

5850 West Las Positas Boulevard
Pleasanton, California

Environmental Noise Assessment

12 December 2013

Prepared for:

SummerHill Homes

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INTRODUCTION

This letter summarizes our environmental noise assessment for the West Las Positas Boulevard residential project in Pleasanton, California. The project consists of 177 residential units in four 2- to 4-story buildings with amenity spaces including recreation and community rooms. Outdoor use space will be provided in the open space between the buildings as shown in Figure 1, attached. The site, located at 5850 West Las Positas Boulevard, is included in the City of Pleasanton Housing Element Supplemental Environmental Impact Report study area. The site is bordered by Las Positas Boulevard and Hart Middle School to the north, commercial office buildings to the east and west, and single-family homes across the Arroyo Mocho Canal to the south. Following is a summary of our findings:

1. Incorporating sound-rated windows and doors with STC ratings up to approximately 30 in residences along West Las Positas Boulevard will reduce estimated traffic noise to DNL¹ 45 dB² or lower indoors.
2. Where windows must be closed to meet the interior noise criterion, residences must include ventilation or air conditioning systems to provide a habitable interior environment (with windows closed).
3. Estimated environmental noise is DNL 65 dB and below in planned common open spaces, which is consistent with the City's goal.
4. Estimated noise from vehicles associated with the project will not increase DNL at off-site receivers along West Las Positas Boulevard.
5. Outdoor condensing units and other mechanical equipment must incorporate mitigation measures to reduce noise to the City's Municipal Code limits at the adjacent property lines.
6. Guidelines are provided to reduce the impact of construction noise.

ACOUSTICAL CRITERIA

The Pleasanton General Plan

The Noise Element of the Pleasanton General Plan 2005-2025, adopted 21 July 2009, contains land use compatibility guidelines for environmental noise in the community. Table 1, below, summarizes these guidelines for residential land uses.

Table 1: Summary of Table 11-5: Noise and Land Use Compatibility Guidelines

DNL Value in Decibels	Compatibility Level
Multi-Family Residential	
65 dB or less	<i>Normally Acceptable:</i> Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements.
65 to 75 dB	<i>Conditionally Acceptable:</i> Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.
Greater than 75 dB	<i>Unacceptable:</i> New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

¹ Day/Night Average Sound Level (DNL) — A descriptor established by the U.S. Environmental Protection Agency to describe the average day-night level with a penalty applied to noise occurring during the nighttime hours (10 pm - 7 am) to account for the increased sensitivity of people during sleeping hours.

² A-Weighted Sound Level (dB) — A term for the A-Weighted sound pressure level. The sound level is obtained by use of a standard sound level meter and is expressed in decibels.

In addition to the land use compatibility guidelines, the Noise Element outlines the following noise level goals:

- Interior noise goal of DNL 45 dB or lower for all residences
- Maximum instantaneous noise level goals indoors, when the noise source is rail activity or aircraft. The project site is located outside the DNL 60 dB railroad noise contour, and the CNEL 60 dB airport noise contour for Livermore Municipal Airport. Therefore, this analysis assumes these instantaneous noise level goals do not apply.

The Final Supplemental EIR for General Plan Amendment and Rezoning, dated December 2011, identifies DNL 65 dB as the outdoor noise goal for residential outdoor use spaces.

Pleasanton Municipal Code

Section 9.04.030 of the Pleasanton Municipal Code limits noise levels from mechanical equipment such as air-conditioners to 60 dB at residential property lines. Section 9.04.100 limits construction noise to the levels indicated in the Construction Noise section below.

California Building Code (CBC)

The California Building Code limits indoor noise from outdoor sources to DNL 45 dB in habitable rooms of attached housing.³ Projects exposed to an outdoor DNL greater than 60 dB require an acoustical analysis during the design phase showing that the proposed design will limit outdoor noise to the prescribed allowable interior level. Additionally, if windows must be closed to meet the interior standard, "the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment."

EXISTING NOISE ENVIRONMENT

To quantify the existing noise environment, two long-term monitors continuously measured noise levels at the site between 6 and 8 November 2013. In addition, short-term "spot" measurements were conducted and compared with corresponding time periods of the long-term monitors to determine how noise levels vary at different locations and elevations. Table 2 summarizes existing noise levels at the site. Figure 1, attached, shows the approximate measurement locations.

Table 2: Existing Noise Environment

Site	Location	Date / Time	DNL
LT-1	West Las Positas Boulevard Monitor Approximately 85 feet southeast of roadway centerline	6 – 8 November 2013	65 dB
LT-2	Arroyo Mocho Canal Monitor Along southern property line of site		55 dB
ST-1	West Las Positas Boulevard Spot Approximately 95 feet southeast of roadway centerline	3:40 – 3:55 PM 8 November 2013	63 dB
ST-2	West Side Spot Approximately 340 feet southeast of roadway centerline	2:50 – 3:05 PM 11 October 2013	54 dB

Appendix D for the City's Housing Element Supplemental EIR includes existing and "far term" forecast traffic volumes for West Las Positas Boulevard in the project vicinity. In summary, forecast peak-hour traffic volumes are expected to increase by approximately 50 percent. This corresponds with approximately a 2-decibel increase in environmental noise. Estimated future noise levels are summarized in Figure 1, attached.

³ 2010 California Building Code, California Code of Regulations, Title 24, Part 2, Chapter 12, Section 1207: Sound Transmission.

ANALYSIS AND MITIGATIONS

Land Use Compatibility

As shown in Figure 1, attached, estimated future noise at the setback of planned residences ranges from DNL 56 dB in the shielded portions of the site to DNL 67 dB along Las Positas Boulevard. This falls into the City's *normally* and *conditionally acceptable* categories for residential projects.

Interior Noise

The project must incorporate sound rated windows and doors to reduce vehicle traffic noise to DNL 45 dB or less indoors. Preliminary estimates suggest that incorporating windows and doors with sound insulation ratings of STC 30 in rooms along Las Positas Boulevard will reduce traffic noise to this goal. This is based on architectural floor plans and elevations dated 5 December 2013, and assumes that exterior walls will be equivalent to stucco over wood sheeting, wood studs with batt insulation in stud cavities, and one layer of gypsum board on the interior side (approximately STC⁴ 45). In other locations, STC 28 windows and doors are assumed.⁵ The final design and sound insulation ratings must be reviewed by an acoustical consultant prior to construction.

Where windows need to be closed to meet the interior noise goal, the CBC requires "... a ventilation or air-conditioning system to provide a habitable interior environment." This applies to Building A and B, and should be discussed with the project mechanical engineer during the design phases of the project.

Exterior Noise

Outdoor use space will be provided in the area between Buildings A and B. Estimated future environmental noise in this areas will vary, depending on distance and shielding from vehicles on West Las Positas Boulevard. They are estimated to be DNL 65 dB and below, which is consistent with the City's goal for this type of space.

Mechanical Equipment Noise (Associated with the Project)

Outdoor mechanical equipment must meet the Municipal Code noise limits summarized above. It is assumed that the buildings will include rooftop air-condensing units. An acoustical consultant should review manufacturer's noise level data for the proposed units during the design phase to determine if noise reduction measures are needed. If needed, noise reduction may include a combination of selecting quiet units, maintaining minimum distances to property lines, physical barriers and/or enclosures.

Traffic Noise (Associated with the Project)

The Transportation Analysis, prepared by Fehr & Peers transportation consultants in July 2011, for the Pleasanton Housing Element Supplemental EIR includes peak-hour traffic volumes for the intersection of West Las Positas Boulevard and Hacienda Drive. In summary, the "project", which includes both this and the other projects included in the overall study, will increase peak-hour traffic volumes along West Las

⁴ Sound Transmission Class (STC) – A single-number rating derived from the sound insulation properties of a partition. Numerically, STC represents the number of decibels of speech sound reduction from one side of the partition to the other

⁵ It is important to note that STC ratings are for full window assemblies (glass and frame) rather than just the glass itself. Laboratory-tested sound-rated assemblies from an NVLAP accredited lab should be used. For reference, standard dual-pane construction grade windows and sliding glass doors have sound insulation ratings in the range of STC 26 to 28.

Positas Boulevard by approximately 3 percent. This corresponds with an increase in environmental noise of less than 1 decibel, which is considered less than significant.

Construction Noise

The project shall incorporate the following guidelines to reduce the potential impact of construction noise. These guidelines are taken from Noise Mitigation Measure 4.J-1 from the Final Supplemental EIR, General Plan Amendment and Rezonings report dated December 2011.

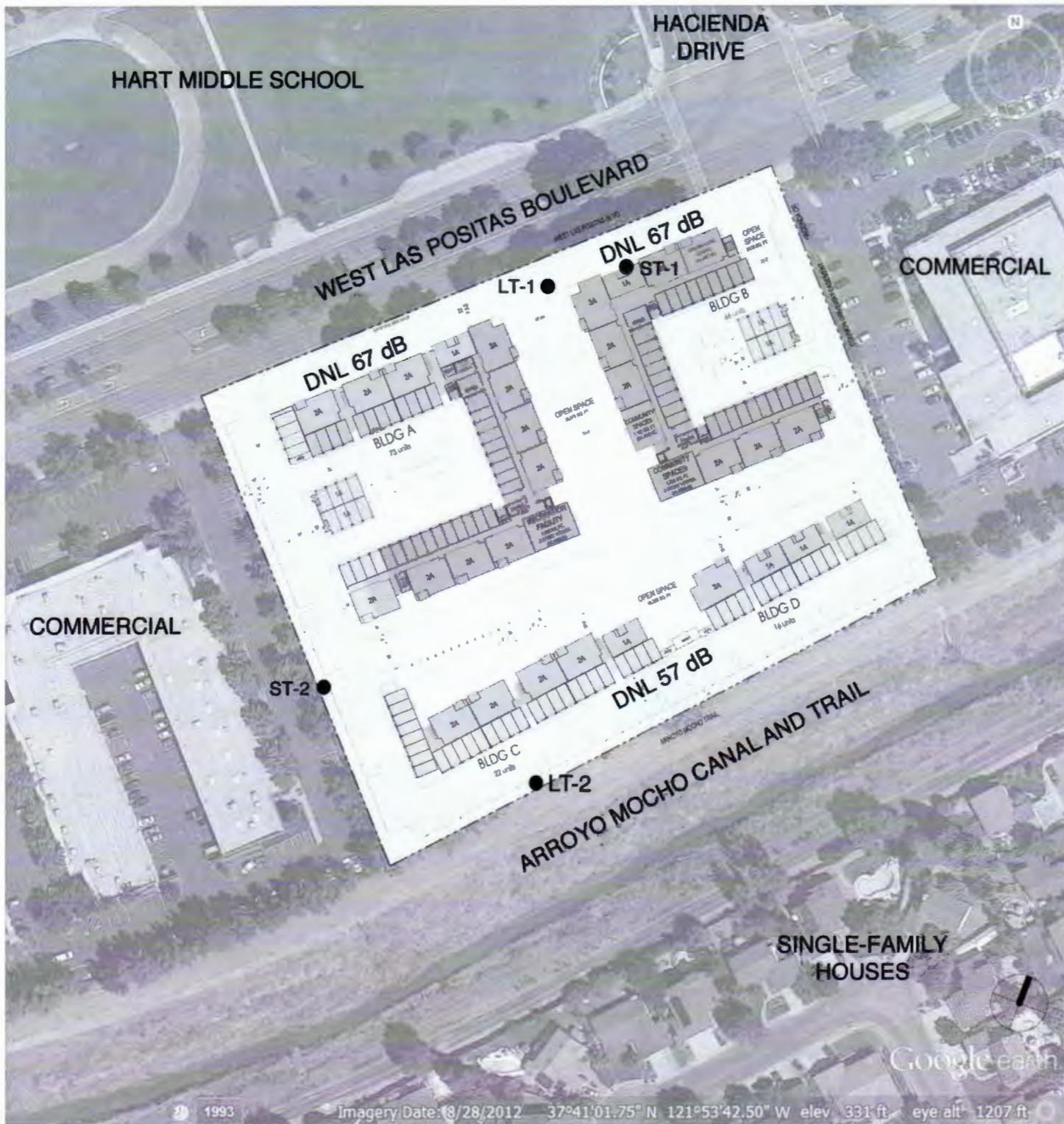
- Comply with the applicable construction noise exposure criteria established in the Pleasanton Municipal Code, Section 9.04.100.
 - Notwithstanding any other provision of this chapter, between the hours of 8:00 a.m. and 8:00 p.m. daily, except Sunday and holidays, when the exemption shall apply between 10:00 a.m. and 6:00 p.m., construction, alteration or repair activities which are authorized by valid city permit shall be allowed if they meet at least one of the following noise limitations.
 - No individual piece of equipment shall produce a noise level exceeding 83 dB at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to 25 feet from the equipment as possible; or
 - The noise level at any point outside of the property plane of the project shall not exceed 86 dB.
- Locate stationary construction equipment as far from adjacent occupied building as possible.
- Select routes for movement of construction-related vehicles and equipment so that noise-sensitive areas, including residences, and outdoor recreation areas, are avoided as much as possible. Include these routes in materials submitted to the City of Pleasanton for approval prior to the issuance of building permits.
- All site improvements and construction activities shall be limited to the hours of 8:00 a.m. to 5:00 p.m., Monday through Saturday. In addition, no construction shall be allowed on State and federal holidays. If complaints are received regarding the Saturday construction hours, the Community Development Director may modify or revoke the Saturday construction hours. The Community Development Director may allow earlier "start-times" for specific construction activities (e.g., concrete-foundation/floor pouring). If it can be demonstrated to the satisfaction of the Community Development Director that the construction and construction traffic noise will not affect nearby residents.
- All construction equipment must meet DMV noise standards and shall be equipped with muffling devices.

Designate a noise disturbance coordinator who will be responsible for responding to complaints about noise during construction. The telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site and shall be provided to the City of Pleasanton. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas.

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● INDICATES APPROXIMATE NOISE MEASUREMENT LOCATION
 NOTE: DRAWING PROVIDED BY OTHERS; NO SCALE

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5850 WEST LAS POSITAS BOULEVARD SITE PLAN INDICATING ESTIMATED FUTURE NOISE ENVIRONMENT

FIGURE 1

CSA PROJECT NO. 13-0602
 12 DECEMBER 2013
 JMR