# Hallmark-Barham Specific Plan EIR

# Technical Appendices

# Appendix L

# Noise Report

# NOISE ASSESSMENT

## East Barham Residential Development Project
## City of San Marcos, CA

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**August 3, 2021**

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## GLOSSARY OF COMMON TERMS

**Sound Pressure Level (SPL):** a ratio of one sound pressure to a reference pressure ($L_{ref}$) of 20 µPa. Because of the dynamic range of the human ear, the ratio is calculated logarithmically by 20 log ($L/L_{ref}$).

**A-weighted Sound Pressure Level (dBA):** Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more.

**Minimum Sound Level ($L_{min}$):** Minimum SPL or the lowest SPL measured over the time interval using the A-weighted network and slow time weighting.

**Maximum Sound Level ($L_{max}$):** Maximum SPL or the highest SPL measured over the time interval the A-weighted network and slow time weighting.

**Equivalent sound level ($L_{eq}$):** the true equivalent sound level measured over the run time. Leq is the A-weighted steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

**Day Night Sound Level (Ldn)**: Representing the Day/Night sound level, this measurement is a 24 –hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. This is primarily used in community noise regulations where there is a 10 dB "Penalty" for nighttime noise. Typically, Ldn's are measured using A weighting.

**Community Noise Exposure Level (CNEL)**: The accumulated exposure to sound measured in a 24-hour sampling interval and artificially boosted during certain hours. For CNEL, samples taken between 7 pm and 10 pm are boosted by 5 dB; samples taken between 10 pm and 7 am are boosted by 10 dB.

**Octave Band**: An octave band is defined as a frequency band whose upper band-edge frequency is twice the lower band frequency.

**Third-Octave Band**: A third-octave band is defined as a frequency band whose upper band-edge frequency is 1.26 times the lower band frequency.

**Response Time (F,S,I)**: The response time is a standardized exponential time weighting of the input signal according to fast (F), slow (S) or impulse (I) time response relationships. Time response can be described with a time constant. The time constants for fast, slow and impulse responses are 1.0 seconds, 0.125 seconds and 0.35 milliseconds, respectively.

## EXECUTIVE SUMMARY

This noise study has been completed to determine the noise impacts to and from the proposed residential project. The project is located along E. Barham Drive, south of State Route 78 (SR-78) between Woodland Parkway and La Moree Road.

Construction Noise

The grading equipment will be spread out over the project site from distances near the occupied property lines to distances of 200 feet or more away. Based upon the site plan the majority of the grading operations, on average, will occur more than 75 feet from the property lines. At an average distance of 75 feet from the construction activities to the nearest property line, noise levels will comply with the 75 dBA Leq standard over 8 hours at the property lines. Therefore, no impacts are anticipated and no mitigation is required during construction of the proposed Project. Additionally, all equipment should be properly fitted with mufflers and all staging and maintenance should be conducted as far away for the existing residence as possible.

Additionally, the project may require blasting which would also require the need for a rock drill. Rock drilling and blasting will occur on an as-needed basis on site. In the event that the rock drill is staged within 160 feet of any occupied noise sensitive land use, it is recommended that a specific noise mitigation plan based upon the location of the construction equipment, topography and construction schedule be identified by an acoustical engineer. A mitigation plan should be developed that may include a temporary noise barrier along any property line where the impacts could occur. Based on previous projects, a barrier ranging from 8 to 12 feet in height maybe needed. The proposed noise barrier will need to be of solid non-gapping material to adequately reduce construction noise levels below the noise threshold. The mitigation plan can also incorporate the usage of the equipment (amount of time used and/or the location in respect to the property line). The mitigation plan would determine the final height and location of a temporary barrier if one is necessary. The project's requested approvals include a Conditional Use Permit, which would allow for the use of the temporary rock crusher.

Rock Crusher Noise

The crusher would be located at the northern grading limits of the project, adjacent to E. Barham Drive, approximately 500 feet from the nearest single-family residences to the east, 500 feet from the nearest single-family residences to the west, and 465 feet from the church and preschool to the west. Based on empirical data collected at a material processing plant in the City of Upland noise levels from a rock crusher ranged between 80-86 dBA at 45 feet (Ldn, 2011). To achieve the City's 60 dBA Leq standard, the rock crusher needs to be 900 feet from the nearest residence. The nearest residence to the proposed rock crusher location is approximately 500 feet. Therefore, distance alone is not adequate enough to achieve the City's 60 dBA Leq standard at the single-

family residences or the City's 65 dBA Leq standard at the Church and preschool. Given this, the noise levels are anticipated to be above the City's 60 dBA Leq standard at the residences and 65 dBA Leq standard at the Church and preschool, for the rock crusher.

A 5 decibel reduction is needed to reduce to the noise level to 60 dBA Leq. Breaking the line of sight from a noise source to a receptor will typically achieve a 5 decibel reduction or better based on elevation offsets. Therefore, if the crusher is 10 feet in height, the barrier must be at least 11-12 feet in height. This will help shield the crusher both visually and acoustically. The mitigation can consist of an earthen berm, 5/8" plywood, 1 inch acoustical blankets or any combination of these materials.

Noise measurements of the rock crusher should be conducted once the final crusher type and location are determined to ensure compliance with the City's thresholds. If noise levels are found to be above the established thresholds of 60 dBA at any existing single family residential use, 65 dBA for any multifamily use or 70 dBA at a commercial use then additional mitigation in the form of higher barriers, sound absorbing materials or operational limits on the crusher usage will need to be incorporated.

Onsite Transportation Noise

The results of this analysis indicate that future vehicle noise from State Route 78 (SR-78) and E. Barham Drive is the principal sources of noise that will impact the site. The San Diego Northern Railroad is located almost 500 feet from the project site and would not significantly contribute to project noise levels. Due to the roadway activities, the outdoor use areas, were found to exceed the City's 65 dBA CNEL threshold without mitigation. Noise mitigation in the form of 8-foot barriers at the top of slopes of the building pads and 5 to 7-foot barriers installed at the balconies/decks for the units having direct line of sight to the roadways is needed to comply with the City of San Marcos Noise standards for multi-family uses based on transportation related noise sources (i.e., vehicle).

Additionally, a final noise assessment is required prior to the issuance of the first building permit since the building facades are above 60 dBA CNEL. This final report would identify the interior noise requirements based upon architectural and building plans. It should be noted; interior noise levels of 45 dBA CNEL can be obtained with conventional building construction methods and providing a closed window condition requiring a means of mechanical ventilation (e.g., air conditioning) and upgraded windows for all sensitive rooms (e.g., bedrooms and living spaces).

Offsite Transportation Noise

The Project does not create a noise increase of more than 3 dBA CNEL on any of the analyzed roadway segments. Therefore, the Project's contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses.

# 1.0 PROJECT INTRODUCTION

## 1.1 Purpose of this Study

The purpose of this Noise study is to determine potential noise impacts (if any) created from the proposed construction operations and to determine potential noise impacts (if any) to the site generated from offsite sources. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less then significant.

## 1.2 Project Location

The vacant 10.56 acre project site having an Assessor Parcel Number (APN) of 228-310-0100 is located at 943 E. Barham Drive in the Barham/Discovery Community in the City of San Marcos. Specifically, the project site is located on the southern side of Barham Drive between Woodland Parkway and La Moree Road. A project vicinity map and location map are shown in Figure 1-A. The existing site is currently vacant. The project is bounded on the west by an existing church and Grace Park, by existing single-family residential to the east and southwest, by adjacent roadways to the north, and by existing open space to the south.

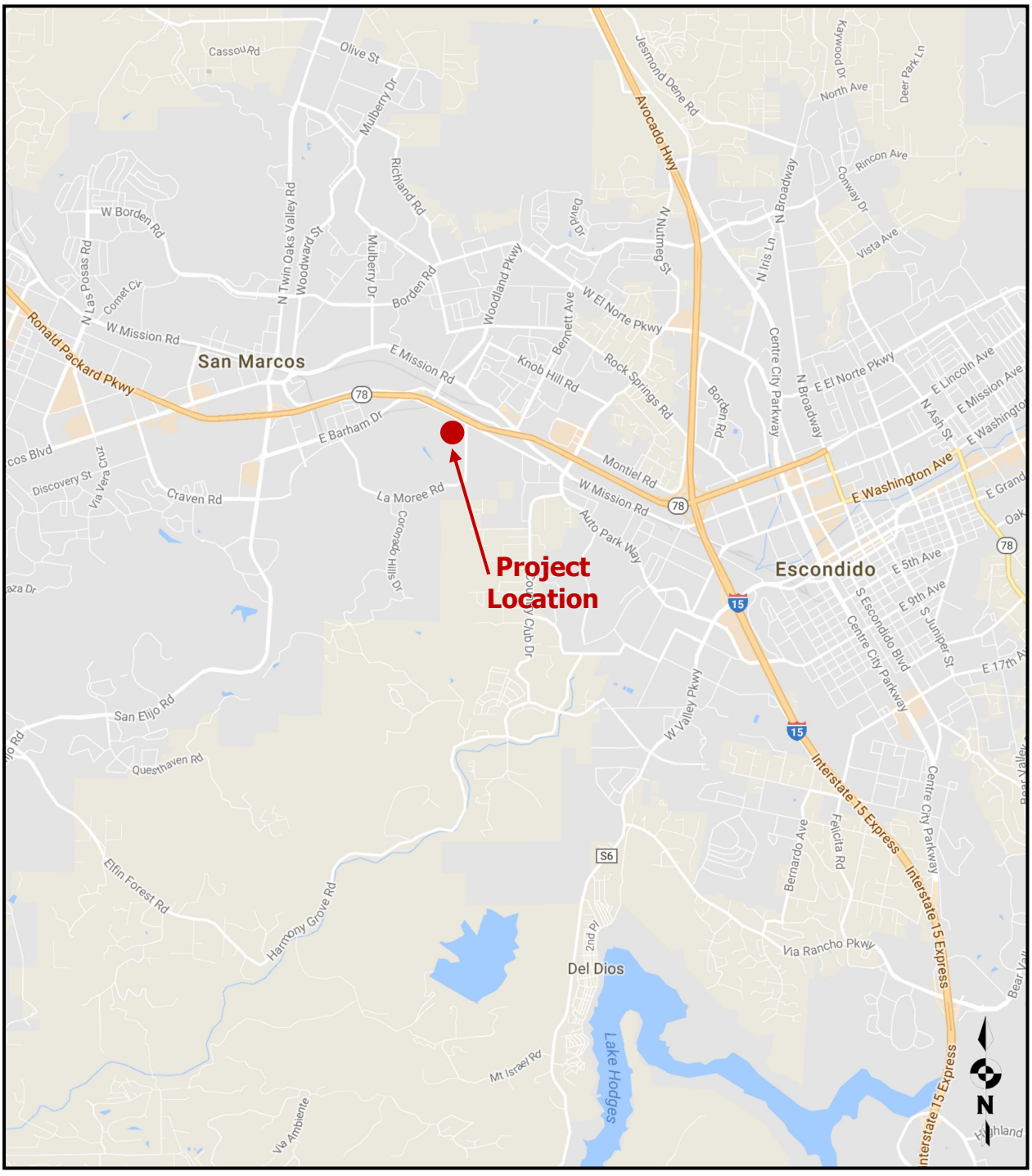
## 1.3 Project Description and Purpose

The project proposes 151 multi-family residential units situated on approximately 10.56 gross acres. Residential buildings comprise approximately 2.8-acres of the project site. Multi-family residential dwelling units are comprised of one, two, and three-story condominiums with ten dwelling unit types interspersed throughout the Specific Plan area. Overall building heights will not exceed 40 feet.

The project proposes a total of 349 parking spaces. This includes 283 garage spaces associated with the units, which will be pre-wired for electric vehicle charging stations. The project design includes 66 outdoor parking spaces of which 10 would be for the residences. The project would also include two electric vehicle charging stations within the visitor parking areas.

The project is proposing a General Plan Amendment (GP20-0002), Specific Plan (SP20-0002), Rezone (RZ20-0001), Multi-Family Site Development Plan (MFSD20-0001), Tentative Subdivision Map (TM20-0001), a Conditional Use Permit (CUP20-0007) and a Grading Variance (GV20-0002). Also, during grading a small rock crusher would be onsite for ancillary crushing needs if necessary. The project development plan is shown on Figure 1-B of this report.

## Figure 1-A: Project Vicinity Map




Source: (Google, 2021)

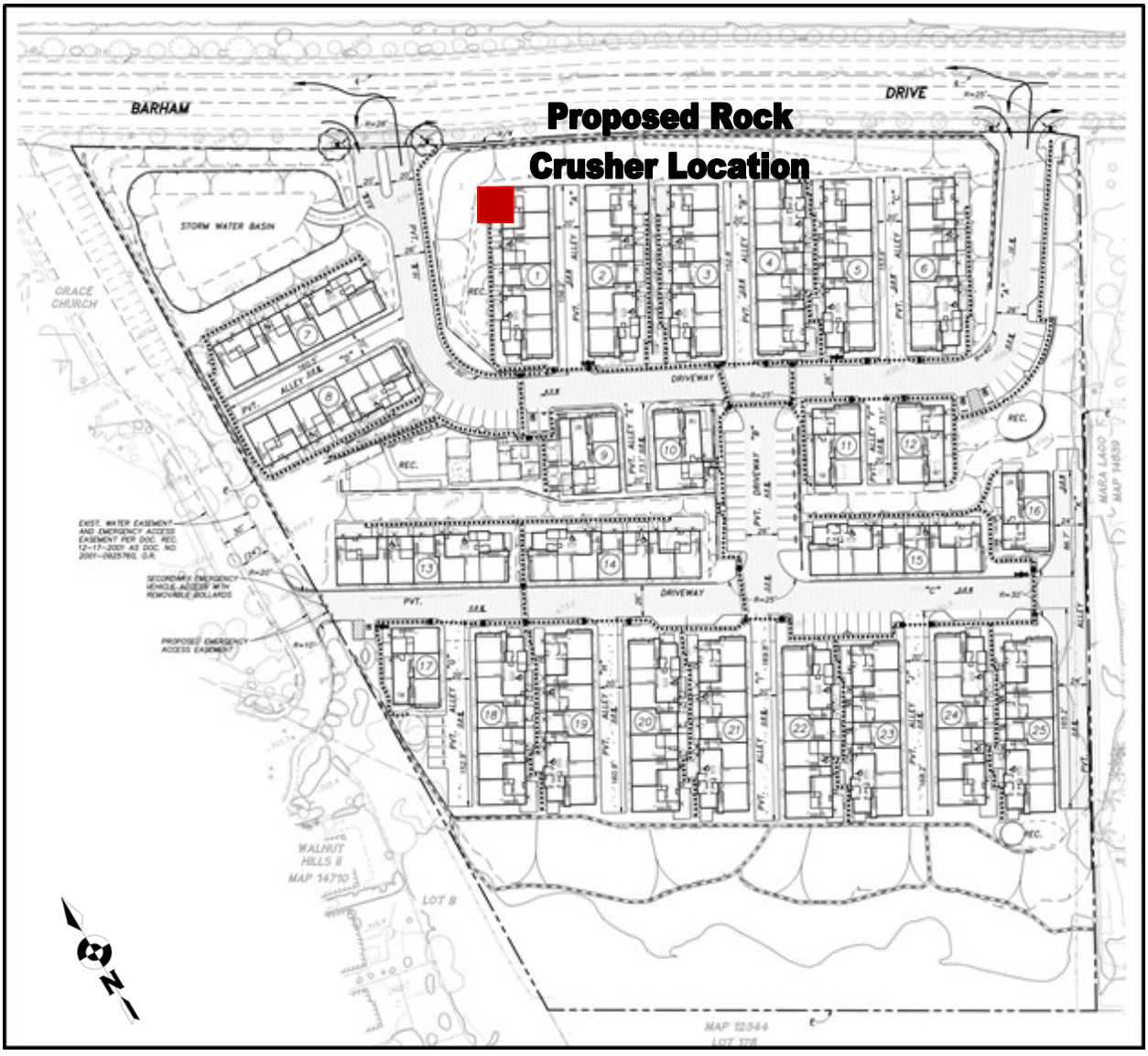
## Figure 1-B: Residential Development Details


Source: (SB&O, INC., 2021)

## 1.4 Rock Crushing Operations

The project may utilize a Thunderbird Hazemag Impact Crushing Plant Model CP300 rock crusher, or equivalent. Rock crushing will occur between the hours of 9:00 AM and 4:00 PM. The crusher would be located approximately 500 feet from the nearest residences, the church and preschool. The rock crushing equipment will be located in the central portion of the site along E. Barham Drive to maximize the distance separation from adjacent residential, church, and school uses. The rock crusher location is shown in Figure 1-C. If blasting is required, the contractor will be required to follow the City's blasting protocols per the City's Municipal Code Section 17.60.06 (City of San Marcos Municipal Code, 2019).

**Figure 1-C: Proposed Rock Crusher Location**



# 2.0 FUNDAMENTALS

## 2.1 Acoustical Fundamentals

Noise is defined as unwanted or annoying sound which interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs and when the noise occurs. Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise whereas the equivalent sound level depicted as Leq represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

The Community Noise Equivalent Level (CNEL) is the 24 hour A-weighted average for sound, with corrections or penalties for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of 10 decibels to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sounds appear louder.

A vehicle's noise level is from a combination of the noise produced by the engine, exhaust and tires. The cumulative traffic noise levels along a roadway segment are based on three primary factors: the amount of traffic, the travel speed of the traffic, and the vehicle mix ratio or number of medium and heavy trucks. The intensity of traffic noise is increased by higher traffic volumes, greater speeds and increased number of trucks.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore, the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiant in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas and vegetation. On the other hand, fixed/point sources radiate outward uniformly as it travels away from the source. Their sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance.

The most effective noise reduction methods consist of controlling the noise at the source, blocking the noise transmission with barriers or relocating the receiver. Any or all of these methods may be required to reduce noise levels to an acceptable level.

## 2.2 Vibration Fundamentals

Vibration is a trembling or oscillating motion of the ground. Like noise, vibration is transmitted in waves, but in this case through the ground or solid objects. Unlike noise, vibration is typically felt rather than heard. Vibration can be either natural as in the form of earthquakes, volcanic eruptions, or manmade as from explosions, heavy machinery, or trains. Both natural and manmade vibration may be continuous, such as from operating machinery; or infrequent, as from an explosion.

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized in three ways: displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position and for the purposes of soil displacement is typically measured in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Particle acceleration is the rate of change in velocity with respect to time and is measured in inches per second or millimeters per second. Typically, particle velocity (measured in inches or millimeters per second) and/or acceleration (measured in gravities) are used to describe vibration. Table 2-1 shows the human reaction to various levels of peak particle velocity.

Vibrations also vary in frequency and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occurring around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, it is less common, to measure traffic frequencies above 30 Hz.

Propagation of ground-borne vibrations is complicated and difficult to predict because of the endless variations in the soil through which the waves travel. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by dropping an object into water. P-waves, or compression waves, are waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced

with distance as a result of material damping in the form of internal friction, soil layering, and special voids. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

**Table 2-1: Human Reaction to Typical Vibration Levels**

| Vibration Level Peak Particle Velocity (in/sec) | Human Reaction | Effect on Buildings |
|---|---|---|
| 0.006–0.019 | Threshold of perception, possibility of intrusion | Vibrations unlikely to cause damage of any type |
| 0.08 | Vibrations readily perceptible | Recommended upper level of vibration to which ruins and ancient monuments should be subjected |
| 0.10 | Level at which continuous vibration begins to annoy people | Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings |
| 0.20 | Vibrations annoying to people in buildings | Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings |
| 0.4–0.6 | Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges | Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage |

Source: Caltrans, Division of Environmental Analysis, *Transportation Related Earthborne Vibration, Caltrans Experiences*, Technical Advisory, Vibration, TAV-02-01-R9601, 2020 (Caltrans, 2020).

# 3.0 SIGNIFICANCE THRESHOLDS AND STANDARDS

## 3.1 Construction Noise

The City of San Marcos Municipal Code addresses the limits grading, extraction and construction activities between 7:00 a.m. and 4:30 p.m. Monday through Friday and no grading, extraction or construction is allowed on the weekends or holidays. The Municipal code does not set noise limits on construction activities. Commonly, the City has utilized the County of San Diego's Noise Ordinance noise limit of 75 dBA for other projects.

## 3.2 Vibration Standards

The City of San Marcos has not yet adopted vibration criteria. The United States Department of Transportation Federal Transit Administration (FTA) provides criteria for acceptable levels of groundborne vibration for various types of special buildings that are sensitive to vibration. For purposes of identifying potential project-related vibration impacts, the FTA criteria will be used. The human reaction to various levels of vibration is highly subjective. The upper end of the range shown for the threshold of perception, or roughly 65 VdB, may be considered annoying by some people. Vibration below 65 VdB may also cause secondary audible effects, such as a slight rattling of doors, suspended ceilings/fixtures, windows, and dishes, any of which may result in additional annoyance. Table 3-1 shows the FTA groundborne vibration and noise impact criteria for human annoyance.

In addition to the vibration annoyance standards presented above, the FTA also applies the following standards for construction vibration damage. Table 3-2 on the following page, structural damage is possible for typical residential construction when the peak particle velocity (PPV) exceeds 0.2 inch per second (in/sec). This criterion is the threshold at which there is a risk of damage to normal dwellings.

In the context of this analysis, the noise and vibration impacts associated with the construction operations and any blasting operations will be conditioned to comply with the thresholds stated above. The potential noise and vibration impacts are analyzed separately below.

**Table 3-1: Groundborne Vibration and Noise Impact Criteria (Human Annoyance)**

| | Groundborne Vibration Impact Levels (VdB re 1 microinch/second) | | | Groundborne Noise Impact Levels (dB re 20 micropascals) | | |
|---|---|---|---|---|---|---|
| | Frequent Events[1] | Occasional Events[2] | Infrequent Events[3] | Frequent Events[1] | Occasional Events[2] | Infrequent Events[3] |
| **Category 1**: Buildings where low ambient vibration is essential for interior operations. | 65 VdB[4] | 65 VdB[4] | 65 VdB[4] | N/A[4] | N/A[4] | N/A[4] |
| **Category 2**: Residences and buildings where people normally sleep. | 72 VdB | 75 VdB | 80 VdB | 35 dBA | 38 dBA | 43 dBA |
| **Category 3**: Institutional land uses with primarily daytime use. | 75 VdB | 78 VdB | 83 VdB | 40 dBA | 43 dBA | 48 dBA |

Source: United States Department of Transportation Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment,* 2018 (FTA, 2018).

[1] "Frequent Events" are defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.

[2] "Occasional Events" are defined as between 30 and 70 vibration events of the same source per day. Most commuter truck lines have this many operations.

[3] "Infrequent Events" are defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

[5] Vibration-sensitive equipment is not sensitive to groundborne noise.

**Table 3-2: Groundborne Vibration Impact Criteria (Structural Damage)**

| Building Category | PPV (in/sec) | 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 |

Source: United States Department of Transportation Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment,* 2018 (FTA, 2018).

Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

## 3.3 Transportation Noise Standards

The City's General Plan Chapter 7 Noise Element uses the Noise Compatibility Guidelines listed in Table 7-3 of the General Plan Noise Element (provided below as Table 3-3) to determine the compatibility of land use when evaluating proposed development projects. The Noise Compatibility Guidelines indicate ranges of compatibility and are intended to be flexible enough to apply to a range of projects and environments (City of San Marcos General Plan, 2012). For example, a commercial project would be evaluated differently than a residential project.

A land use located in an area identified as "acceptable" indicates that standard construction methods would attenuate exterior noise to an acceptable indoor noise level and that people can carry out outdoor activities with minimal noise interference. Land uses that fall into the "conditionally acceptable" noise environment should have an acoustical study that considers the type of noise source, the sensitivity of the noise receptor, and the degree to which the noise source may interfere with sleep, speech, or other activities characteristic of the land use. For land uses indicated as "conditionally acceptable," structures must be able to attenuate the exterior noise to the indoor noise level as indicated in the Noise Standards listed in Table 7-4 of the General Plan Noise Element (provided below as Table 3-4). For land uses where the exterior noise levels fall within the "unacceptable" range, new construction generally should not be undertaken .

## Table 3-3: Noise Compatibility Guidelines

Table 7-3
Noise and Land Use Compatibility Guidelines for Transportation-related Noise

| | Land Use Category | Exterior Noise Level (CNEL) 55 | 60 | 65 | 70 | 75 | 80 |
|---|---|---|---|---|---|---|---|
| A | Residential—single family residences, mobile homes, senior/age-restricted housing | | | | | | |
| B | Residential—multifamily residences, mixed use (residential/commercial) | | | | | | |
| C | Lodging—hotels, motels | | | | | | |
| D[2] | Schools, churches, hospitals, residential care facility, child care facilities | | | | | | |
| E[2] | Passive recreational parks, nature preserves, contemplative spaces, cemeteries | | | | | | |
| F[2] | Active parks, golf courses, athletic fields, outdoor spectator sports, water recreation | | | | | | |
| G[2] | Office/professional, government, medical/dental, commercial, retail, laboratories | | | | | | |
| H[2] | Industrial, manufacturing, utilities, agriculture, mining, stables, ranching, warehouse, maintenance/repair | | | | | | |

Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved

Conditionally Acceptable - New construction or development should be undertaken only after a detailed noise analysis is conducted to determine if noise reduction measures are necessary to achieve acceptable levels for land use. Criteria for determining exterior and interior noise levels are listed in Table 7-4, Noise Standards. If a project cannot mitigate noise to a level deemed Acceptable, the appropriate County decision-maker must determine that mitigation has been provided to the greatest extent practicable or that extraordinary circumstances exist.

Unacceptable - New construction or development shall not be undertaken.

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## Table 3-4: Noise Standards

Table 7-4
Noise Standards[1]

1. The exterior noise level (as defined in Item 3) standard for Category A shall be 60 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.

2. The exterior noise level standard for Categories B and C shall be 65 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.

3. The exterior noise level standard for Categories D and G shall be 65 CNEL and the interior noise level standard shall be 50 dBA Leq (one hour average).

4. For single-family detached dwelling units, "exterior noise level" is defined as the noise level measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum net lot area: (i) for lots less than 4,000 square feet in area, the exterior area shall include 400 square feet, (ii) for lots between 4,000 square feet to 10 acres in area, the exterior area shall include 10 percent of the lot area; (iii) for lots over 10 acres in area, the exterior area shall include 1 acre.

5. For all other residential land uses, "exterior noise level" is defined as noise measured at exterior areas which are provided for private or group usable open space purposes. "Private Usable Open Space" is defined as usable open space intended for use of occupants of one dwelling unit, normally including yards, decks, and balconies. When the noise limit for Private Usable Open Space cannot be met, then a Group Usable Open Space that meets the exterior noise level standard shall be provided. "Group Usable Open Space" is defined as usable open space intended for common use by occupants of a development, either privately owned and maintained or dedicated to a public agency, normally including swimming pools, recreation courts, patios, open landscaped areas, and greenbelts with pedestrian walkways and equestrian and bicycle trails, but not including off-street parking and loading areas or driveways

6. For non-residential noise sensitive land uses, exterior noise level is defined as noise measured at the exterior area provided for public use.

7. For noise sensitive land uses where people normally do not sleep at night, the exterior and interior noise standard may be measured using either CNEL or the one-hour average noise level determined at the loudest hour during the period when the facility is normally occupied.

8. The exterior noise standard does not apply for land uses where no exterior use area is proposed or necessary, such as a library.

9. For Categories E and F the exterior noise level standard shall not exceed the limit defined as "Acceptable" in by the City, or an equivalent one-hour noise standard.

(1) Exterior Noise Level compatibility guidelines for Land Use Categories A-H are identified in Table 3.11-6, Noise Compatibility Guidelines.
Note: "Category(ies)" discussed in this table refer to lettered Land Use Category(ies) in Table 7-3 of this Element.

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# 4.0 CONSTRUCTION NOISE

## 4.1 Construction Noise Prediction Methodology

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders and scrapers can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor and reduced to 63 dBA at 200 feet from the source.

Using a point-source noise prediction model, calculations of the expected construction noise impacts were completed. The essential model input data for these performance equations include the source levels of each type of equipment, relative source to receiver horizontal and vertical separations, the amount of time the equipment is operating in a given day, also referred to as the duty-cycle and any transmission loss from topography or barriers.

The equipment needed for the development will consist of a large bulldozer, a water truck, a medium sized front loader, a medium sized crawler type excavator, a large highway dump truck, a small to medium sized road grader, and a medium sized rubber tire backhoe. Based on the EPA noise emissions, empirical data and the amount of equipment needed, worst case noise levels from the construction equipment for site preparation would occur during the grading operations. Additionally, the project will utilize a Thunderbird Hazemag Crusher or equivalent. Additionally, the project may require blasting which would also require the need for a rock drill. This equipment is utilized separately from the grading equipment and will be analyzed separately.

## 4.2 Grading Activities Noise Findings and Mitigation

The grading activities will consist of the preparation of internal roadways, parking and the finished pads. The equipment will be spread out over the project site from distances near the occupied property lines to distances of 500 feet or more away. Based upon the site plan the majority of the grading operations, on average, will occur more than 200 feet from the property lines. This means that most of the time the average distance from all the equipment to the nearest property line is 200 feet.

As can be seen in Table 4-1, at an average distance of 200 feet from the construction activities to the nearest property line would result in a noise attenuation of 12.0 dBA without shielding. Given this, the noise levels will comply with the 75 dBA Leq standard at the property lines. Therefore, no impacts are anticipated and no mitigation is required during construction of the proposed Project. Additionally, all equipment should be properly fitted with mufflers and all staging and maintenance should be conducted as far away for the existing residence as possible.

**Table 4-1: Construction Noise Levels**

| Equipment Type | Quantity Used | Source @ 50 Feet (dBA) | Cumulative Noise Level @ 50 Feet (dBA) |
|---|---|---|---|
| Tractor/Backhoe | 1 | 72 | 72.0 |
| Dozer D9 Cat | 1 | 74 | 74.0 |
| Loader/Grader | 1 | 73 | 73.0 |
| Excavator | 1 | 72 | 72.0 |
| Water Trucks | 1 | 70 | 70.0 |
| Haul Trucks | 1 | 75 | 75.0 |
| Paver/Blade | 1 | 75 | 75.0 |
| | | Cumulative Level | 82.4 |
| | | Distance to Sensitive Use | 200 |
| | | Noise Reduction due to Distance | -12.0 |
| | | **Property Line Noise Level** | **4** |

## 4.3 Rock Drill Noise Findings and Mitigation

Areas of the project site that require deeper cuts and where the native material is not easily rippable (graded) may require blasting and the use of a rock drill. The rock drill would be moved around the site on an as needed basis dependent upon the site characteristics. The use of a rock drill would occur independently of all other proposed equipment. The drilling and blasting activities would occur in one area then the grading equipment would relocate or remove the debris. To determine the worst-case noise levels from the drilling operations the noise level from the rock drill would be 85.0 dBA at 50 feet. Utilizing a 6 dBA reduction per doubling of distance, at an average distance of 160 feet from any property line, the noise levels will comply with the 75 dBA standard as shown in Table 4-2.

**Table 4-2: Construction Noise Levels from Rock Drill**

| Construction Equipment | Quantity | Source Level @ 50 Feet (dBA) | Duty Cycle (Hours/Day) | Noise Level @ 50 Feet (dBA) |
|---|---|---|---|---|
| Rock Drill | 1 | 85 | 8 | 85.0 |
| | | | Noise Reduction Needed to Comply | -10.0 |
| | | | Distance Required to Reduce Noise Levels | 160 |
| | | | **NEAREST PROPERTY LINE NOISE LEVEL** | **74.9** |

Rock drilling and blasting will occur on an as-needed basis on site. In the event that the rock drill is staged within 160 feet of any occupied noise sensitive land use, it is recommended that a specific noise mitigation plan based upon the location of the construction equipment, topography and construction schedule be identified by an acoustical engineer. A mitigation plan should be developed that may include a temporary noise barrier along any property line where the impacts could occur. Based on previous projects, a barrier ranging from 8 to 12 feet in height maybe needed. The proposed noise barrier will need to be of solid non-gapping material to adequately reduce construction noise levels below the noise threshold. The mitigation plan can also incorporate the usage of the equipment (amount of time used and/or the location in respect to the property line). The mitigation plan would determine the final height and location of a temporary barrier if one is necessary. The project's requested approvals include a Conditional Use Permit, which would allow for the use of the temporary rock crusher.

Blasting may be required during the project grading and site preparation activities. The project would comply with all provisions identified in the City's Municipal Code Section 17.60.06 as it relates to blasting and blasting shall only be permitted between the hours of 9:00 AM and 4:00 PM during any weekday.

## 4.4 Rock Crushing Noise Findings and Mitigation

This section examines the potential noise source impacts associated with the operation of the proposed temporary rock crushing equipment. The project may utilize a Thunderbird Hazemag Impact Crushing Plant Model CP300 rock crusher, or equivalent as proposed by the applicant. The rock crusher is limited between the hours of 7:00 am and 4:30 pm, Monday through Friday. Rock crushing is not allowed on weekends or holidays. According to the project applicant, rock crushing is only anticipated to occur for several weeks once the material is required. The crusher would be located at the northern grading limits of the project, adjacent to E. Barham Drive, approximately 500 feet from the nearest single-family residences to the east, 500 feet from the nearest single-family residences to the west, and 465 feet from the church and preschool to the west. Based on empirical data collected at a material processing plant in the City of Upland and a crushing operation in the City of Escondido, the average or hourly noise levels from different

rock crushers ranged between 80-86 dBA Leq at 45 feet (Ldn Consulting, 2011). A worst-case noise level of 86 dBA Leq at 45 feet will be utilized for the analysis.

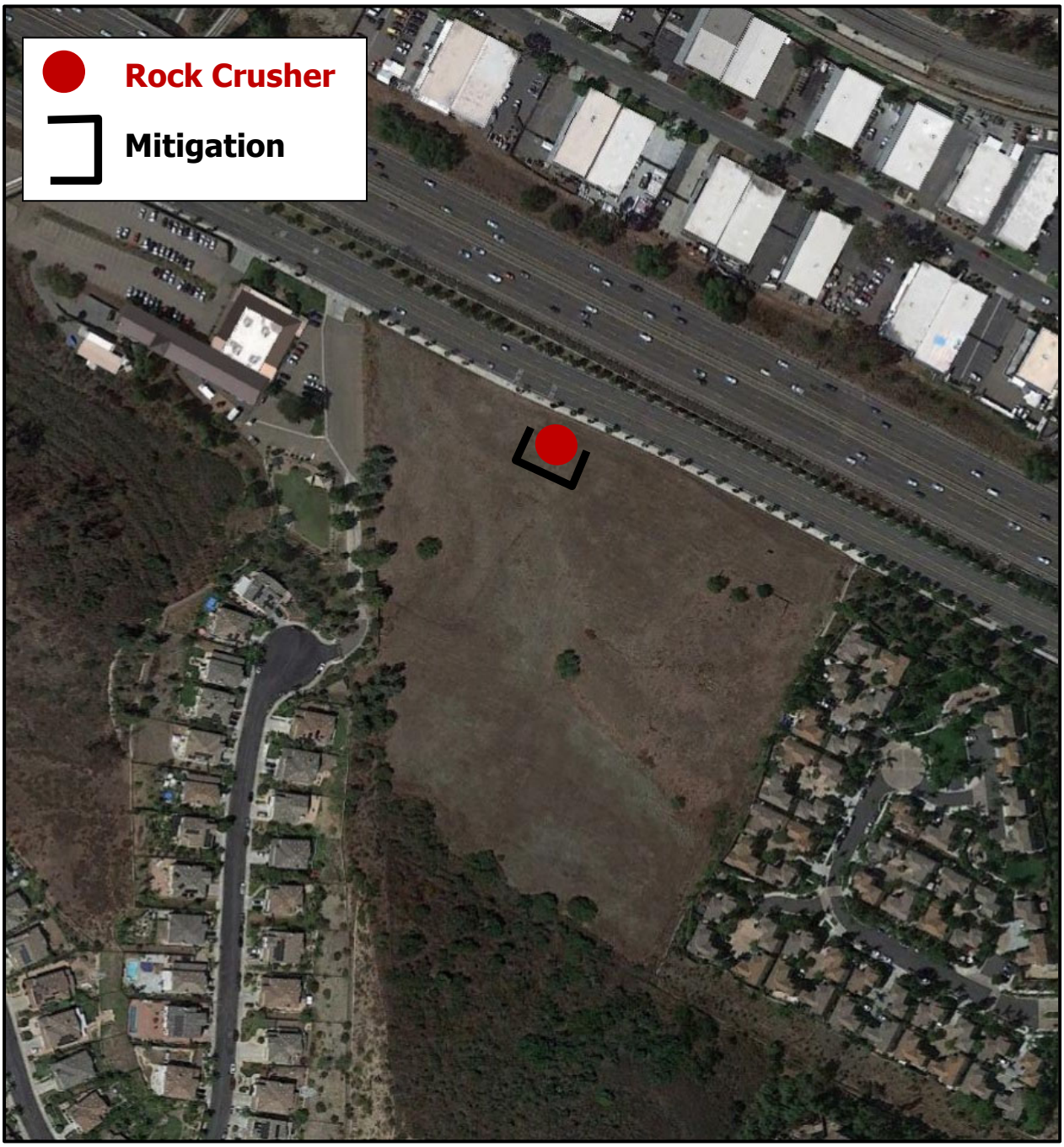
Although the City does not have a specific noise threshold for rock crushing in the SMMC or in the General Plan, historically the City has required that noise levels from the proposed temporary rock crusher maintain noise levels of 60 dBA or less at surrounding single-family residences, 65 dBA at multi-family uses, and 70 dBA at all commercial uses. The City updated the SMMC with the approval to amend Chapter 20 in 2017. Specifically, the amendment established under Chapter 20.300.070 (Performance Standards) regulating exterior noise standards requires that noise levels from the sources are maintain at 60 dBA or less at surrounding single-family residences and 65 dBA at multi-family and all commercial uses. Although rock crushing activities are part of the construction phase of project development the City has applied these standards to rock crushers.

As can be seen in Table 4-3, distance alone is not adequate enough to achieve the City's 60 dBA Leq standard at the single-family residences or the City's 65 dBA Leq standard at the Church and preschool which are considered commercial uses. Given this, the noise levels are anticipated to be above the City's 60 dBA Leq standard at the residences and 65 dBA Leq standard at the Church and preschool, for the rock crusher. This represents a significant impact and mitigation is required during rock crushing operations of the proposed Project. As can be seen in Table 4-3, a 5 decibel reduction is needed to reduce the noise level to 60 dBA Leq at the residences and a 0.7 decibel reduction is needed at the church and preschool. Breaking the line of sight from a noise source to a receptor will typically achieve a 5-decibel reduction or better based on elevation offsets resulting in a noise level of 60.0 dBA at the residences and 60.7 dBA at the church and preschool. Therefore, if the crusher is 10 feet in height, the barrier must be at least 11-12 feet in height. This will help shield the crusher both visually and acoustically. The mitigation can consist of an earthen berm, 5/8" plywood, 1-inch acoustical blankets or any combination of these materials. Figure 4-A shows the location of the crusher and placement of the required mitigation.

**Table 4-3: Rock Crushing Noise Levels**

| Sensitive Use | Rock Crusher Noise Level @ 45 Feet (dBA Leq) | Distance to Sensitive Use (Feet) | Noise Reduction due to Distance (dBA Leq) | Noise Level @ Sensitive Uses (dBA Leq) | Noise Threshold (dBA Leq) | Reduction Needed (dBA Leq) |
|---|---|---|---|---|---|---|
| Single-Family Residential | 86 | 505 | -21.0 | 65.0 | 60 | 5.0 |
| Church/Preschool | | 465 | -20.3 | 65.7 | 65 | 0.7 |

**Figure 4-A: Preliminary Rock Crusher Location and Mitigation**



Noise measurements of the rock crusher should be conducted to determine the hourly noise level within the first week of operation once the final crusher type and location are determined to ensure compliance with the City's thresholds. If noise levels are found to be above the established thresholds of 60 dBA Leq at any existing single family residential use, 65 dBA Leq for any multifamily use or 65 dBA Leq at a commercial use then additional mitigation in the form of higher barriers, sound absorbing materials or operational limits on the crusher usage will need to be incorporated.

Cumulative Construction Noise

Sound levels are logarithmic not linear, so adding two sources of 68 dBA plus 68 dBA is equal to 71 dBA not 136 dBA. You must first antilog each number, add and then log the summation. Sound levels that are separated by more than ten decibels generally do not cumulatively add to each other. The rock crusher noise level (60.0 dBA after mitigation) and the grading noise level (74.8 dBA) are not anticipated to add to each other based on the difference between the two noise levels and the separation of the equipment. Therefore, the rock crusher and grading operations cumulatively would not exceed the 75 dBA Leq standard average over 8 hours at the property lines. Additionally, the rock drill and grading equipment will be separated from each other, typically by several hundred feet and working near different property lines and are not anticipated to cumulatively increase the noise level at a specific property line.

## 4.4 Construction Vibration Findings and Mitigation

The nearest vibration-sensitive uses are the residences located 100 feet or more from the proposed construction. Table 4-4 lists the average vibration levels that would be experienced at the nearest vibration sensitive land uses from the temporary construction activities.

The FTA has determined vibration levels that would cause annoyance to a substantial number of people and potential damage to building structures. The FTA criterion for vibration induced structural damage is 0.20 in/sec for the peak particle velocity (PPV). Project construction activities would result in PPV levels below the FTA's criteria for vibration induced structural damage. Therefore, project construction activities would not result in vibration induced structural damage to residential buildings near the construction areas. The FTA criterion for infrequent vibration induced annoyance is 80 Vibration Velocity (VdB) for residential uses. Construction activities would generate levels of vibration that would not exceed the FTA criteria for nuisance for nearby residential uses. Therefore, vibration impacts would be less than significant.

**Table 4-4: Vibration Levels from Construction Activities (Residential Receptors)**

| Equipment | Approximate Velocity Level at 25 Feet (VdB) | Approximate RMS Velocity at 25 Feet (in/sec) | Approximate Velocity Level at 100 Feet (VdB) | Approximate RMS Velocity at 100 Feet (in/sec) |
|---|---|---|---|---|
| Small bulldozer | 58 | 0.003 | 68.9 | 0.0111 |
| Jackhammer | 79 | 0.035 | 60.9 | 0.0044 |
| Loaded trucks | 86 | 0.076 | 67.9 | 0.0095 |
| Large bulldozer | 87 | 0.089 | 39.9 | 0.0004 |
| | | FTA Criteria | 80 | 0.2 |
| | | **Significant Impact?** | **No** | **No** |

[1] PPV at Distance D = PPVref x $(25/D)^{1.5}$

As stated above, blasting may be required during the project grading and site preparation activities. The project would comply with all provisions identified in the City's Municipal Code Section 17.60.06 as it relates to blasting and vibration. Blasting shall only be permitted between the hours of 9:00 AM and 4:00 PM during any weekday. The project will be conditioned to these defined hours of operation and require a notification and inspection process to protect nearby residents and residences from damage or injury due to blasting.

# 5.0 TRANSPORTATION NOISE

## 5.1 Existing Noise Environment Onsite

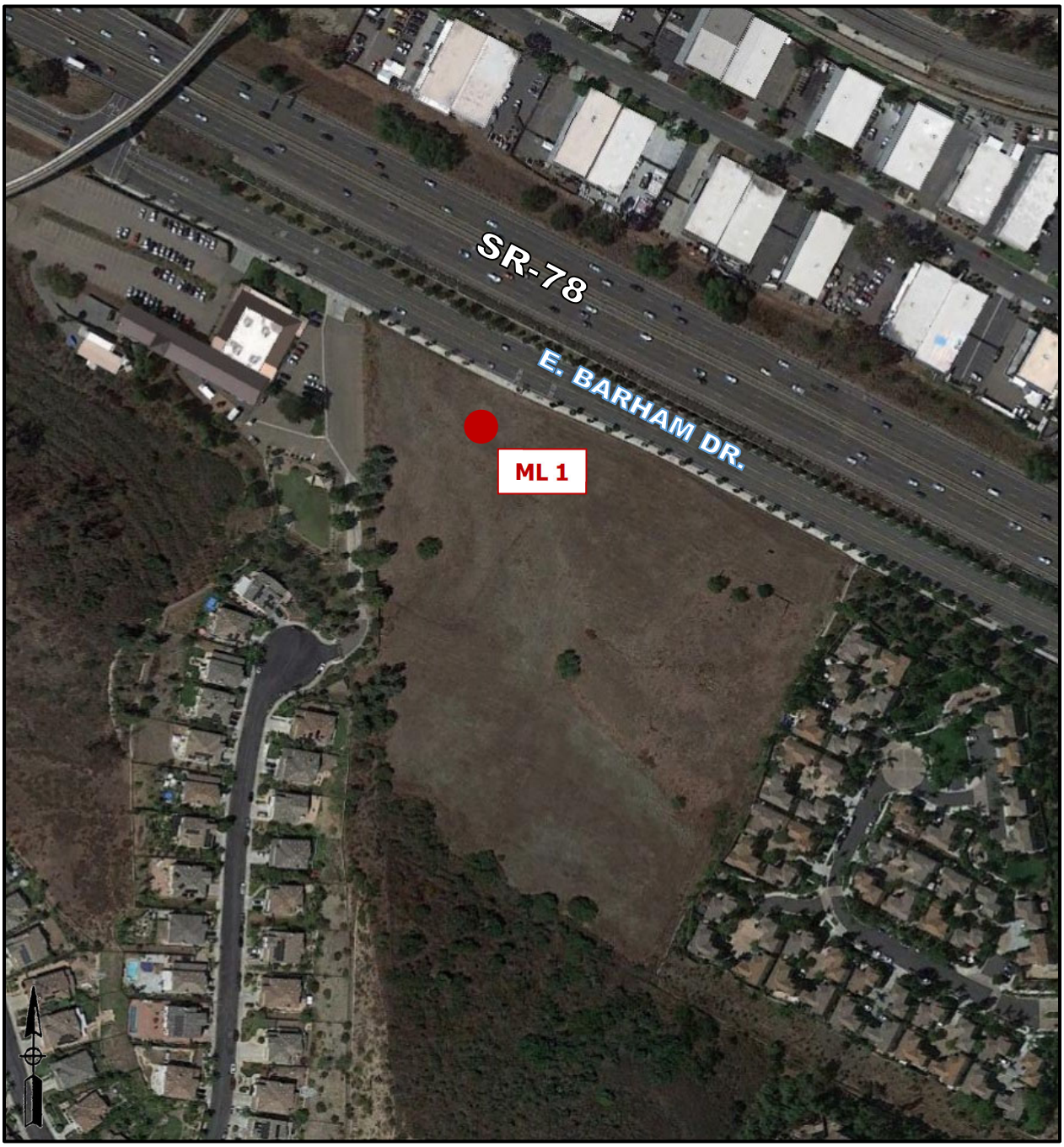
Noise measurements were taken using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

The ambient measurements were conducted on September 25, 2020 between 2:00 pm –2:15 pm. The results of the noise level measurements are presented in Table 5-1. The measurements were taken on site to establish a baseline of the vehicle noise from SR-78 and E. Barham Drive. The measurements were free of obstruction and had a direct line of sight to the roadways. The overall sound level was found to be 69.0 dBA. The statistical indicators Lmax, Lmin, L10, L50 and L90, are also given for the monitoring location. The noise monitoring locations can be seen in Figure 5-A on the following page.

**Table 5-1: Measured Ambient Noise Levels**

| Measurement Identification | Description | Time | Noise Levels (dBA Leq) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Leq | Lmax | Lmin | L10 | L50 | L90 |
| ML 1 | E. Barham Drive | 2:00 p.m. – 2:15 p.m. | 69.0 | 79.0 | 61.9 | 71.4 | 67.3 | 63.7 |
| Source: Ldn Consulting September 25, 2020 | | | | | | | | |

## Figure 5-A: Ambient Monitoring Locations



## 5.2 Future Onsite Roadway Noise

To determine the future noise environment and impact potentials the Sound32 model was utilized. The critical model input parameters, which determine the projected vehicular traffic noise levels, include vehicle travel speeds, the percentages of automobiles, medium trucks and heavy trucks in the roadway volume, the site conditions and the peak hour traffic volume. The peak hour traffic volumes range between 6-12% of the average daily traffic (ADT) and 10% is generally acceptable for noise modeling.

Table 5-2 presents the roadway parameters used in the analysis including the peak traffic volumes, vehicle speeds and the hourly traffic flow distribution (vehicle mix). The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the Sound32 Model. The vehicle mix for SR-78 was obtained from the latest Caltrans Truck Traffic report. The Buildout conditions for SR-78 were calculated from lane capacity guidelines by Caltrans of 2,100 peak vehicles per hour. The Buildout conditions for E. Barham Drive include the future year 2050 traffic volume forecasts provided by the project traffic study provided by Linscott, Law & Greenspan Engineers (LLG Engineers, 2020).

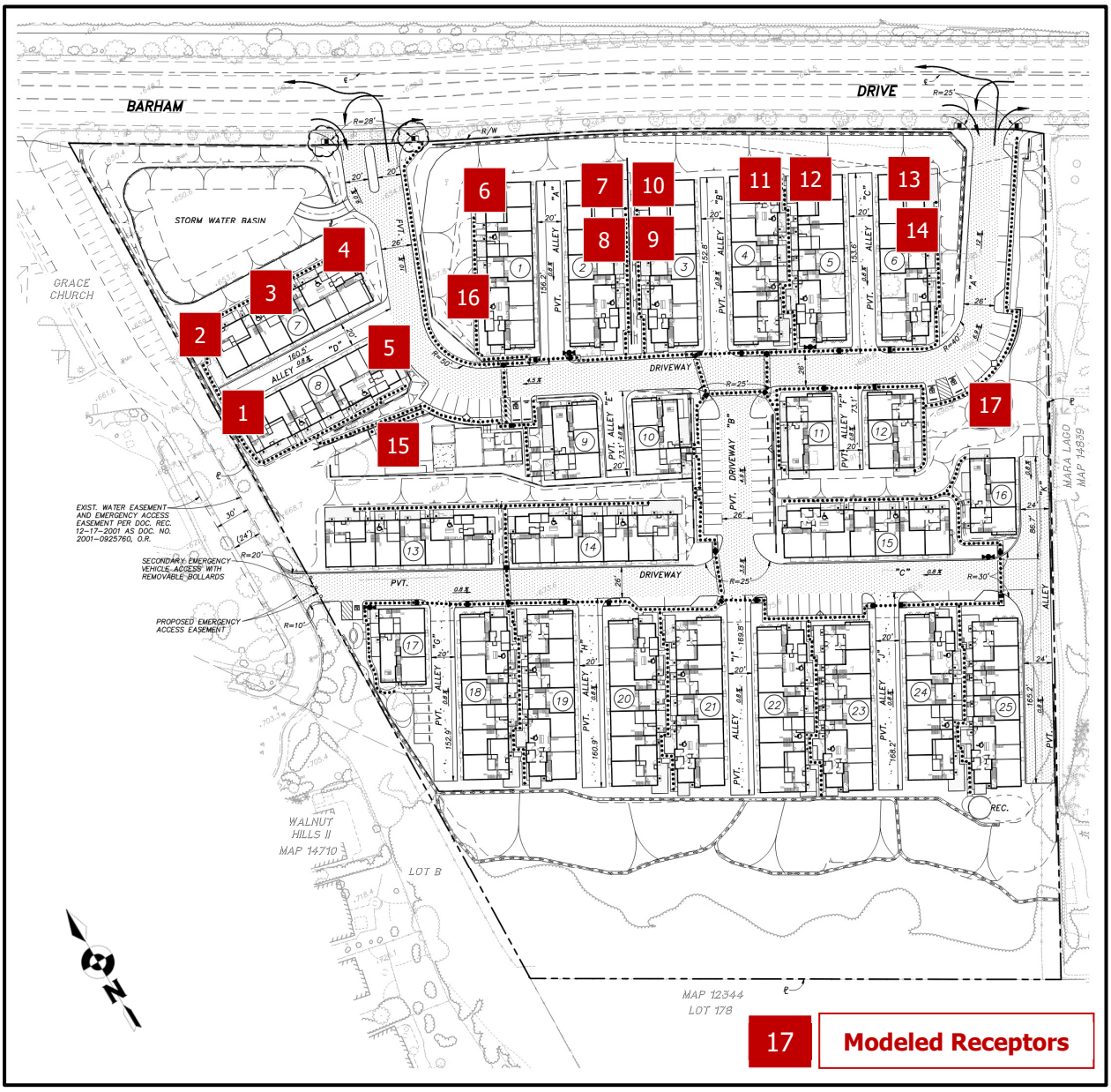
**Table 5-2: Future Traffic Parameters**

| Roadway | Average Daily Traffic (ADT)[1] | Peak Hour Volumes[1] | Modeled Speeds (MPH) | Vehicle Mix % | | |
|---|---|---|---|---|---|---|
| | | | | Auto | Medium Trucks | Heavy Trucks |
| SR-78 West | - | 6,300 | 65 | 95.5 | 2.1 | 2.4 |
| SR-78 East | - | 8,400 | 65 | 95.5 | 2.1 | 2.4 |
| E. Barham Drive | 19,040 | 1,904 | 45 | 96 | 2 | 2 |

[1] Source: Transportation Impact Analysis, Linscott, Law & Greenspan Engineers, December 17, 2020
[2] Typical City vehicle mix

The required coordinate information necessary for the Sound32 model input was taken from the conceptual site plans provided by SB&O (SB&O, INC., 2021). The conceptual plans were used to identify the pad elevations, roadway elevations, and the relationship between the noise source(s) and the outdoor receptor areas. The modeled observer locations for the potential outdoor use areas for are presented in Figure 5-B.

## Figure 5-B: Modeled Receptor Locations



## 5.3 Onsite Noise Findings and Mitigation

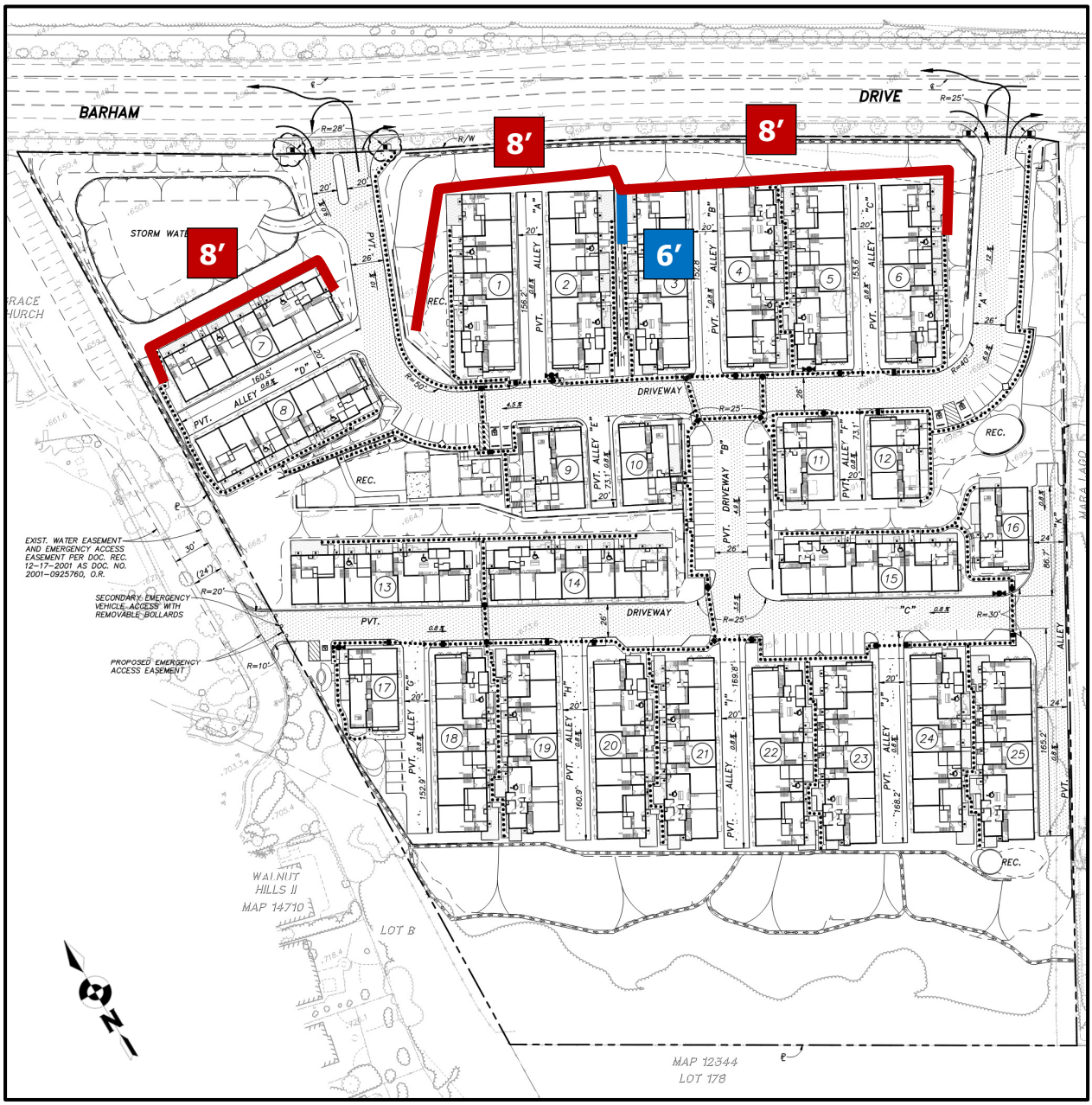
The modeling results for the Buildout analysis are quantitatively shown in Table 5-3 for the ground level patios. Based upon these findings, ground floor mitigation is necessary at the top of slopes along E. Barham Drive for the units facing SR-78 to comply with the City Noise Standard of 65 dBA CNEL. Additionally, second and third floor mitigation is necessary at the proposed balconies for the units facing E. Barham Drive and SR-78 to comply with the City Noise Standard of 65 dBA CNEL. These mitigation measures are shown in Figure 5-C for the ground floor patios and outdoor use areas.

The barriers must be constructed of a non-gapping material consisting of masonry, ¼ inch thick glass, earthen berm or any combination of these materials. The S32 models input parameters and output files for the future conditions with and without mitigation are provided in ***Attachment A***. Based upon these findings, ground floor noise mitigation in the form of 8-foot barriers would be necessary at the top of slopes of the units along E. Barham Drive to comply with the City of San Marcos Noise standards of 65 dBA CNEL at the multi-family residences and outdoor useable areas.

**Table 5-3: Future Exterior Noise Levels (Ground Level)**

| Receptor Number | Receptor Location | Unmitigated Ground Level Noise Levels (dBA CNEL) | Barrier Heights (Feet) | Mitigated Ground Floor Noise Levels (dBA CNEL) |
|---|---|---|---|---|
| 1 | Building 8 | 54 | 0 | 54 |
| 2 | Building 7 | 69 | **8** | 64 |
| 3 | Building 7 | 70 | **8** | 65 |
| 4 | Building 7 | 70 | **8** | 65 |
| 5 | Building 8 | 65 | 0 | 65 |
| 6 | Building 1 | 71 | **8** | 64 |
| 7 | Building 2 | 71 | **8** | 65 |
| 8 | Building 2 | 64 | 0 | 60 |
| 9 | Building 3 | 65 | 0 | 62 |
| 10 | Building 3 | 72 | **8 and 6 (Figure 5-C)** | 64 |
| 11 | Building 4 | 74 | **8** | 64 |
| 12 | Building 5 | 72 | **8** | 65 |
| 13 | Building 6 | 74 | **8** | 65 |
| 14 | Building 6 | 69 | **8** | 62 |
| 15 | Rec Area 1 | 62 | 0 | 61 |
| 16 | Rec Area 2 | 68 | 0 | 63 |
| 17 | Rec Area 3 | 65 | 0 | 65 |

## Figure 5-C: Ground Level Mitigation Measures



The modeling results for the Buildout analysis are quantitatively shown in and Tables 5-4 and 5-5 for the second and third floor balconies. Noise mitigation in the form of 7-foot barriers, where needed, may also be necessary at the second and third floor balconies for the units facing E. Barham Drive and SR-78. Additionally, balconies further back would require 5-foot barriers. These mitigation measures are shown in Figure 5-D for the second and third floor balconies.

The barriers must be constructed of a non-gapping material (i.e., stucco, ¼ inch thick glass or Plexiglas). The locations of the balconies/deck that may need balcony barriers is provided in Figure 5-C on the following page. The modeling input and outputs are provided in ***Attachment A***.

**Table 5-4: Future Exterior Noise Levels (Second Level)**

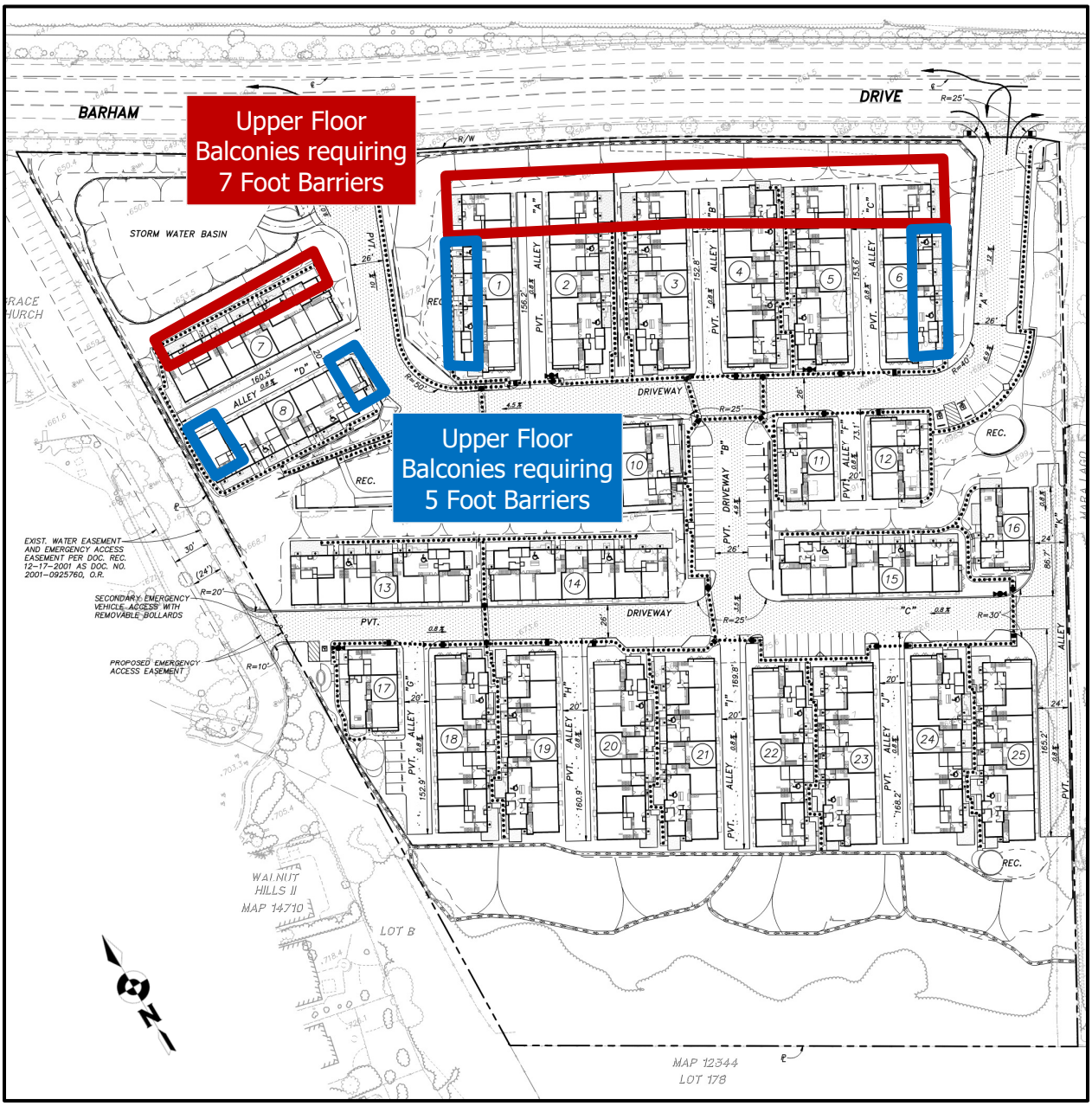
| Receptor Number | Receptor Location | Unmitigated Ground Level Noise Levels (dBA CNEL) | Barrier Heights (Feet) | Mitigated Ground Floor Noise Levels (dBA CNEL) |
|---|---|---|---|---|
| 1 | Building 8 | 56 | 0 | 56 |
| 2 | Building 7 | 70 | **7** | 63 |
| 3 | Building 7 | 71 | **7** | 64 |
| 4 | Building 7 | 71 | **7** | 63 |
| 5 | Building 8 | 66 | **5** | 64 |
| 6 | Building 1 | 73 | **7** | 65 |
| 7 | Building 2 | 74 | **7** | 65 |
| 8 | Building 2 | 66 | **5** | 61 |
| 9 | Building 3 | 66 | 0 | 65 |
| 10 | Building 3 | 75 | **7** | 64 |
| 11 | Building 4 | 77 | **7** | 64 |
| 12 | Building 5 | 74 | **7** | 63 |
| 13 | Building 6 | 77 | **7** | 65 |
| 14 | Building 6 | 72 | **7** | 65 |

## Table 5-5: Future Exterior Noise Levels (Third Level)

| Receptor Number | Receptor Location | Unmitigated Ground Level Noise Levels (dBA CNEL) | Barrier Heights (Feet) | Mitigated Ground Floor Noise Levels (dBA CNEL) |
|---|---|---|---|---|
| 1 | Building 8 | 61 | 0 | 61 |
| 2 | Building 7 | 71 | **7** | 63 |
| 3 | Building 7 | 72 | **7** | 63 |
| 4 | Building 7 | 72 | **7** | 63 |
| 5 | Building 8 | 67 | **5** | 64 |
| 6 | Building 1 | 75 | **7** | 64 |
| 7 | Building 2 | 76 | **7** | 64 |
| 8 | Building 2 | 77 | **7** | 64 |
| 9 | Building 3 | 68 | **5** | 64 |
| 10 | Building 3 | 75 | **7** | 64 |
| 11 | Building 4 | 77 | **7** | 64 |
| 12 | Building 5 | 74 | **7** | 63 |
| 13 | Building 6 | 77 | **7** | 64 |
| 14 | Building 6 | 72 | **5** | 65 |

Additionally, a final interior noise assessment is required prior to the issuance of the first building permit since the exterior noise levels at the building facades are above 60 dBA CNEL. This final report would identify the interior noise requirements based upon architectural and building plans to meet the City's established interior noise limit of 45 dBA CNEL. It should be noted; interior noise levels of 45 dBA CNEL can easily be obtained with conventional building construction methods and providing a closed window condition requiring a means of mechanical ventilation (e.g., air conditioning) for each building and upgraded windows for all sensitive rooms (e.g., bedrooms and living spaces).

## Figure 5-D: Upper Level Mitigation Measures



## 5.4 Onsite Rail Line Noise

The proposed Project is located approximately 500 feet from the San Diego Northern Railroad (SDNR) consisting of Sprinter service operated by the NCTD. According to the City of San Marcos General Plan Noise Element, the 65 dBA CNEL noise contour from the rail activity, with no shielding, is located 130 feet from the centerline of the railroad. Noise levels from train activity would be reduced to less than 60 dBA CNEL at the project site and would not significantly impact the noise levels at the receptors. Therefore, no additional analysis is provided.

## 5.5 Project Related Offsite Transportation Noise

To determine if direct or cumulative off-site noise level increases associated with the development of the proposed project would create noise impacts, the traffic volumes for the existing conditions were compared with the traffic volume increase of existing plus the proposed project. The project is estimated to only generate 1,208 daily trips with a peak hour volume of 119 trips according to the project traffic study. The existing average daily traffic (ADT) volumes on adjacent E. Barham Drive is several thousand ADT. Typically, it requires a project to double (or add 100%) the traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to the cumulative traffic volumes. The project will add less than a 15% increase to E. Barham Drive volumes. Therefore, no direct or cumulative impacts are anticipated.

## 6.0 REFERENCES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# **ATTACHMENT A**

FUTURE EXTERIOR NOISE MODEL
INPUT AND OUTPUT FILES

E Barham Residential - Ground Level Unmitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
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N,1851,83,669,
L-SR-78 EAST, 2
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N,1822,26,669,
L-BARHAM, 3
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N,1131,277,657,
N,1225,229,660,
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N,1510,81,666,
N,1812,-77,660,
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B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
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1215,284,667,670,
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R, 14 , 65 ,10
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R, 16 , 65 ,10
932,180,679.,REC 2

R, 17 , 65 ,10
1282,-116,687.,REC 3
D, 4.5
1 ,ALL
D, 4.5
2 ,ALL
C,C

SOUND32 - RELEASE 07/30/91

TITLE:
E Barham Residential - Ground Level Unmitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 8 | 65. | 10. | 53.7 |
| 2 | BLDG 7 | 65. | 10. | 69.7 |
| 3 | BLDG 7 | 65. | 10. | 70.8 |
| 4 | BLDG 7 | 65. | 10. | 70.8 |
| 5 | BLDG 8 | 65. | 10. | 65.3 |
| 6 | BLDG 1 | 65. | 10. | 71.5 |
| 7 | BLDG 2 | 65. | 10. | 71.5 |
| 8 | BLDG 2 | 65. | 10. | 64.3 |
| 9 | BLDG 3 | 65. | 10. | 65.5 |
| 10 | BLDG 3 | 65. | 10. | 73.2 |
| 11 | BLDG 4 | 65. | 10. | 74.4 |
| 12 | BLDG 5 | 65. | 10. | 71.8 |
| 13 | BLDG 6 | 65. | 10. | 73.9 |
| 14 | BLDG 6 | 65. | 10. | 69.5 |
| 15 | REC 1 | 65. | 10. | 62.2 |
| 16 | REC 2 | 65. | 10. | 68.7 |
| 17 | REC 3 | 65. | 10. | 65.3 |

E Barham Residential - Ground Level Mitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,673,
714,258,665,673,
866,258,665,673,
866,227,665,673,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,683,
975.,264,675,683,
1107.,213,675,683,
1103.,202,675,683,
1105.,198,682,690,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,688,
1105.,198,682,688,
1105.,198,682,690,
1167.,171,682,690,
1222.,145,682,690,
1227.,141,683,691,
1342.,88,683,691,
1310.,27,683,691,
R, 1 , 65 ,10
723,132,669,BLDG 8
R, 2 , 65 ,10
735,248,669,BLDG 7
R, 3 , 65 ,10
816,249,669,BLDG 7
R, 4 , 65 ,10
861,242,669,BLDG 7
R, 5 , 65 ,10
855,143,669,BLDG 8
R, 6 , 65 ,10
982,246,678,BLDG 1
R, 7 , 65 ,10
1090,194,679,BLDG 2
R, 8 , 65 ,10
1068,150,679.,BLDG 2
R, 9 , 65 ,10
1088,141,686.,BLDG 3
R, 10 , 65 ,10
1111,187,686.,BLDG 3
R, 11 , 65 ,10
1207,147,686.,BLDG 4
R, 12 , 65 ,10
1221,128,687.,BLDG 5
R, 13 , 65 ,10
1329,81,687.,BLDG 6
R, 14 , 65 ,10
1307,38,687.,BLDG 6
R, 15 , 65 ,10
829,87,679.,REC 1

R, 16 , 65 ,10
932,180,679.,REC 2
R, 17 , 65 ,10
1282,-116,687.,REC 3
D, 4.5
1 ,ALL
D, 4.5
2 ,ALL
C,C

SOUND32 - RELEASE 07/30/91

TITLE:
E Barham Residential - Ground Level Mitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 8 | 65. | 10. | 53.7 |
| 2 | BLDG 7 | 65. | 10. | 64.4 |
| 3 | BLDG 7 | 65. | 10. | 64.8 |
| 4 | BLDG 7 | 65. | 10. | 64.7 |
| 5 | BLDG 8 | 65. | 10. | 65.0 |
| 6 | BLDG 1 | 65. | 10. | 63.9 |
| 7 | BLDG 2 | 65. | 10. | 65.2 |
| 8 | BLDG 2 | 65. | 10. | 60.4 |
| 9 | BLDG 3 | 65. | 10. | 62.6 |
| 10 | BLDG 3 | 65. | 10. | 65.2 |
| 11 | BLDG 4 | 65. | 10. | 64.5 |
| 12 | BLDG 5 | 65. | 10. | 64.8 |
| 13 | BLDG 6 | 65. | 10. | 65.0 |
| 14 | BLDG 6 | 65. | 10. | 62.6 |
| 15 | REC 1 | 65. | 10. | 61.8 |
| 16 | REC 2 | 65. | 10. | 63.3 |
| 17 | REC 3 | 65. | 10. | 65.1 |

E Barham Residential - Second Floor Balconies Unmitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,665,
714,258,665,665,
866,258,665,665,
866,227,665,665,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,675,
975.,264,675,675,
1107.,213,675,675,
1089.,176,675,675,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,682,
1105.,198,682,682,
1167.,171,682,682,
1222.,145,682,682,
1227.,141,683,683,
1342.,88,683,683,
1310.,27,683,683,
B-BLDG 7 BALC, 15 , 2 , 0 ,0
720.,244,675,675,
720.,252,675,675,
749.,252,675,675,
749.,245,675,675,
B-BLDG 7 BALC, 16 , 2 , 0 ,0
809.,246,675,675,
809.,253,675,675,
829.,253,675,675,
829.,246,675,675,
B-BLDG 7 BALC, 17 , 2 , 0 ,0
858.,246,675,675,
864.,246,675,675,
864.,231,675,675,
B-BLDG 8 BALC, 18 , 2 , 0 ,0
855.,150,675,675,
857.,150,675,675,
857.,136,675,675,
B-BLDG 1 BALC, 19 , 2 , 0 ,0
969.,234,684,684,
980.,256,684,684,
991.,251,684,684,
B-BLDG 2 BALC, 20 , 2 , 0 ,0
1088.,203,685,685,
1099.,198,685,685,
1088.,176,685,685,
R, 1 , 65 ,10
723,132,679.,BLDG 8
R, 2 , 65 ,10
735,248,679.,BLDG 7
R, 3 , 65 ,10
816,249,679.,BLDG 7

R, 4 , 65 ,10
861,242,679.,BLDG 7
R, 5 , 65 ,10
855,143,679.,BLDG 8
R, 6 , 65 ,10
982,246,688.,BLDG 1
R, 7 , 65 ,10
1090,194,689.,BLDG 2
R, 8 , 65 ,10
1068,150,689.,BLDG 2
C,C

SOUND32 - RELEASE 07/30/91

TITLE:
E Barham Residential - Second Floor Balconies Unmitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 8 | 65. | 10. | 55.8 |
| 2 | BLDG 7 | 65. | 10. | 70.4 |
| 3 | BLDG 7 | 65. | 10. | 71.4 |
| 4 | BLDG 7 | 65. | 10. | 71.5 |
| 5 | BLDG 8 | 65. | 10. | 66.7 |
| 6 | BLDG 1 | 65. | 10. | 73.2 |
| 7 | BLDG 2 | 65. | 10. | 74.6 |
| 8 | BLDG 2 | 65. | 10. | 65.9 |

E Barham Residential - Second Floor Balconies Unmitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,665,
714,258,665,665,
866,258,665,665,
866,227,665,665,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,675,
975.,264,675,675,
1107.,213,675,675,
1089.,176,675,675,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,682,
1105.,198,682,682,
1167.,171,682,682,
1222.,145,682,682,
1227.,141,683,683,
1342.,88,683,683,
1310.,27,683,683,
B-BLDG 3 BALC, 15 , 2 , 0 ,0
1094.,171,692,692,
1105.,193,692,692,
1115.,188,692,692,
B-BLDG 4 BALC, 16 , 2 , 0 ,0
1201.,149,692,692,
1203.,152,692,692,
1214.,147,692,692,
1210.,141,692,692,
B-BLDG 5 BALC, 17 , 2 , 0 ,0
1229.,134,693,693,
1221.,138,693,693,
1211.,117,693,693,
B-BLDG 6 BALC, 18 , 2 , 0 ,0
1326.,86,693,693,
1327.,89,693,693,
1338.,84,693,693,
1326.,59,693,693,
B-BLDG 6 BALC, 19 , 2 , 0 ,0
1308.,48,693,693,
1314.,44,693,693,
1306.,29,693,693,
R, 1 , 65 ,10
1088,141,696.,BLDG 3
R, 2 , 65 ,10
1106,184,696.,BLDG 3
R, 3 , 65 ,10
1207,147,696.,BLDG 4
R, 4 , 65 ,10
1221,128,697.,BLDG 5
R, 5 , 65 ,10
1330,82,697.,BLDG 6

R, 6 , 65 ,10
1307,38,697.,BLDG 6
C,C

SOUND32 - RELEASE 07/30/91

TITLE:
E Barham Residential - Second Floor Balconies Unmitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 3 | 65. | 10. | 66.5 |
| 2 | BLDG 3 | 65. | 10. | 75.5 |
| 3 | BLDG 4 | 65. | 10. | 77.3 |
| 4 | BLDG 5 | 65. | 10. | 74.4 |
| 5 | BLDG 6 | 65. | 10. | 77.3 |
| 6 | BLDG 6 | 65. | 10. | 72.1 |

E Barham Residential - Second Floor Balconies Mitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,673,
714,258,665,673,
866,258,665,673,
866,227,665,673,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,683,
975.,264,675,683,
1107.,213,675,683,
1089.,176,675,683,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,690,
1105.,198,682,690,
1167.,171,682,690,
1222.,145,682,690,
1227.,141,683,691,
1342.,88,683,691,
1310.,27,683,691,
B-BLDG 7 BALC, 15 , 2 , 0 ,0
720.,244,675,682,
720.,252,675,682,
749.,252,675,682,
749.,245,675,682,
B-BLDG 7 BALC, 16 , 2 , 0 ,0
809.,246,675,682,
809.,253,675,682,
829.,253,675,682,
829.,246,675,682,
B-BLDG 7 BALC, 17 , 2 , 0 ,0
858.,246,675,682,
864.,246,675,682,
864.,231,675,682,
B-BLDG 8 BALC, 18 , 2 , 0 ,0
855.,150,675,680,
857.,150,675,680,
857.,136,675,680,
B-BLDG 1 BALC, 19 , 2 , 0 ,0
969.,234,684,691,
980.,256,684,691,
991.,251,684,691,
B-BLDG 2 BALC, 20 , 2 , 0 ,0
1088.,203,685,692,
1099.,198,685,692,
1088.,176,685,692,
R, 1 , 65 ,10
723,132,679.,BLDG 8
R, 2 , 65 ,10
735,248,679.,BLDG 7
R, 3 , 65 ,10
816,249,679.,BLDG 7

R, 4 , 65 ,10
861,242,679.,BLDG 7
R, 5 , 65 ,10
855,143,679.,BLDG 8
R, 6 , 65 ,10
982,246,688.,BLDG 1
R, 7 , 65 ,10
1090,194,689.,BLDG 2
R, 8 , 65 ,10
1068,150,689.,BLDG 2
C,C

SOUND32 - RELEASE 07/30/91

TITLE:
E Barham Residential - Second Floor Balconies Mitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 8 | 65. | 10. | 55.8 |
| 2 | BLDG 7 | 65. | 10. | 63.2 |
| 3 | BLDG 7 | 65. | 10. | 64.0 |
| 4 | BLDG 7 | 65. | 10. | 63.0 |
| 5 | BLDG 8 | 65. | 10. | 63.7 |
| 6 | BLDG 1 | 65. | 10. | 64.8 |
| 7 | BLDG 2 | 65. | 10. | 65.0 |
| 8 | BLDG 2 | 65. | 10. | 61.4 |

E Barham Residential - Second Floor Balconies Mitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,673,
714,258,665,673,
866,258,665,673,
866,227,665,673,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,683,
975.,264,675,683,
1107.,213,675,683,
1089.,176,675,683,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,690,
1105.,198,682,690,
1167.,171,682,690,
1222.,145,682,690,
1227.,141,683,691,
1342.,88,683,691,
1310.,27,683,691,
B-BLDG 3 BALC, 15 , 2 , 0 ,0
1094.,171,692,699,
1105.,193,692,699,
1115.,188,692,699,
B-BLDG 4 BALC, 16 , 2 , 0 ,0
1201.,149,692,699,
1203.,152,692,699,
1214.,147,692,699,
1210.,141,692,699,
B-BLDG 5 BALC, 17 , 2 , 0 ,0
1229.,134,693,700,
1221.,138,693,700,
1211.,117,693,700,
B-BLDG 6 BALC, 18 , 2 , 0 ,0
1326.,86,693,700,
1327.,89,693,700,
1338.,84,693,700,
1326.,59,693,700,
B-BLDG 6 BALC, 19 , 2 , 0 ,0
1308.,48,693,698,
1314.,44,693,698,
1306.,29,693,698,
R, 1 , 65 ,10
1088,141,696.,BLDG 3
R, 2 , 65 ,10
1106,184,696.,BLDG 3
R, 3 , 65 ,10
1207,147,696.,BLDG 4
R, 4 , 65 ,10
1221,128,697.,BLDG 5
R, 5 , 65 ,10
1330,82,697.,BLDG 6

R, 6 , 65 ,10
1307,38,697.,BLDG 6
C,C

SOUND32 - RELEASE 07/30/91

TITLE:
E Barham Residential - Second Floor Balconies Mitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 3 | 65. | 10. | 64.6 |
| 2 | BLDG 3 | 65. | 10. | 64.2 |
| 3 | BLDG 4 | 65. | 10. | 64.6 |
| 4 | BLDG 5 | 65. | 10. | 63.4 |
| 5 | BLDG 6 | 65. | 10. | 65.0 |
| 6 | BLDG 6 | 65. | 10. | 65.4 |

E Barham Residential - Third Floor Balconies Unmitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,665,
714,258,665,665,
866,258,665,665,
866,227,665,665,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,675,
975.,264,675,675,
1107.,213,675,675,
1089.,176,675,675,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,682,
1105.,198,682,682,
1167.,171,682,682,
1222.,145,682,682,
1227.,141,683,683,
1342.,88,683,683,
1310.,27,683,683,
B-BLDG 7 BALC, 15 , 2 , 0 ,0
720.,244,685,685,
720.,252,685,685,
749.,252,685,685,
749.,245,685,685,
B-BLDG 7 BALC, 16 , 2 , 0 ,0
809.,246,685,685,
809.,253,685,685,
829.,253,685,685,
829.,246,685,685,
B-BLDG 7 BALC, 17 , 2 , 0 ,0
858.,246,685,685,
864.,246,685,685,
864.,231,685,685,
B-BLDG 8 BALC, 18 , 2 , 0 ,0
855.,150,685,685,
857.,150,685,685,
857.,136,685,685,
B-BLDG 1 BALC, 19 , 2 , 0 ,0
969.,234,694,694,
980.,256,694,694,
991.,251,694,694,
B-BLDG 2 BALC, 20 , 2 , 0 ,0
1088.,203,695,695,
1099.,198,695,695,
1088.,176,695,695,
R, 1 , 65 ,10
723,132,689.,BLDG 8
R, 2 , 65 ,10
735,248,689.,BLDG 7
R, 3 , 65 ,10
816,249,689.,BLDG 7

R, 4 , 65 ,10
861,242,689.,BLDG 7
R, 5 , 65 ,10
855,143,689.,BLDG 8
R, 6 , 65 ,10
982,246,698.,BLDG 1
R, 7 , 65 ,10
1090,194,699.,BLDG 2
R, 8 , 65 ,10
1068,150,699.,BLDG 2
C,C

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TITLE:
E Barham Residential - Third Floor Balconies Unmitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 8 | 65. | 10. | 60.6 |
| 2 | BLDG 7 | 65. | 10. | 71.0 |
| 3 | BLDG 7 | 65. | 10. | 72.1 |
| 4 | BLDG 7 | 65. | 10. | 72.4 |
| 5 | BLDG 8 | 65. | 10. | 67.1 |
| 6 | BLDG 1 | 65. | 10. | 75.1 |
| 7 | BLDG 2 | 65. | 10. | 75.7 |
| 8 | BLDG 2 | 65. | 10. | 67.0 |

E Barham Residential - Third Floor Balconies Unmitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,665,
714,258,665,665,
866,258,665,665,
866,227,665,665,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,675,
975.,264,675,675,
1107.,213,675,675,
1089.,176,675,675,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,682,
1105.,198,682,682,
1167.,171,682,682,
1222.,145,682,682,
1227.,141,683,683,
1342.,88,683,683,
1310.,27,683,683,
B-BLDG 3 BALC, 15 , 2 , 0 ,0
1094.,171,702,702,
1105.,193,702,702,
1115.,188,702,702,
B-BLDG 4 BALC, 16 , 2 , 0 ,0
1201.,149,702,702,
1203.,152,702,702,
1214.,147,702,702,
1210.,141,702,702,
B-BLDG 5 BALC, 17 , 2 , 0 ,0
1229.,134,703,703,
1221.,138,703,703,
1211.,117,703,703,
B-BLDG 6 BALC, 18 , 2 , 0 ,0
1326.,86,703,703,
1327.,89,703,703,
1338.,84,703,703,
1326.,59,703,703,
B-BLDG 6 BALC, 19 , 2 , 0 ,0
1308.,48,703,703,
1314.,44,703,703,
1306.,29,703,703,
R, 1 , 65 ,10
1088,141,706.,BLDG 3
R, 2 , 65 ,10
1106,184,706.,BLDG 3
R, 3 , 65 ,10
1207,147,706.,BLDG 4
R, 4 , 65 ,10
1221,128,707.,BLDG 5
R, 5 , 65 ,10
1330,82,707.,BLDG 6

R, 6 , 65 ,10
1307,38,707.,BLDG 6
C,C

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TITLE:
E Barham Residential - Third Floor Balconies Unmitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 3 | 65. | 10. | 68.2 |
| 2 | BLDG 3 | 65. | 10. | 75.5 |
| 3 | BLDG 4 | 65. | 10. | 77.2 |
| 4 | BLDG 5 | 65. | 10. | 74.3 |
| 5 | BLDG 6 | 65. | 10. | 77.1 |
| 6 | BLDG 6 | 65. | 10. | 72.0 |

E Barham Residential - Third Floor Balconies Mitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,673,
714,258,665,673,
866,258,665,673,
866,227,665,673,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,683,
975.,264,675,683,
1107.,213,675,683,
1089.,176,675,683,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,690,
1105.,198,682,690,
1167.,171,682,690,
1222.,145,682,690,
1227.,141,683,691,
1342.,88,683,691,
1310.,27,683,691,
B-BLDG 7 BALC, 15 , 2 , 0 ,0
720.,244,685,692,
720.,252,685,692,
749.,252,685,692,
749.,245,685,692,
B-BLDG 7 BALC, 16 , 2 , 0 ,0
809.,246,685,692,
809.,253,685,692,
829.,253,685,692,
829.,246,685,692,
B-BLDG 7 BALC, 17 , 2 , 0 ,0
858.,246,685,692,
864.,246,685,692,
864.,231,685,692,
B-BLDG 8 BALC, 18 , 2 , 0 ,0
855.,150,685,690,
857.,150,685,690,
857.,136,685,690,
B-BLDG 1 BALC, 19 , 2 , 0 ,0
969.,234,694,701,
980.,256,694,701,
991.,251,694,701,
B-BLDG 2 BALC, 20 , 2 , 0 ,0
1088.,203,695,702,
1099.,198,695,702,
1088.,176,695,702,
R, 1 , 65 ,10
723,132,689.,BLDG 8
R, 2 , 65 ,10
735,248,689.,BLDG 7
R, 3 , 65 ,10
816,249,689.,BLDG 7

R, 4 , 65 ,10
861,242,689.,BLDG 7
R, 5 , 65 ,10
855,143,689.,BLDG 8
R, 6 , 65 ,10
982,246,698.,BLDG 1
R, 7 , 65 ,10
1090,194,699.,BLDG 2
R, 8 , 65 ,10
1068,150,699.,BLDG 2
C,C

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TITLE:
E Barham Residential - Third Floor Balconies Mitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 8 | 65. | 10. | 60.6 |
| 2 | BLDG 7 | 65. | 10. | 62.9 |
| 3 | BLDG 7 | 65. | 10. | 63.6 |
| 4 | BLDG 7 | 65. | 10. | 62.8 |
| 5 | BLDG 8 | 65. | 10. | 63.7 |
| 6 | BLDG 1 | 65. | 10. | 64.5 |
| 7 | BLDG 2 | 65. | 10. | 64.5 |
| 8 | BLDG 2 | 65. | 10. | 64.2 |

E Barham Residential - Third Floor Balconies Mitigated
T-PEAK HOUR TRAFFIC CONDITIONS, 1
 6017 , 65 , 132 , 65 , 151 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 2
 8022 , 65 , 176 , 65 , 202 , 65
T-PEAK HOUR TRAFFIC CONDITIONS, 3
 1828 , 45 , 38 , 45 , 38 , 45
L-SR-78 WEST, 1
N,570,751,665,
N,1269,387,667,
N,1598,215,668,
N,1851,83,669,
L-SR-78 EAST, 2
N,541,695,665,
N,1239,330,667,
N,1569,158,668,
N,1822,26,669,
L-BARHAM, 3
N,491,599,646,
N,872,397,650,
N,916,375,651,
N,989,341,653,
N,1061,309,655,
N,1131,277,657,
N,1225,229,660,
N,1357,161,664,
N,1510,81,666,
N,1812,-77,660,
B-SR-78 MEDIAN, 1 , 2 , 0 ,0
557,727,665,668,
1256,362,667,670,
1585,190,668,671,
1838,58,669,672,
B-SR-78 SOUTH WALL, 2 , 2 , 0 ,0
517,649,665,668,
1215,284,667,670,
1380,198,667,670,
B-EAST SLOPE, 3 , 2 , 0 ,0
1437,65,665,665,
1431,55,673,673,
1448,-13,700,700,
1500,-49,700,700,
B-BLDG 7, 4 , 2 , 0 ,0
720,206,665,695,
720,244,665,695,
858,246,665,695,
858,231,665,695,
862,231,665,695,
861,206,665,695,
B-BLDG 8, 5 , 2 , 0 ,0
713,136,665,695,
712,175,665,695,
853,176,665,695,
855,150,665,695,
851,150,665,695,
851,136,665,695,
B-BLDG 1, 6 , 2 , 0 ,0
929,128,674,704,
991,251,674,704,
1026,234,674,704,
964,107,674,704,
B-BLDG 2, 7 , 2 , 0 ,0
991,94,675,705,
1053,221,675,705,
1088,204,675,705,
1028,79,675,705,
B-BLDG 3, 8 , 2 , 0 ,0
1054,65,682,712,
1115,188,682,712,

1150,171,682,712,
1088,45,682,712,
B-BLDG 4, 9 , 2 , 0 ,0
1115,31,682,712,
1178,160,682,712,
1201,149,682,712,
1200,146,682,712,
1213,140,682,712,
1151,16,682,712,
B-BLDG 5, 10 , 2 , 0 ,0
1167,11,683,713,
1229,134,683,713,
1264,117,683,713,
1202,-10,683,713,
B-BLDG 6, 11 , 2 , 0 ,0
1229,-24,683,713,
1291,103,683,713,
1326,86,683,713,
1266,-38,683,713,
B-BLDG 7 WALL TOS, 12 , 2 , 0 ,0
712,235,665,673,
714,258,665,673,
866,258,665,673,
866,227,665,673,
B-BLDG 1-2 WALL TOS, 13 , 2 , 0 ,0
910.,168,675,683,
975.,264,675,683,
1107.,213,675,683,
1089.,176,675,683,
B-BLDG 3-6 WALL TOS, 14 , 2 , 0 ,0
1093.,172,682,690,
1105.,198,682,690,
1167.,171,682,690,
1222.,145,682,690,
1227.,141,683,691,
1342.,88,683,691,
1310.,27,683,691,
B-BLDG 3 BALC, 15 , 2 , 0 ,0
1094.,171,702,709,
1105.,193,702,709,
1115.,188,702,709,
B-BLDG 4 BALC, 16 , 2 , 0 ,0
1201.,149,702,709,
1203.,152,702,709,
1214.,147,702,709,
1210.,141,702,709,
B-BLDG 5 BALC, 17 , 2 , 0 ,0
1229.,134,703,710,
1221.,138,703,710,
1211.,117,703,710,
B-BLDG 6 BALC, 18 , 2 , 0 ,0
1326.,86,703,710,
1327.,89,703,710,
1338.,84,703,710,
1326.,59,703,710,
B-BLDG 6 BALC, 19 , 2 , 0 ,0
1308.,48,703,708,
1314.,44,703,708,
1306.,29,703,708,
R, 1 , 65 ,10
1088,141,706.,BLDG 3
R, 2 , 65 ,10
1106,184,706.,BLDG 3
R, 3 , 65 ,10
1207,147,706.,BLDG 4
R, 4 , 65 ,10
1221,128,707.,BLDG 5
R, 5 , 65 ,10
1330,82,707.,BLDG 6

R, 6 , 65 ,10
1307,38,707.,BLDG 6
C,C

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TITLE:
E Barham Residential - Third Floor Balconies Mitigated

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|---|---|---|---|
| 1 | BLDG 3 | 65. | 10. | 67.3 |
| 2 | BLDG 3 | 65. | 10. | 64.0 |
| 3 | BLDG 4 | 65. | 10. | 64.2 |
| 4 | BLDG 5 | 65. | 10. | 63.5 |
| 5 | BLDG 6 | 65. | 10. | 64.5 |
| 6 | BLDG 6 | 65. | 10. | 65.0 |