

## **CHAPTER ELEVEN: NOISE**

### **11.1 INTRODUCTION**

Mountain House is located adjacent to several identified noise sources, primarily transportation related (roadway traffic and railroad operations). In addition, a new airport is being constructed approximately five miles to the northwest of the project site, with the main runway aligned with the southwest corner of the community.

This chapter summarizes Master Plan provisions related to noise, and states both the Plan Description and Implementation Measures for Specific Plan III (SP III). Chapter Nine: Transportation and Circulation, provides additional information on roadway traffic and transportation facilities.

The following assumptions about noise impacts are used for this Specific Plan:

- a. The Noise Chapter of the San Joaquin County General Plan establishes a policy to limit exterior noise levels to 65 dB Ldn (a composite 24-hour average noise level descriptor) for residential developments, and 60 dB Ldn for schools, group care facilities, and hospitals, in order to provide an acceptable environment for outdoor activities.
- b. Standard construction practices under the current Uniform Building Code (UBC) are expected to provide an exterior to interior noise level reduction of at least 20 dB, therefore achieving an interior noise level of 45 dB Ldn with the windows in the closed position.
- c. The Noise Chapter of the San Joaquin County General Plan also requires an acoustical analysis for development of residential or other noise sensitive land uses in areas where the exterior noise level is predicted to exceed 60 dB Ldn.
- d. Noise-sensitive land uses include residential, education, and hospital uses.

### **11.2 MOBILE SOURCE NOISE IMPACTS**

#### **11.2.1 Master Plan Summary**

The Master Plan requires a variety of measures to mitigate noise from mobile sources. Berms, barriers, soundwalls, setbacks, landscaping, or some combination of these measures will be used adjacent to transportation noise sources to reduce indoor and outdoor noise exposure to acceptable levels. Where excessive sound wall heights would be necessary, a combination of setbacks and berms or sound walls will be considered. Setbacks will be used in conjunction with noise barriers where necessary to achieve acceptable levels of noise.

On school sites and other noise-sensitive land uses, any outdoor instructional areas or areas which require speech audibility will be located outside the 60 dB Ldn noise contour or shielded from mobile noise in excess of 60 dB Ldn.

Noise studies prepared by EDAW have identified noise-reducing barriers sufficient to meet the needed mitigation for noise generated from major and minor Arterials. Noise levels in primary outdoor use

areas of new residential development will not exceed an Ldn of 60 dB unless the project design includes reasonable mitigation measures to reduce noise in outdoor activity areas to as close to an Ldn of 60 dB as possible. Where it is not possible to reduce noise in outdoor activity areas to an Ldn of 60 dB or less using practical application of the best available noise reduction measures, an exterior noise level of up to an Ldn of 65 dB may be allowed. Under no circumstances will interior noise levels exceed an Ldn of 45 dB.

### **11.2.2 Specific Plan III Description**

As part of this Specific Plan, a noise analysis was prepared to identify expected noise levels and appropriate mitigations and sound wall locations and heights. Existing noise-sensitive land uses within the planning area include 49 residences in the northwest portion of the project site (Grant Line Village), four residences in the central portion of the site, and one residence in the northern portion of the project site along the south side of Grant Line Road. The sound barriers identified in Table 11-1: Predicted Road Traffic Noise Levels Under 2025 Plus Specific Plan III Buildout Conditions and Figure 11-1: Soundwall Locations, will reduce exterior noise levels at the residences along Grant Line Road to below 65 dBA Ldn/CNEL. This mitigation shall be funded through fair-share payments by the applicants for development within SP III.

The existing noise environment on and within the vicinity of the SP III project site is influenced primarily by surface transportation noise emanating from vehicular traffic on area roadways, such as I-205, Mountain House Parkway, and Grant Line Road. Agricultural activities within and adjacent to SP III also contribute to the existing background noise levels.

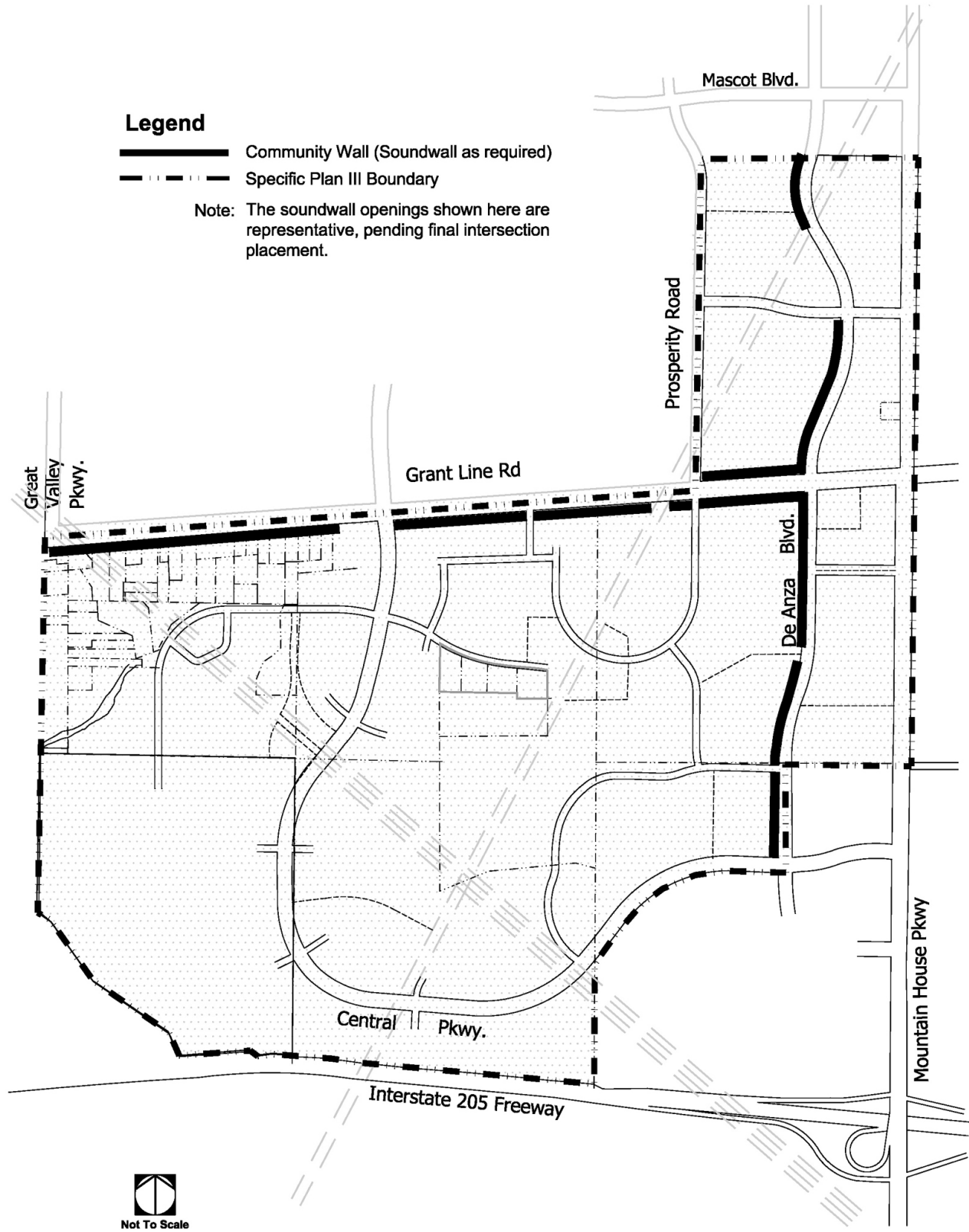
SP III is also influenced by aircraft flyover noise from the Byron Airport located approximately five miles to the northwest in Contra Costa County. Portions of Neighborhoods A/B, and D fall within the area of potential noise impact from Byron Airport. See Figure 11-2: Byron Airport Aircraft Overflight and Potential Noise Impact Zone. Light plane operations to and from the airport would produce minimal noise impacts on the SP III area as most of these aircraft would pass over the SP III area at heights that make their presence largely unnoticeable. Nonetheless, SP III implements the Master Plan requirement that home buyers in the airport overflight zone area shall be provided a disclosure that indicates that the property offered for sale is located in an area subject to aircraft flyover noise.

The SP III project includes edge treatments that would prevent noise from off-site agricultural operations near the eastern and western boundaries of the SP III site. The edge treatment and 100-foot setback along the west edge would address the areas where residential uses would directly abut the County line, where the nearest agricultural activities could occur. The treatment along the east edge of the SP III project site would be defined by the Mountain House Parkway right-of-way plus a minimum 32-foot additional setback which will reduce off-site agricultural noise as perceived at proposed Specific Plan III noise-sensitive land uses. The industrial, office, and commercial land uses proposed along the west side of Mountain House Parkway would provide additional noise shielding, though these land uses are likely not to be developed until after the SP III's residential neighborhoods are developed and inhabited. Agricultural operations could also continue to occur on undeveloped portions of the SP III project site while development occurs. However, interim agricultural buffers required of new developments will help reduce these noise effects.

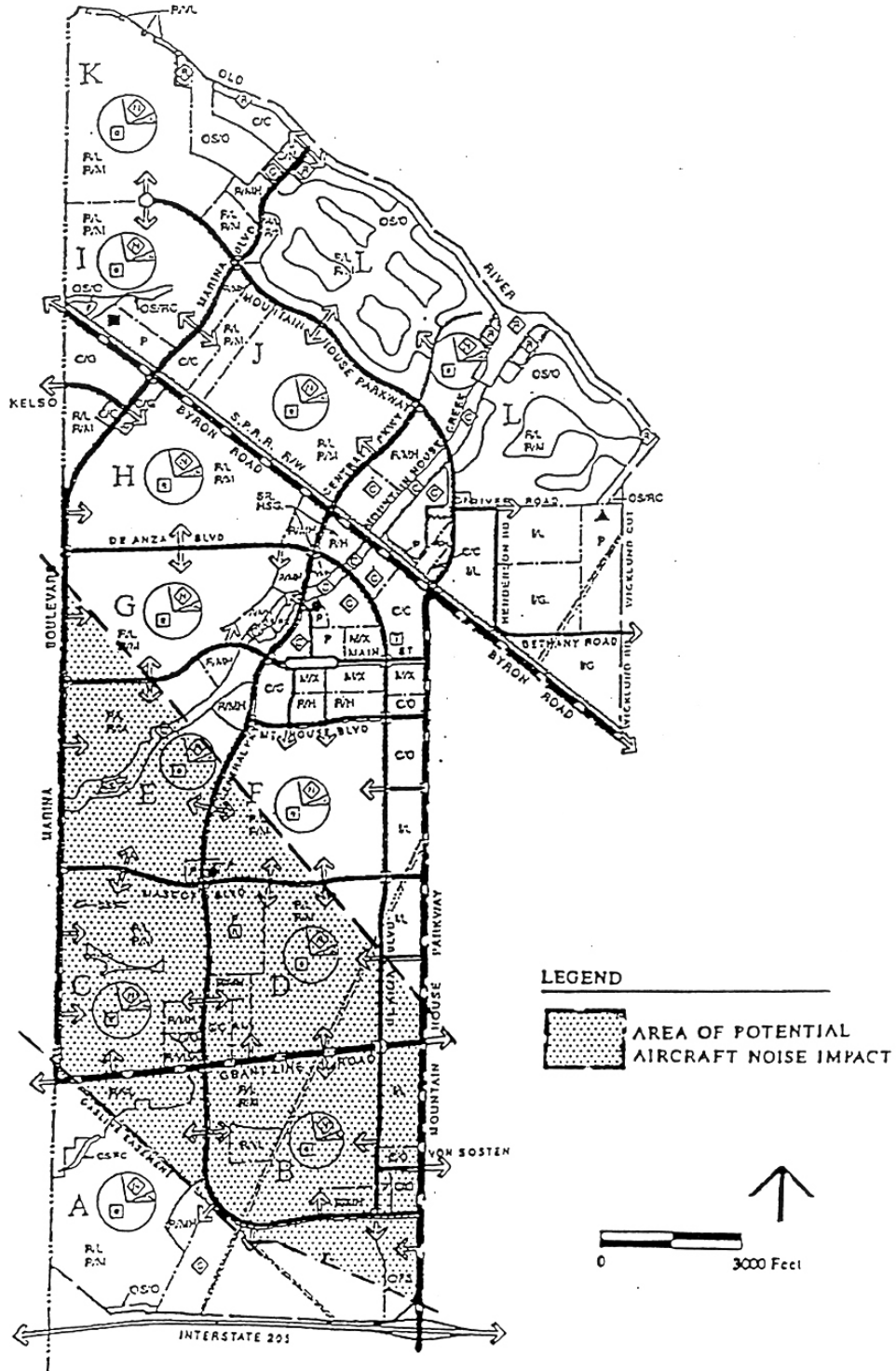
**Table 11-1: Predicted Road Traffic Noise Levels Under 2025 Plus Specific Plan III Buildout Conditions**

Road Segments along Proposed Sensitive Receptors	Sound wall proposed as part of SP III	Noise Level (dBA CNEL) 50 Feet from Centerline of Near Travel Lane		Exceedance of 65 dB Ldn/CNEL without Sound Barrier?	Exceedance of 65 dB Ldn/CNEL with Sound Barrier?
		Cumulative + Project (Year 2025) without Sound Wall	With 7-foot Sound Wall		
Central Pkwy. south of Grant Line Rd.	no	69.16	N/A	Yes	N/A
Central Pkwy. along proposed Community Park and Delta College Campus	no	65.53	N/A	Yes	N/A
Central Pkwy. west of De Anza Blvd. (and south of Grant Line Rd.)	no	67.79	N/A	Yes	N/A
De Anza Blvd. between Mascott Blvd and Grant Line Rd.	yes, along west side of road	66.52	59.82	Yes	No
De Anza Blvd. between Grant Line Rd. and Central Pkwy.	yes, along west side of road	67.59	60.89	Yes	No
Grant Line Rd. between Prosperity and De Anza Blvd.	yes, along south side of road	68.79	62.04	Yes	No
Grant Line Rd. between Central Valley Pkwy. and Prosperity and De Anza Blvd.	yes, along south side of road	71.36	64.53	Yes	No
<b>Road Segments along Existing Sensitive Receptors</b>					
Road Segments along Existing Sensitive Receptors	Sound wall proposed as part of SP III	Noise Level (dBA CNEL) at Nearest Residence		Exceedance of 65 dB Ldn/CNEL without Sound Barrier?	Exceedance of 65 dBA Ldn/CNEL with Sound Barrier?
		Cumulative + Project (Year 2025) without Sound Wall	With 7-foot Sound Wall		
Grant Line Rd. along existing Grant Line Village (north side of road in SPII)	Proposed as part of SPII	72.59	65.43 (or 64.11 with and 8-foot sound wall)	Yes	Yes
<b>Grant Line Rd. along existing Grant Line Village (south side of road)</b>	yes, along south side of road	<b>69.89</b>	<b>63.31</b>	<b>Yes</b>	<b>No</b>

Source: Specific Plan III DEIR, 2005.



**FIGURE 11-1: SOUNDWALL LOCATIONS**



Map does not reflect changes to road alignments and land use designations. Underlying land plan shown here is Mountain House Master Plan (1994) and does not reflect proposed SP III Land Plan.

**FIGURE 11-2: BYRON AIRPORT AIRCRAFT OVERFLIGHT AND POTENTIAL NOISE IMPACT ZONE**

Source: Mountain House Master Plan

### 11.2.3 Implementation Measures

- a. On school sites and other noise-sensitive land uses, any outdoor instructional areas or areas which require speech audibility will be located outside or shielded from the 60 dB Ldn noise contour.
- b. Noise levels in primary outdoor use areas of new residential development shall not exceed an Ldn of 60 dB unless the project design includes reasonable mitigation measures to reduce noise in outdoor activity areas to as close to an Ldn of 60 dB as possible. Where it is not possible to reduce noise in outdoor activity areas to an Ldn of 60 dB or less using practical application of the best available noise reduction measures, an exterior noise level of up to an Ldn of 65 dB may be allowed. Under no circumstances will interior noise levels exceed an Ldn of 45 dB. Compliance shall be verified prior to the issuance of building permits.
- c. All implementing projects shall comply with the applicable noise provisions of SP III and the San Joaquin County Development Title.
- d. A noise study shall be prepared for all noise sensitive areas where the exterior noise level is predicted to exceed 60 dB Ldn and shall identify specific noise-reducing barriers, taking into account the final design and grading of the subdivision, sufficient to meet the needed mitigation for noise generated from arterial roadways. The applicant shall submit the noise study to the Community Development Department (CDD) prior to approval of Development Permits.
- e. The applicant shall provide a disclosure by deed notice that property within the Byron Airport overflight zone is located in an area that may be subject to aircraft flyover noise. The following shall be noted on the Final Map:

“The deed of each lot shall contain a recording notification that Village X (A/B or D as appropriate) lies within Byron Airport’s potential aircraft noise impact area, defined as Zone D of the Contra Costa Airport Land Use Compatibility Plan, Compatibility Map (Figure 4B).”
- f. Before the approval of building permits for each individual subdivision, CDD shall evaluate the building permits for compliance with the San Joaquin County Development Title. Where individual projects do not clearly comply with interior noise standards included in these guidelines, mitigation measures such as use of dual-pane-windows, mechanical air systems, exterior wall insulation, and other noise-reducing building materials and methods shall be required as appropriate to reduce interior noise exposure to 45 dBA L<sub>dn</sub>, (Table 4.13-3). Where individual projects do not clearly comply with exterior noise standards of the San Joaquin Development Title (Table 4.13-3), mitigation measures, such as use of noise barriers, buildings for screening, and setbacks between noise sources and receptors, shall be implemented as appropriate to minimize exterior noise levels. Where there is a question regarding pre-mitigation or post-mitigation noise levels in an area, site-specific noise studies may be conducted to determine compliance or noncompliance with County guidelines. Any and all noise studies and mitigation required by the above shall be fully funded by the College Park developers.

Title 24 of the California Code of Regulations requires the preparation of an acoustical analysis for multifamily residences that demonstrates how interior noise levels will achieve a 45 dBA

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L<sub>dn</sub>/CNEL in locations where the exterior noise levels exceed 60 dBA L<sub>dn</sub>/CEL. As a result, a Title 24 analysis shall be prepared as part of the final design of any proposed multifamily residential dwellings. To the extent necessary, noise control measures shall be designed according to the type of building construction and specified sound rating for each building element to achieve an interior noise level of 45 dBA L<sub>dn</sub>/CNEL.

For any subdivisions for which the Building Division of the CDD and/or associated noise studies discussed above determine that agricultural noise from existing agricultural operations could exceed the County's interior and exterior noise standards of 65 dBA L<sub>dn</sub>/CEL and 45 dBA L<sub>dn</sub>/CEL, respectively, a disclosure statement shall be included in the sales or rental documents for residences indicating that the residence could potentially be subject to periodic agricultural activity noise above County Standards.

## **11.3 STATIONARY SOURCE NOISE IMPACTS**

### **11.3.1 Master Plan Summary**

To control stationary noise sources (such as industrial, commercial, or utilities that create a constant or periodic noise in a fixed location), the Master Plan requires that daytime and night-time hourly Noise Equivalent Level (Leq) standard will be used to evaluate stationary noise sources at receiving residential land uses. To provide noise level standards that account for stationary noise sources, new development of noise sensitive uses will not be allowed where the noise levels due to stationary noise sources will exceed the community's noise level standards set forth in the Master Plan.

### **11.3.2 Specific Plan III Description**

SP III takes into account stationary noise impacts by the siting of the general land use types. Actual control of noise from individual stationary sources will be the responsibility of the developer. In addition, design and operational standards shall be established to minimize noise generated by loading dock activities from adversely affecting planned and existing off-site noise-sensitive land uses.

### **11.3.3 Implementation Measures**

- a. The industrial, commercial, or public facility land uses proposed as part of the SP III project shall be designed to ensure that outdoor equipment does not result in an exceedance of 55 dB Leq during daytime hours (7 a.m. to 10 p.m.) or 50 dB Leq during night-time hours (10 p.m. to 7 a.m.) at off-site noise-sensitive receptors. These noise levels shall be lowered by five dB for simple tone noises or for noises consisting primarily of speech or music.

b. Commercial, Office, and Industrial Uses

Industrial and commercial land uses proposed as part of the College Park project shall be designed to ensure that outdoor equipment does not result in an exceedance of 55 dBA  $L_{eq}$  during daytime hours (7:00 a.m. to 10:00 p.m.) or 50 dBA  $L_{eq}$  during nighttime hours (10:00 p.m. to 7: a.m.) at off-site noise-sensitive receptors. In addition, design and operational standards shall be established to minimize noise generated by loading dock activities from adversely affecting planned and existing off-site noise-sensitive land uses. Design and operational measures may include:

- Enclose outdoor noise-generating equipment and/or set back from the property line.
- Locate buildings and structures such that they shield off-site sensitive receptors from on-site noise sources, including loading dock activity.
- Enclose loading dock areas.
- Limit loading dock activity, including delivery truck arrivals and departures, to between 7:00 a.m. and 10:00 p.m. at those loading docks with direct line of site of noise-sensitive receptors within a distance of 1,000 feet. Activity at all other loading docks shall be limited to the hours between 5:00 a.m. and 10:00 p.m.

Noise studies, including on-site sound level measurements, shall be conducted to ensure that these thresholds are not exceeded. The noise studies shall be funded by the College Park developers and approved by CDD before construction.

Landscape Maintenance

The following measures shall apply to noise-generating activities associated with landscaping and maintenance of school grounds, neighborhood parks, community parks, and open space.

- On-site landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufactures' specifications. For maintenance areas located within 320 feet of noise-sensitive land uses, the operation of on-site landscape maintenance equipment shall be limited to the least noise-sensitive periods of thee day, between the hours of 7:00 a.m. and 10:00 p.m.