	2.4
SB-6-097	2 - residential	VAC/BERNCASTLE RD/VIC PEART AVE	1258	0	64	0.1	1.5	3.9
SB-6-098	2 - residential	721 BERNCASTLE RD	995	0	65	0.1	1.4	3.6
SB-6-099	2 - residential	VAC/SIERRA HWY/VIC ANGELES FORES	187	0	73	0.1	0.8	2.5
NB-7-001	2 - residential	36300 SIERRA HWY	267	0	68	0.5	1.2	3.2
NB-7-002	2 - residential	36350 SIERRA HWY	287	0	67	0.3	1.2	3.2
NB-7-003	2 - residential	36350 SIERRA HWY	354	0	67	0.1	1.2	3.2
NB-7-004	2 - residential	1120 HAROLD ASH AVE	382	0	67	0.2	1.2	3.2
NB-7-005	2 - residential	36420 N SIERRA HWY	227	0	68	0.4	1.2	3.2
NB-7-006	2 - residential	36438 SIERRA HWY	399	0	67	0.2	1.2	3.2
NB-7-007	2 - residential	36438 SIERRA HWY	259	0	68	0.4	1.2	3.2
NB-7-008	2 - residential	36444 SIERRA HWY	390	0	67	0.1	1.2	3.2
NB-7-009	2 - residential	36444 SIERRA HWY	259	0	68	0.4	1.2	3.2

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NB-7-010	2 - residential	36444 SIERRA HWY	362	0	67	0.1	1.2	3.2
NB-7-011	2 - residential	36444 SIERRA HWY	260	0	68	0.4	1.2	3.2
NB-7-012	2 - residential	36506 SIERRA HWY	431	0	67	0.1	1.2	3.2
NB-7-013	2 - residential	36506 SIERRA HWY	243	0	68	0.4	1.2	3.2
NB-7-014	2 - residential	36512 SIERRA HWY	254	0	68	0.4	1.2	3.2
NB-7-015	2 - residential	36516 SIERRA HWY	418	0	67	0.1	1.2	3.2
NB-7-016	2 - residential	36516 SIERRA HWY	256	0	68	0.4	1.2	3.2
NB-7-017	2 - residential	36522 SIERRA HWY	418	0	67	0.1	1.2	3.2
NB-7-018	2 - residential	36522 SIERRA HWY	259	0	68	0.4	1.2	3.2
NB-7-019	2 - residential	36528 SIERRA HWY	418	0	67	0.1	1.2	3.2
NB-7-020	2 - residential	36528 SIERRA HWY	258	0	68	0.4	1.2	3.2
NB-7-021	2 - residential	36528 SIERRA HWY	259	0	68	0.4	1.2	3.2
NB-7-022	2 - residential	36554 SIERRA HWY	256	0	68	0.4	1.2	3.2
NB-7-023	2 - residential	36552 SIERRA HWY	230	0	68	0.4	1.2	3.2
NB-7-024	2 - residential	36556 SIERRA HWY	256	0	68	0.4	1.2	3.2
NB-7-025	2 - residential	36556 SIERRA HWY	257	0	68	0.4	1.2	3.2
NB-7-026	2 - residential	36556 SIERRA HWY	352	0	67	0.1	1.2	3.2
NB-7-027	2 - residential	VAC/VIC AVE S/10TH STE	575	0	57	1.4	2.9	6.6
NB-7-028	2 - residential	VAC/VIC AVE S/10TH STE	873	0	56	1.1	3.2	7.1
NB-7-029	2 - residential	VAC/COR SIERRA HWY/AVE Q	564	0	63	0.3	1.6	4.1
NB-7-030	2 - residential	813 E AVENUE Q	739	0	63	0.2	1.6	4.1
NB-7-031	2 - residential	38816 8TH ST E	739	0	63	0.2	1.6	4.1
NB-7-032	2 - residential	38820 8TH ST E	753	0	63	0.2	1.6	4.1
NB-7-033	2 - residential	38820 8TH ST E	753	0	63	0.2	1.6	4.1
NB-7-034	2 - residential	38820 8TH ST E	772	0	63	0.2	1.6	4.1

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NB-7-035	2 - residential	38828 8TH ST E	772	0	63	0.2	1.6	4.1
NB-7-036	2 - residential	38832 8TH ST E	784	0	63	0.2	1.6	4.1
NB-7-037	2 - residential	38840 8TH ST E	784	0	63	0.2	1.6	4.1
NB-7-038	2 - residential	38879 8TH ST E	607	0	63	0.3	1.6	4.1
NB-7-039	2 - residential	204 E AVENUE L8	450	0	65	0.2	1.4	3.6
NB-7-040	2 - residential	42450 2ND ST E	554	0	65	0.1	1.4	3.6
NB-7-041	2 - residential	42713 2ND ST E	435	0	66	0.2	1.4	3.6
NB-7-042	2 - residential	42725 2ND ST E	444	0	66	0.1	1.4	3.6
NB-7-043	2 - residential	42753 2ND ST E	410	0	66	0.2	1.4	3.6
NB-7-044	2 - residential	44801 TREVOR AVE	609	0	72	0.0	0.8	2.5
NB-7-045	2 - residential	44803 TREVOR AVE	609	0	72	0.0	0.8	2.5
NB-7-046	2 - residential	44811 TREVOR AVE	655	0	72	0.0	0.8	2.5
NB-7-047	2 - residential	44611 YUCCA AVE	88	0	81	0.0	0.1	1.2
SB-7-001	2 - residential	1765 PEARBLOSSOM HWY	559	0	59	0.6	2.2	5.4
SB-7-002	2 - residential	35512 SIERRA HWY	374	0	59	0.8	2.2	5.4
SB-7-003	2 - residential	35724 SIERRA HWY	258	0	63	0.5	1.6	4.1
SB-7-004	2 - residential	35724 SIERRA HWY	137	0	64	0.8	1.6	4.1
SB-7-005	2 - residential	36145 SIERRA HWY	572	0	67	0.2	1.2	3.2
SB-7-006	2 - residential	36153 SIERRA HWY	317	0	67	0.3	1.2	3.2
SB-7-007	2 - residential	36153 SIERRA HWY	226	0	68	0.4	1.2	3.2
SB-7-008	2 - residential	--	210	0	68	0.7	1.2	3.2
SB-7-009	2 - residential	36432 HAROLD 3RD ST	716	0	61	0.5	2.0	5.0
SB-7-010	2 - residential	36411 HAROLD 2ND ST	580	0	61	0.7	2.0	5.0
SB-7-011	2 - residential	36442 HAROLD 3RD ST	766	0	61	0.5	2.0	5.0
SB-7-012	2 - residential	36442 HAROLD 3RD ST	581	0	61	0.7	2.0	5.0

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SB-7-013	2 - residential	36450 HAROLD 3RD ST	781	0	60	0.3	2.0	5.0
SB-7-014	2 - residential	36450 HAROLD 3RD ST	581	0	61	0.7	2.0	5.0
SB-7-015	2 - residential	36456 HAROLD 3RD ST	762	0	60	0.3	2.0	5.0
SB-7-016	2 - residential	36456 HAROLD 3RD ST	577	0	61	0.6	2.0	5.0
SB-7-017	2 - residential	36460 HAROLD 3RD ST	762	0	60	0.5	2.0	5.0
SB-7-018	2 - residential	36466 HAROLD 3RD ST	763	0	60	0.5	2.0	5.0
SB-7-019	2 - residential	36470 HAROLD 3RD ST	764	0	60	0.5	2.0	5.0
SB-7-020	2 - residential	36484 HAROLD 3RD ST	764	0	60	0.5	2.0	5.0
SB-7-021	2 - residential	36484 HAROLD 3RD ST	775	0	60	0.5	2.0	5.0
SB-7-022	2 - residential	36484 HAROLD 3RD ST	682	0	61	0.5	2.0	5.0
SB-7-023	2 - residential	582 BAYBERRY ST	734	0	56	1.4	2.9	6.6
SB-7-024	2 - residential	596 BAYBERRY ST	677	0	56	1.4	2.9	6.6
SB-7-025	2 - residential	573 BAYBERRY ST	694	0	56	1.4	2.9	6.6
SB-7-026	2 - residential	37340 LARCHWOOD DR	532	0	57	1.6	2.9	6.6
SB-7-027	2 - residential	573 BAYBERRY ST	685	0	56	1.4	2.9	6.6
SB-7-028	2 - residential	37348 LARCHWOOD DR	532	0	57	1.6	2.9	6.6
SB-7-029	2 - residential	37354 LARCHWOOD DR	519	0	57	1.6	2.6	6.2
SB-7-030	2 - residential	37362 LARCHWOOD DR	519	0	57	1.6	2.6	6.2
SB-7-031	2 - residential	37368 LARCHWOOD DR	513	0	57	1.6	2.6	6.2
SB-7-032	2 - residential	37374 LARCHWOOD DR	513	0	57	1.6	2.6	6.2
SB-7-033	2 - residential	37402 LARCHWOOD DR	528	0	57	1.5	2.9	6.6
SB-7-034	2 - residential	37414 LARCHWOOD DR	528	0	57	1.5	2.9	6.6
SB-7-035	2 - residential	37420 LARCHWOOD DR	540	0	57	1.5	2.9	6.6
SB-7-036	2 - residential	37426 LARCHWOOD DR	542	0	57	1.5	2.9	6.6
SB-7-037	2 - residential	37432 LARCHWOOD DR	563	0	56	1.4	2.9	6.6

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SB-7-038	2 - residential	37440 LARCHWOOD DR	576	0	56	1.4	2.9	6.6
SB-7-039	2 - residential	37446 LARCHWOOD DR	576	0	56	1.4	2.9	6.6
SB-7-040	2 - residential	37452 LARCHWOOD DR	600	0	56	1.3	2.9	6.6
SB-7-041	2 - residential	37458 LARCHWOOD DR	600	0	56	1.3	2.9	6.6
SB-7-042	2 - residential	37466 LARCHWOOD DR	621	0	56	1.3	3.2	7.1
SB-7-043	2 - residential	37502 LARCHWOOD DR	621	0	56	1.3	3.2	7.1
SB-7-044	2 - residential	37510 LARCHWOOD DR	635	0	56	1.3	3.2	7.1
SB-7-045	2 - residential	570 IVY DR	811	0	55	1.1	3.2	7.1
SB-7-046	2 - residential	37510 LARCHWOOD DR	635	0	56	1.3	3.2	7.1
SB-7-047	2 - residential	37518 LARCHWOOD DR	654	0	56	1.2	3.2	7.1
SB-7-048	2 - residential	567 IVY DR	792	0	55	1.1	3.2	7.1
SB-7-049	2 - residential	566 E AVENUE R8	809	0	55	1.1	3.2	7.1
SB-7-050	2 - residential	572 E AVENUE R8	741	0	55	1.1	3.2	7.1
SB-7-051	2 - residential	596 E AVENUE R8	665	0	56	1.2	3.2	7.1
SB-7-052	2 - residential	596 E AVENUE R8	603	0	56	1.3	3.2	7.1
SB-7-053	2 - residential	38110 5TH ST E	453	0	65	0.4	1.4	3.6
SB-7-054	2 - residential	38110 5TH ST E	501	0	65	0.3	1.4	3.6
SB-7-055	2 - residential	VAC/6TH STE/VIC AVE Q12	403	0	65	0.2	1.4	3.6
SB-7-056	2 - residential	560 E AVENUE Q9	422	0	65	0.5	1.4	3.6
SB-7-057	2 - residential	560 E AVENUE Q9	376	0	65	0.3	1.4	3.6
SB-7-058	2 - residential	--	463	0	65	0.5	1.4	3.6
SB-7-059	2 - residential	564 E PALMDALE BLVD	414	0	66	0.5	1.4	3.6
SB-7-060	2 - residential	38535 6TH ST E	264	0	65	0.3	1.4	3.6
SB-7-061	2 - residential	38545 6TH ST E	273	0	65	0.3	1.4	3.6
SB-7-062	2 - residential	38717 6TH ST E	264	0	65	0.2	1.4	3.6

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SB-7-063	2 - residential	--	605	0	65	0.2	1.4	3.6
SB-7-064	2 - residential	--	494	0	65	0.2	1.4	3.6
SB-7-065	2 - residential	--	488	0	65	0.2	1.4	3.6
SB-7-066	2 - residential	--	492	0	65	0.2	1.4	3.6
SB-7-067	2 - residential	--	487	0	65	0.2	1.4	3.6
SB-7-068	2 - residential	--	523	0	65	0.2	1.4	3.6
SB-7-069	2 - residential	VAC/VIC 6 STE/AVE Q	340	0	65	0.2	1.4	3.6
SB-7-070	2 - residential	VAC/VIC 6 STE/AVE Q	287	0	65	0.3	1.4	3.6
SB-7-071	2 - residential	VAC/VIC 6 STE/AVE Q	226	0	65	0.4	1.4	3.6
SB-7-072	2 - residential	VAC/VIC 6 STE/AVE Q	197	0	66	0.7	1.3	3.4
SB-7-073	2 - residential	533 E AVENUE P14	338	0	65	0.2	1.4	3.6
SB-7-074	2 - residential	533 E AVENUE P14	288	0	65	0.3	1.4	3.6
SB-7-075	2 - residential	539 E AVENUE P14	236	0	65	0.3	1.4	3.6
SB-7-076	2 - residential	543 E AVENUE P14	187	0	66	0.7	1.3	3.4
SB-7-077	2 - residential	VAC/DIVISION ST/VIC AVE M	166	0	71	0.3	1.0	2.8
SB-7-078	2 - residential	42145 SIERRA HWY	156	0	71	0.3	1.0	2.8
SB-7-079	2 - residential	42213 SIERRA HWY	154	0	70	0.3	1.0	2.8
SB-7-080	2 - residential	42359 DIVISION ST	186	0	70	0.1	1.0	2.8
SB-7-081	2 - residential	VAC/SIERRA HWY/FORBES ST	137	0	70	0.2	1.0	2.8
SB-7-082	2 - residential	42925 SIERRA HWY	162	0	70	0.2	1.0	2.8
SB-7-083	2 - residential	VAC/VIC SIERRA HWY/AVE K8	149	0	70	0.2	1.0	2.8
SB-7-084	2 - residential	43155 SIERRA HWY	149	0	70	0.2	1.0	2.8
SB-7-085	2 - residential	43321 SIERRA HWY	169	0	70	0.2	1.0	2.8
SB-7-086	2 - residential	43747 SIERRA HWY	681	0	67	0.1	1.3	3.4

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SB-7-087	2 - residential	43813 SIERRA HWY	678	0	67	0.1	1.3	3.4
SB-7-088	2 - residential	VAC/SIERRA HWY/VIC AVE K	660	0	67	0.1	1.3	3.4
SB-7-089	2 - residential	VAC/SIERRA HWY/VIC AVE K	661	0	67	0.1	1.3	3.4
SB-7-090	2 - residential	VAC/SIERRA HWY/VIC AVE K	651	0	67	0.1	1.3	3.4
SB-7-091	2 - residential	43857 SIERRA HWY	648	0	67	0.1	1.3	3.4
SB-7-092	2 - residential	43857 SIERRA HWY	642	0	67	0.1	1.3	3.4
SB-7-093	2 - residential	43857 SIERRA HWY	633	0	67	0.1	1.3	3.4
SB-7-094	2 - residential	43863 SIERRA HWY	622	0	67	0.1	1.3	3.4
SB-7-095	2 - residential	--	602	0	67	0.1	1.3	3.4
SB-7-096	2 - residential	--	560	0	67	0.1	1.3	3.4
SB-7-097	2 - residential	--	532	0	67	0.1	1.3	3.4
SB-7-098	2 - residential	--	477	0	67	0.1	1.3	3.4
SB-7-099	2 - residential	325 W AVENUE J8 BLDG A	428	0	69	0.1	1.2	3.1
SB-7-100	2 - residential	325 W AVENUE J8 BLDG A	350	0	69	0.0	1.1	2.9
SB-7-101	2 - residential	325 W AVENUE J8 BLDG A	291	0	70	0.1	1.0	2.8
SB-7-102	2 - residential	--	490	0	67	0.1	1.3	3.4
SB-7-103	2 - residential	--	482	0	67	0.1	1.3	3.4
SB-7-104	2 - residential	44049 SIERRA HWY	482	0	67	0.1	1.3	3.4
SB-7-105	2 - residential	44131 SIERRA HWY	219	0	75	0.1	0.5	2.3
SB-7-106	2 - residential	44131 SIERRA HWY	178	0	75	0.1	0.5	2.3
SB-7-107	2 - residential	44215 SIERRA HWY	194	0	75	0.1	0.5	2.3
SB-7-108	2 - residential	44215 SIERRA HWY	170	0	75	0.1	0.5	2.3
SB-7-109	2 - residential	44215 SIERRA HWY	169	0	75	0.1	0.5	2.3
SB-7-110	2 - residential	44219 SIERRA HWY	213	0	75	0.1	0.5	2.3

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							moderate	severe (significant for CEQA)
SB-7-111	2 - residential	44219 SIERRA HWY	504	0	65	0.3	1.4	3.6
SB-7-112	2 - residential	44246 CEDAR AVE	736	0	63	0.3	1.6	4.1
SB-7-113	2 - residential	44248 CEDAR AVE	737	0	63	0.3	1.6	4.1
SB-7-114	2 - residential	44300 CEDAR AVE	727	0	63	0.3	1.6	4.1
SB-7-115	2 - residential	44306 CEDAR AVE	723	0	63	0.4	1.6	4.1
SB-7-116	2 - residential	44330 BEECH AVE	504	0	66	0.3	1.3	3.4
SB-7-117	2 - residential	543 W AVENUE J	645	0	71	0.1	1.0	2.6
SB-7-118	2 - residential	525 W AVENUE J	425	0	71	0.1	1.0	2.6
SB-7-119	2 - residential	44531 BEECH AVE	621	0	64	0.1	1.6	4.1
SB-7-120	2 - residential	44545 BEECH AVE	620	0	64	0.1	1.6	4.1
SB-7-121	2 - residential	44549 BEECH AVE	620	0	64	0.1	1.6	4.1
SB-7-122	2 - residential	44559 BEECH AVE	616	0	64	0.1	1.6	4.1
SB-7-123	2 - residential	44602 BEECH AVE	492	0	66	0.1	1.3	3.4
SB-7-124	2 - residential	523 W OLDFIELD ST	441	0	66	0.1	1.3	3.4
SB-7-125	2 - residential	521 W OLDFIELD ST	401	0	66	0.1	1.3	3.4
SB-7-126	2 - residential	44612 BEECH AVE	412	0	66	0.1	1.3	3.4
SB-7-127	2 - residential	44648 BEECH AVE	395	0	66	0.1	1.3	3.4
SB-7-128	2 - residential	44648 BEECH AVE	395	0	66	0.1	1.3	3.4
SB-7-129	2 - residential	44652 BEECH AVE	401	0	66	0.0	1.3	3.4
SB-7-130	2 - residential	44651 BEECH AVE	630	0	63	0.1	1.6	4.1
SB-7-131	2 - residential	44657 BEECH AVE	630	0	63	0.1	1.6	4.1
SB-7-132	2 - residential	44663 BEECH AVE	631	0	63	0.1	1.6	4.1
SB-7-133	2 - residential	539 W NEWGROVE ST	628	0	63	0.1	1.6	4.1
SB-7-134	2 - residential	44719 BEECH AVE	723	0	63	0.0	1.6	4.1
SB-7-135	2 - residential	44733 BEECH AVE	722	0	63	0.0	1.6	4.1

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SB-7-136	2 - residential	44733 BEECH AVE	620	0	63	0.1	1.6	4.1
NB-1-A	3 - institutional	Church, 1721 N BROADWAY	537	0	65	0.7	3.6	7.5
NB-1-B	3 - institutional	Church, 1230 N SAN FERNANDO RD	378	0	61	1.0	4.3	8.6
NB-1-C	3 - institutional	School, 2050 N SAN FERNANDO RD	103	0	68	0.8	3.1	6.5
NB-1-D	1 - studio/theater	Studio, 2701 MEDIA CENTER DR	134	0	68	0.7	1.2	3.2
NB-1-E	3 - institutional	School, 2709 MEDIA CENTER DR	55	0	66	1.8	3.3	6.8
NB-2-A	3 - institutional	School, 3020 N SAN FERNANDO RD	65	0	66	1.6	3.3	6.8
NB-2-B	3 - institutional	School, 3200 N SAN FERNANDO RD	300	0	60	1.7	4.9	9.4
NB-2-C	3 - institutional	Church, 1910 S BRAND BLVD	59	0	69	1.0	3.0	6.3
NB-2-D	3 - institutional	Lab, 560 RIVERDALE DR	126	0	66	1.4	3.3	6.8
NB-2-E	1 - studio/theater	Studio, 736 SALEM ST	373	0	56	2.1	3.2	7.1
SB-2-A	1 - studio/theater	Studio/theater, 3191, 3201, 3229 CASITAS AVE	38	0	71	0.9	1.0	2.8
SB-2-B	1 - studio/theater	Studio/theater, 3245, 3249, 3265, 3269 CASITAS AVE	38	0	71	0.9	1.0	2.8
SB-2-C	3 - institutional	School, 3273 CASITAS AVE	38	0	71	0.9	2.7	5.8
SB-2-D	3 - institutional	Lab, 4501 COLORADO BLVD	88	0	69	2.2	2.8	6.0
SB-2-E	3 - institutional	School, 5245 W SAN FERNANDO RD	89	0	69	2.3	2.8	6.0
NB-3-A	3 - institutional	School, 5744 SAN FERNANDO RD	128	0	65	1.4	3.6	7.5
NB-3-B	3 - institutional	School, 926 WESTERN AVE	252	0	64	0.5	3.9	7.8
NB-3-C	3 - institutional	Lab, 918 THOMPSON AVE	167	0	66	0.5	3.4	7.1
NB-3-D	3 - institutional	School, 333 S FRONT ST	46	0	76	0.3	1.2	4.9

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
NB-3-E	3 - institutional	School, 2322 N LINCOLN ST	305	0	62	1.3	4.3	8.6
NB-3-F	3 - institutional	Church, 2401 N BRIGHTON ST	468	0	61	1.0	4.3	8.6
NB-3-G	1 - studio/theater	Studio, 7766 SAN FERNANDO RD	109	0	72	**1.1**	1.0	2.6
NB-3-H	3 - institutional	Church, 7834 SAN FERNANDO RD	108	0	72	1.1	2.5	5.6
NB-3-I	3 - institutional	Church, 8040 SAN FERNANDO RD	112	0	67	2.7	3.3	6.8
SB-3-A	1 - studio/theater	Studio, 833 SONORA AVE	63	0	75	0.4	0.5	2.3
SB-3-B	1 - studio/theater	Studio, 630 S FLOWER ST	75	0	68	1.2	1.2	3.2
SB-3-C	1 - studio/theater	Studio, 923 N VICTORY BLVD	782	0	57	0.5	2.6	6.2
SB-3-D	1 - studio/theater	Studio, 1813 N VICTORY PL	105	0	73	0.3	0.8	2.5
SB-3-E	1 - studio/theater	Studio, 2720 N ONTARIO ST	226	0	61	1.1	1.9	4.7
SB-3-F	3 - institutional	School, 10765 STRATHERN ST	140	0	64	2.4	3.6	7.5
SB-3-G	1 - studio/theater	Studio, 11273 GOSS ST	309	0	62	1.6	1.9	4.7
NB-4-A	3 - institutional	Church, 10022 SAN FERNANDO RD	157	0	66	2.3	3.4	7.1
NB-4-B	3 - institutional	School, 130 N BRAND BLVD	125	0	70	1.9	2.8	6.0
NB-4-C	3 - institutional	Church, 1231 1ST ST	267	0	68	0.8	3.0	6.3
NB-5-A	3 - institutional	School, 21704 GOLDEN TRIANGLE RD	251	0	71	0.4	2.5	5.6
NB-5-B	3 - institutional	Church, 28050 SAND CANYON RD	149	0	74	0.1	1.8	5.2
SB-5-A	1 - studio/theater	Theater, 24242 MAIN ST	197	0	70	0.8	1.1	2.9
SB-5-B	3 - institutional	School, 16628 LOST CANYON RD	227	0	64	0.6	3.9	7.8
SB-5-C	3 - institutional	School, 16530 LOST CANYON RD	131	0	74	0.1	1.8	5.2

Receiver ID	FTA category	Address (provided where available through LA County data)	Distance to near track (ft)	Speed (mph) (design speed)	Existing noise (dBA)	Predicted noise increase (dBA)	Allowable increase (dBA) moderate	Allowable increase (dBA) severe (significant for CEQA)
SB-6-A	3 - institutional	Church, 3015 SACRAMENTO AVE	785	0	56	0.8	6.0	10.9
NB-7-A	3 - institutional	Library, 700 E PALMDALE BLVD	324	0	63	1.3	4.1	8.2
NB-7-B	3 - institutional	Church, 38412 SIERRA HWY	295	0	63	1.4	4.1	8.2
NB-7-C	3 - institutional	Church, 43851 DIVISION ST	133	0	82	0.0	0.3	2.1
SB-7-A	3 – institutional	Mortuary, 38141 6TH ST E	275	0	61	0.9	4.3	8.6
SB-7-B	3 - institutional	Church, 38201 6TH ST E	274	0	61	0.9	4.3	8.6
SB-7-C	3 - institutional	Church, 38342 6TH ST E	126	0	67	1.4	3.3	6.8
SB-7-D	3 - institutional	Church, 38715 6TH ST E	263	0	60	0.6	4.6	9.0
SB-7-E	3 - institutional	School, 38801 CLOCK TOWER PLAZA DR E	306	0	62	1.1	4.3	8.6
SB-7-F	3 - institutional	School, 40015 SIERRA HWY	240	0	61	0.9	4.3	8.6
SB-7-G	3 - institutional	School, 44055 SIERRA HWY	239	0	82	0.0	0.3	2.5
SB-7-H	3 - institutional	Church, 44339 BEECH AVE	681	0	68	0.1	3.0	6.3
SB-7-I	3 - institutional	Church, 44517 SIERRA HWY	225	0	82	0.0	0.3	2.5
SB-7-J	3 - institutional	Church, 44523, 44529 SIERRA HWY	225	0	82	0.0	0.3	2.5

Appendix D – Construction Noise and Vibration Predictions

Table 23 through **Table 25** present the construction noise predictions in each city. **Table 26** through **Table 28** present the construction vibration predictions in each city. Exceedances of the applicable noise limits are shown in red, with the amount above the limit following in parentheses. Note that some distances differ from those listed in the operational noise analysis due to refinement in areas where only distance to parcel was available through the L.A. County database (see Appendix C for further details).

Table 23: Construction Noise Predictions for the Balboa Double Track Addition, City of Los Angeles

Receiver ID	Address	Distance to Near Track (ft)	Noise Limit[a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
SB-5-001	14748 San Fernando Rd	61	78	**86 (8.4)**	**91 (13.1)**	**90 (12.5)**	**89 (10.5)**	**86 (7.7)**

All noise levels are dBA. Predicted impacts are shown in red with the exceedance amount in parentheses.
[a] Residential receiver uses LT-12 measurement +5 dBA.

Table 24: Construction Noise Predictions for the Siding Track Extension, City of Santa Clarita

Receiver ID	Address	Distance to Near Track (ft)	Noise Limit[a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
NB-5-117	21710 Golden Triangle Rd	369	75	71	**75 (0.4)**	75	73	70
SB-5-057	22119 Propello Dr	555	75	64	69	68	66	63
SB-5-058	22082 Propello Dr	379	75	70	**75 (0.2)**	75	73	70
SB-5-059	22030 Propello Dr	313	75	72	**77 (1.9)**	**76 (1.2)**	74	71
SB-5-060	1st row Moveo Dr	293	75	73	**77 (2.4)**	**77 (1.8)**	75	72

Receiver ID	Address	Distance to Near Track (ft)	Noise Limit[a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
SB-5-061	1st row Moveo Dr	265	75	74	**78 (3.3)**	**78 (2.7)**	**76 (0.7)**	73
SB-5-062	1st row Moveo Dr	241	75	74	**79 (4.1)**	**79 (3.5)**	**77 (1.5)**	74
SB-5-063	1st row Moveo Dr	236	75	75	**79 (4.3)**	**79 (3.7)**	**77 (1.7)**	74
SB-5-064	1st row Moveo Dr	236	75	75	**79 (4.3)**	**79 (3.7)**	**77 (1.7)**	74
SB-5-065	1st row Moveo Dr	246	75	74	**79 (4)**	**78 (3.3)**	**76 (1.4)**	74
SB-5-066	1st row Moveo Dr	246	75	74	**79 (4)**	**78 (3.3)**	**76 (1.4)**	74
SB-5-067	1st row Moveo Dr	247	75	74	**79 (3.9)**	**78 (3.3)**	**76 (1.3)**	74
SB-5-068	1st row Moveo Dr	245	75	74	**79 (4)**	**78 (3.4)**	**76 (1.4)**	74
SB-5-069	26247 Prima Way	370	75	71	**75 (0.4)**	75	73	70
SB-5-070	26244 Prima Way	340	75	71	**76 (1.1)**	**76 (0.5)**	74	71
SB-5-071	21758 Bene Dr	392	75	67	72	71	69	67
SB-5-072	1st row Candella Dr	226	75	75	**80 (4.7)**	**79 (4.1)**	**77 (2.1)**	74
SB-5-073	21758 Bene Dr	391	75	67	72	71	69	67
SB-5-074	1st row Candella Dr	216	75	**75 (0.3)**	**80 (5.1)**	**79 (4.5)**	**78 (2.5)**	75
SB-5-075	1st row Candella Dr	381	75	67	72	72	70	67
SB-5-076	1st row Candella Dr	214	75	**75 (0.4)**	**80 (5.2)**	**80 (4.6)**	**78 (2.6)**	75
SB-5-077	1st row Candella Dr	179	75	**75 (0.4)**	**80 (5.2)**	**80 (4.6)**	**78 (2.6)**	75
SB-5-078	21425 Soledad Canyon Rd	276	75	73	**78 (2.9)**	**77 (2.3)**	**75 (0.4)**	73
NB-5-A	21704 Golden Triangle Rd	251	85	74	79	78	76	73
NB-5-01c[b]	21700 Golden Triangle Rd	125	85	80	85	84	82	79
NB-5-02c[b]	21618 Golden Triangle Rd	155	85	78	83	82	80	78
SB-5-01c[b]	22931-22947 Soledad Canyon Rd	230	85	75	80	79	77	74

Receiver ID	Address	Distance to Near Track (ft)	Noise Limit[a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
SB-5-02c[b]	22840 Soledad Canyon Rd	60	85	**86 (1.5)**	**91 (6.2)**	**91 (5.6)**	**89 (3.6)**	**86 (0.8)**
SB-5-03c[b]	22722 Soledad Canyon Rd	240	85	74	79	79	77	74
SB-5-04c[b]	21515 Soledad Canyon Rd	195	85	76	81	80	78	76

All noise levels are dBA. Predicted impacts are shown in red with the exceedance amount in parentheses.

[a] Indicates a receiver that has been added for the construction analysis only.

[b] Single-family residential limit is 75 dBA & multi-family is 80 dBA. The commercial limit is 85 dBA.

Table 25: Construction Noise Predictions for the Terminal Improvements, City of Lancaster

Receiver ID	Address	Distance to Near Track (ft)	Noise Limit[a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
NB-7-044	44801 Trevor Ave	609	75	66	71	70	69	66
NB-7-045	44803 Trevor Ave	609	75	66	71	70	69	66
NB-7-046	44811 Trevor Ave	655	75	66	70	70	68	65
NB-7-047	44611 Yucca Ave	85	75	**83 (8.4)**	**88 (13.2)**	**88 (12.6)**	**86 (10.6)**	**83 (7.8)**
SB-7-119	44531 Beech Ave	621	75	60	64	64	62	59
SB-7-120	44545 Beech Ave	620	75	60	64	64	62	59
SB-7-121	44549 Beech Ave	620	75	60	64	64	62	59
SB-7-122	44559 Beech Ave	616	75	60	64	64	62	59
SB-7-123	44602 Beech Ave	492	75	62	66	66	64	61
SB-7-124	523 W Oldfield St	441	75	63	67	67	65	62
SB-7-125	521 W Oldfield St	401	75	63	68	68	66	63
SB-7-126	44612 Beech Ave	412	75	63	68	67	65	63

Receiver ID	Address	Distance to Near Track (ft)	Noise Limit[a]	Activity 1 Noise Predictions	Activity 2 Noise Predictions	Activity 3 Noise Predictions	Activity 4 Noise Predictions	Activity 5 Noise Predictions
SB-7-127	44648 Beech Ave	395	75	64	68	68	66	63
SB-7-128	44648 Beech Ave	395	75	64	68	68	66	63
SB-7-129	44652 Beech Ave	401	75	63	68	68	66	63
SB-7-130	44651 Beech Ave	630	75	60	64	64	62	59
SB-7-131	44657 Beech Ave	630	75	60	64	64	62	59
SB-7-132	44663 Beech Ave	631	75	60	64	64	62	59
SB-7-133	539 W Newgrove St	628	75	60	64	64	62	59
SB-7-134	44719 Beech Ave	723	75	58	63	62	61	58
SB-7-135	44725 Beech Ave	722	75	58	63	62	61	58
SB-7-136	44733 Beech Ave	620	75	60	64	64	62	59
SB-7-137	44942 Cedar Ave	575	80	62	67	66	64	61
SB-7-138	530 W Jackman St	293	80	68	72	72	70	67
SB-7-139	531 W Jackman St	240	80	71	76	76	74	71
SB-7-I	44517 Sierra Hwy	225	85	72	77	76	74	71
SB-7-J	44523, 44529 Sierra Hwy	225	85	72	77	76	74	71
SB-7-01c[b]	44738 Sierra Hwy	17	85	**97 (12.4)**	**102 (17.2)**	**102 (16.6)**	**100 (14.6)**	**97 (11.8)**
SB-7-02c[b]	44847 Sierra Hwy	230	85	74.8	79.5	78.9	77.0	74.1
SB-7-03c[b]	45075 Sierra Hwy	175	85	77.2	81.9	81.3	79.3	76.5

All noise levels are dBA. Predicted impacts are shown in red with the exceedance amount in parentheses.

[a] Indicates a receiver that has been added for the construction analysis only.

[b] Single-family residential limit is 75 dBA & multi-family is 80 dBA. The commercial limit is 85 dBA.

Table 26: Construction Vibration Predictions for the Balboa Double Track Addition, City of Los Angeles

Receiver ID	Address	Distance to Near Track (ft)	PPV Limit[a]	Activity 1 Vibration Predictions	Activity 2 Vibration Predictions	Activity 3 Vibration Predictions	Activity 4 Vibration Predictions	Activity 5 Vibration Predictions
SB-5-001	14748 San Fernando Rd	61	0.016	**0.023 (0.008)**	**0.023 (0.008)**	**0.023 (0.008)**	**0.055 (0.039)**	**0.055 (0.039)**

All vibration levels are PPV in inches/second. Predicted impacts are shown in red with the exceedance amount (above annoyance thresholds) in parentheses. Vibration criteria are listed in Table 11. Damage criteria are not predicted to be exceeded; the construction contractor's Vibration Control Plan, however, should include refined predictions based on planned equipment use.

[a] FTA Manual annoyance criteria (72 VdB residential) converted to PPV using a crest factor of 4.

Table 27: Construction Vibration Predictions for the Siding Track Extension, City of Santa Clarita

Receiver ID	Address	Distance to Near Track (ft)	PPV Limit[a]	Activity 1 Vibration Predictions	Activity 2 Vibration Predictions	Activity 3 Vibration Predictions	Activity 4 Vibration Predictions	Activity 5 Vibration Predictions
NB-5-117	21710 Golden Triangle Rd	369	0.016	0.002	0.002	0.002	0.004	0.004
SB-5-057	22119 Propello Dr	555	0.016	0.001	0.001	0.001	0.002	0.002
SB-5-058	22082 Propello Dr	379	0.016	0.002	0.002	0.002	0.004	0.004
SB-5-059	22030 Propello Dr	313	0.016	0.002	0.002	0.002	0.005	0.005
SB-5-060	1st row Moveo Dr	293	0.016	0.002	0.002	0.002	0.005	0.005
SB-5-061	1st row Moveo Dr	265	0.016	0.003	0.003	0.003	0.006	0.006
SB-5-062	1st row Moveo Dr	241	0.016	0.003	0.003	0.003	0.007	0.007
SB-5-063	1st row Moveo Dr	236	0.016	0.003	0.003	0.003	0.007	0.007
SB-5-064	1st row Moveo Dr	236	0.016	0.003	0.003	0.003	0.007	0.007
SB-5-065	1st row Moveo Dr	246	0.016	0.003	0.003	0.003	0.007	0.007
SB-5-066	1st row Moveo Dr	246	0.016	0.003	0.003	0.003	0.007	0.007
SB-5-067	1st row Moveo Dr	247	0.016	0.003	0.003	0.003	0.007	0.007
SB-5-068	1st row Moveo Dr	245	0.016	0.003	0.003	0.003	0.007	0.007

Receiver ID	Address	Distance to Near Track (ft)	PPV Limit[a]	Activity 1 Vibration Predictions	Activity 2 Vibration Predictions	Activity 3 Vibration Predictions	Activity 4 Vibration Predictions	Activity 5 Vibration Predictions
SB-5-069	26247 Prima Way	370	0.016	0.002	0.002	0.002	0.004	0.004
SB-5-070	26244 Prima Way	340	0.016	0.002	0.002	0.002	0.004	0.004
SB-5-071	21758 Bene Dr	392	0.016	0.001	0.001	0.001	0.003	0.003
SB-5-072	1st row Candella Dr	226	0.016	0.003	0.003	0.003	0.008	0.008
SB-5-073	21758 Bene Dr	391	0.016	0.001	0.001	0.001	0.003	0.003
SB-5-074	1st row Candella Dr	216	0.016	0.004	0.004	0.004	0.008	0.008
SB-5-075	1st row Candella Dr	381	0.016	0.001	0.001	0.001	0.004	0.004
SB-5-076	1st row Candella Dr	214	0.016	0.004	0.004	0.004	0.008	0.008
SB-5-077	1st row Candella Dr	179	0.016	0.005	0.005	0.005	0.011	0.011
SB-5-078	21425 Soledad Canyon Rd	276	0.016	0.002	0.002	0.002	0.006	0.006
NB-5-A	21704 Golden Triangle Rd	251	0.022	0.003	0.003	0.003	0.007	0.007
NB-5-01c[b]	21700 Golden Triangle Rd	125	0.022	0.008	0.008	0.008	0.019	0.019
NB-5-02c[b]	21618 Golden Triangle Rd	155	0.022	0.006	0.006	0.006	0.014	0.014
SB-5-01c[b]	22931-22947 Soledad Canyon Rd	230	0.022	0.003	0.003	0.003	0.008	0.008
SB-5-02c[b]	22840 Soledad Canyon Rd	60	0.022	0.017	0.017	0.017	**0.04 (0.018)**	**0.04 (0.018)**
SB-5-03c[b]	22722 Soledad Canyon Rd	240	0.022	0.003	0.003	0.003	0.007	0.007
SB-5-04c[b]	21515 Soledad Canyon Rd	195	0.022	0.004	0.004	0.004	0.010	0.010

All vibration levels are PPV in inches/second. Predicted impacts are shown in red with the exceedance amount (above annoyance thresholds) in parentheses. Vibration criteria are listed in Table 11. Damage criteria are not predicted to be exceeded; the construction contractor's Vibration Control Plan, however, should include refined predictions based on planned equipment use.

[a] FTA Manual annoyance criteria (72 VdB residential/75 VdB institutional) converted to PPV using a crest factor of 4.

[b] Indicates a receiver that has been added for the construction analysis only.

Table 28: Construction Vibration Predictions for the Terminal Improvements, City of Lancaster

Receiver ID	Address	Distance to Near Track (ft)	PPV Limit[a]	Activity 1 Vibration Predictions	Activity 2 Vibration Predictions	Activity 3 Vibration Predictions	Activity 4 Vibration Predictions	Activity 5 Vibration Predictions
NB-7-044	44801 Trevor Ave	609	0.016	0.001	0.001	0.001	0.002	0.002
NB-7-045	44803 Trevor Ave	609	0.016	0.001	0.001	0.001	0.002	0.002
NB-7-046	44811 Trevor Ave	655	0.016	0.001	0.001	0.001	0.002	0.002
NB-7-047	44611 Yucca Ave	85	0.016	0.014	0.014	0.014	**0.033 (0.018)**	**0.033 (0.018)**
SB-7-119	44531 Beech Ave	621	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-120	44545 Beech Ave	620	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-121	44549 Beech Ave	620	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-122	44559 Beech Ave	616	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-123	44602 Beech Ave	492	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-124	523 W Oldfield St	441	0.016	0.001	0.001	0.001	0.003	0.003
SB-7-125	521 W Oldfield St	401	0.016	0.001	0.001	0.001	0.003	0.003
SB-7-126	44612 Beech Ave	412	0.016	0.001	0.001	0.001	0.003	0.003
SB-7-127	44648 Beech Ave	395	0.016	0.001	0.001	0.001	0.003	0.003
SB-7-128	44648 Beech Ave	395	0.016	0.001	0.001	0.001	0.003	0.003
SB-7-129	44652 Beech Ave	401	0.016	0.001	0.001	0.001	0.003	0.003
SB-7-130	44651 Beech Ave	630	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-131	44657 Beech Ave	630	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-132	44663 Beech Ave	631	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-133	539 W Newgrove St	628	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-134	44719 Beech Ave	723	0.016	0.001	0.001	0.001	0.001	0.001
SB-7-135	44725 Beech Ave	722	0.016	0.001	0.001	0.001	0.001	0.001
SB-7-136	44733 Beech Ave	620	0.016	0.001	0.001	0.001	0.002	0.002

Receiver ID	Address	Distance to Near Track (ft)	PPV Limit[a]	Activity 1 Vibration Predictions	Activity 2 Vibration Predictions	Activity 3 Vibration Predictions	Activity 4 Vibration Predictions	Activity 5 Vibration Predictions
SB-7-137	44942 Cedar Ave	575	0.016	0.001	0.001	0.001	0.002	0.002
SB-7-138	530 W Jackman St	293	0.016	0.002	0.002	0.002	0.005	0.005
SB-7-139	531 W Jackman St	240	0.016	0.003	0.003	0.003	0.008	0.008
SB-7-I	44517 Sierra Hwy	225	0.022	0.003	0.003	0.003	0.008	0.008
SB-7-J	44523, 44529 Sierra Hwy	225	0.022	0.003	0.003	0.003	0.008	0.008
SB-7-01c[b]	44738 Sierra Hwy	17	0.022	**0.159 (0.136)**	**0.159 (0.136)**	**0.159 (0.136)**	**0.375 (0.352)**	**0.375 (0.352)**
SB-7-02c[b]	44847 Sierra Hwy	230	0.022	0.003	0.003	0.003	0.008	0.008
SB-7-03c[b]	45075 Sierra Hwy	175	0.022	0.005	0.005	0.005	0.011	0.011

All vibration levels are PPV in inches/second. Predicted impacts are shown in red with the exceedance amount (above annoyance thresholds) in parentheses. Vibration criteria are listed in Table 11. Damage criteria are not predicted to be exceeded; the construction contractor's Vibration Control Plan, however, should include refined predictions based on planned equipment use.

[a] FTA Manual annoyance criteria (72 VdB residential/75 VdB institutional) converted to PPV using a crest factor of 4.

[b] Indicates a receiver that has been added for the construction analysis only.