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## 4.6 NOISE

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## 4.6 NOISE

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### **INTRODUCTION**

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This section discusses the existing noise and vibration environment in the project vicinity, and identifies potential impacts and mitigation measures related to development of the Clover Valley project in the City of Rocklin, California. Specifically, this section analyzes potential noise and vibration impacts due to and upon development of the projects, relative to applicable noise criteria and to the existing ambient noise environment.

Information for this section was drawn from ambient noise measurements and application of accepted noise prediction algorithms conducted by Bollard Acoustical Consultants, Inc. as described in their report<sup>1</sup> (see Appendix F of this Draft EIR). Pertinent comments received in response to the Notice of Preparation (NOP) for the proposed project have been considered in this analysis.

### **ENVIRONMENTAL SETTING**

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#### **Project Location**

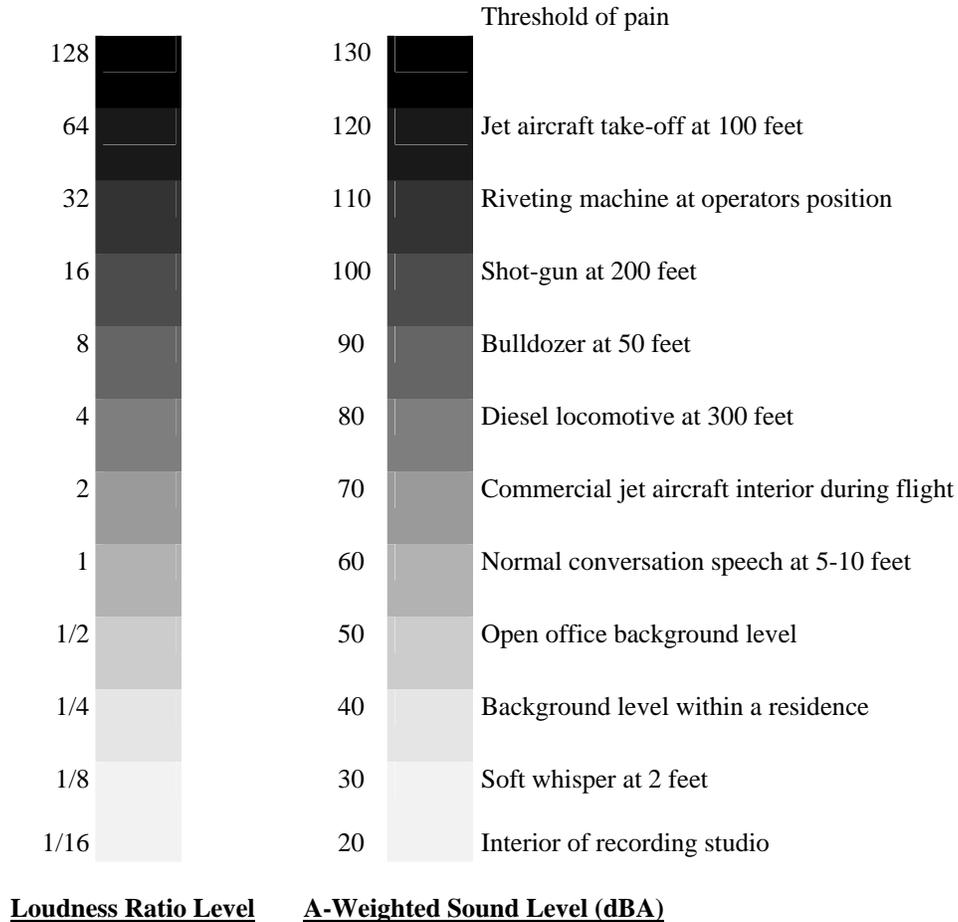
The proposed project is located in the northeast corner of the City of Rocklin, along the west side of Sierra College Boulevard and Union Pacific Railroad tracks, two miles north of Interstate 80, and three miles south of State Route 193. Surrounding lands to the south within the City limits of Rocklin include the Summit Property and Clover Valley Woods. Rocklin's Whitney Oaks residential subdivision is located to the west.

#### **Acoustical Terminology**

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. As a result, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness. Figure 4.6-1 illustrates common noise levels associated with various sources.

**Figure 4.6-1  
 Typical A-Weighted Sound Levels of Common Noise Sources**



Unless otherwise stated, all sound levels reported are in A-weighted decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

Table 4.6-1 defines the acoustical terminology used in this report.

**Table 4.6-1  
 Acoustical Terminology**

<b>Term</b>	<b>Definition</b>
Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
L <sub>dn</sub>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L <sub>eq</sub>	Equivalent or energy-averaged sound level.
L <sub>max</sub>	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	Sound exposure level.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Source: Bollard Acoustical Consultants, 2005.	

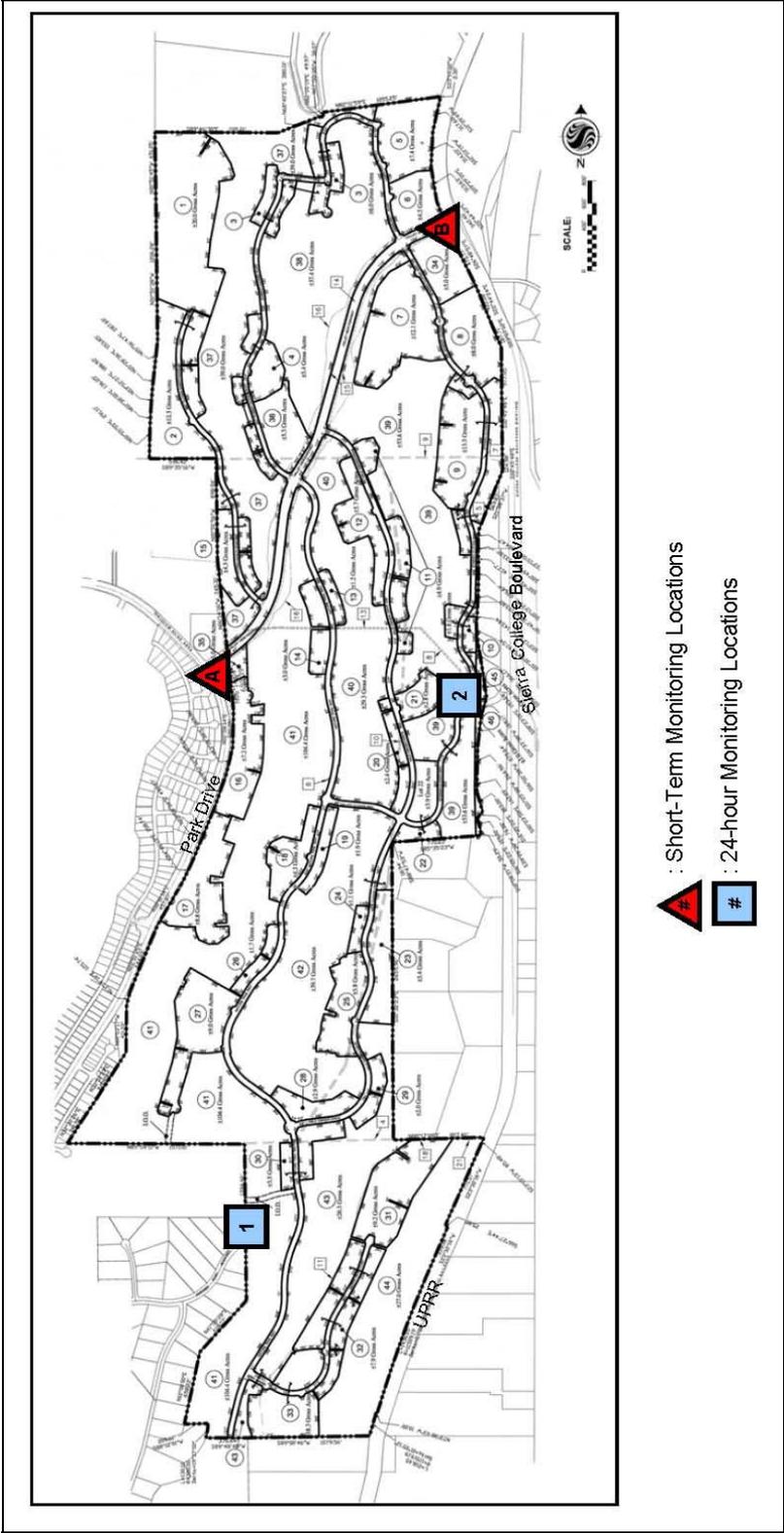
## **Existing Noise Environment in the Project Vicinity**

The project area is mostly isolated from major noise sources due mainly to the shielding of the valley by hills in all directions. As a result, existing ambient noise conditions within the project confines are subjectively considered to be fairly low. At the northeastern portion of the project area, noise from Sierra College Boulevard defines the ambient conditions, but that roadway is mostly shielded from view of the rest of the project site by intervening topography. Railroad operations on the Union Pacific Railroad tracks near the eastern site boundary are audible within the valley area where residential units are proposed, but railroad noise is considerably attenuated at those locations by the intervening hills.

To generally quantify ambient noise levels on the project site, continuous and short-term noise measurements were conducted on December 8, 2005 at locations identified in Figure 4.6-2. The detailed results of the continuous noise surveys are provided in tabular and graphical form in Appendices B and C of the Noise Analysis (see Appendix F of this Draft EIR). Those data indicate that existing ambient noise levels at the continuous monitoring locations ranged from 46 to 48 dB L<sub>dn</sub>. Noise levels in this range are considered very low.

At the short-term ambient noise measurement locations, daytime average noise levels ranged from 46 dB Leq near the water treatment facility off of Park Drive to 54 dB Leq at the location closest to Sierra College Boulevard. As with the continuous measurement results, these ambient noise levels are considered to be low, and this noise environment is well within acceptable limits for new residential development. Existing traffic noise levels adjacent to existing roadways in the project vicinity were calculated using the FHWA Highway Traffic Noise Prediction Model, a standard methodology that is used to calculate both existing and predicted future traffic noise levels. Input data for the model included traffic conditions (volumes, speed, truck proportions and day/night proportions) and distance to receptor. Table 4.6-2 shows traffic noise levels at 100 feet from road centerlines and the distance to the 60 and 65 dB L<sub>dn</sub> contours from road centerlines.

**Figure 4.6-2  
Noise Measurement Locations**



**Table 4.6-2  
 Existing Traffic Noise Levels**

			Distance (Ft.) to L <sub>dn</sub> Contours from centerline	
Roadway	Segment Description	L <sub>dn</sub> @ 100'	65 dB	60 dB
Sierra College Blvd.	Hwy 193 to English Colony Way	64.8	96	208
	English Colony Way to King Rd.	65.7	112	241
	King Rd. to Taylor Rd.	63.9	84	181
	Taylor Rd. to Granite Dr.	64.3	90	193
	Granite Dr. to Interstate 80	63.9	84	182
	South of Interstate 80	65.9	114	246
English Colony Wy.	East of Sierra College Blvd.	51.0	12	25
Park Dr.	North of Valley View Pkwy.	52.9	16	34
	South of Valley View Pkwy.	52.9	16	34
	East of Sunset Blvd.	65.5	108	232
King Rd.	East of Sierra College Blvd.	57.4	31	68
Del Mar Ave.	South of King Rd.	51.6	13 37	27 79
	North of Pacific St.	58.4		
Pacific St./Taylor Rd.	West of Sierra College Blvd.	63.9	85 84	183 182
	East of Sierra College Blvd.	63.9		

Source: Bollard Acoustical Consultants , Inc.

Railroad activities on the eastbound Union Pacific Railroad (UPRR) tracks which border a portion of the eastern project property line generate audible noise levels within the Clover Valley project area. The distance to the 60 dB L<sub>dn</sub> railroad noise contour is identified in the City of Rocklin General Plan Noise Element as being approximately 250 feet from the tracks in areas where warning horns are not used. This level is consistent with Bollard Acoustical railroad noise level data collected on these tracks in recent years. Because at-grade crossings are not proposed in the immediate project area, warning horns are not typically utilized in this area. Because the railroad tracks are considerably depressed in elevation relative to the proposed residential lots within the project confines, and substantially shielded from view by intervening topography, and because the nearest proposed residential property lines to the railroad tracks are over 350 feet away at the southern portion of the site, railroad noise levels at those proposed residential areas are predicted to be well below 60 dB L<sub>dn</sub>.

Proposed residential Small Lots 210 through 214 would be located closer to the railroad tracks, with property lines ranging between 130 and 230 feet from the tracks. The railroad tracks are depressed approximately 80 feet relative to these lots, and the cut of the ridgeline would provide additional shielding of railroad noise at these locations. Given this distance and shielding by intervening topography, as well as a reduction in railroad noise exposure due to the tunnel, railroad noise levels at these lots are predicted to be approximately 60 dB L<sub>dn</sub>.

**REGULATORY CONTEXT**

In order to limit population exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. The City of Rocklin General Plan Noise Element and CEQA provide regulations regarding noise levels for uses relevant to the proposed project. The following provides a general overview of the existing regulations established by the City and CEQA.

**Federal Regulations**

Table 4.6-3 is based upon recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, they are considered applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the Ldn.

<b>Table 4.6-3 Significance of Changes in Cumulative Noise Exposure</b>	
<b>Ambient Noise Level Without Project, Ldn</b>	<b>Increase Required for Significant Impact</b>
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: FICON recommendations provided by Bollard Acoustical Consultants, 2005.

The City of Rocklin as the lead agency for the project does not consider an increase in noise substantial unless noise levels are above the City standard of 60 dB or conditional standard of 65 dB. If noise levels are above the City’s standards, then the FICON criteria above apply. According to Table 4.6-3, an increase in traffic noise levels of 3 dB or more would be significant where the ambient level is between 60 and 65 dB, and 1.5 dB or more would be a significant increase where the ambient noise level exceeds 65 dB Ldn. The rationale for the Table 4.6-3 criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant annoyance.

**State**

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines in Appendix G, indicates that a significant noise impact may occur if a project exposes persons to noise levels in excess of local general plans or noise ordinance standards, or cause a substantial

permanent or temporary increase in ambient noise levels.

## Local

### City of Rocklin General Plan

The following include the existing policies, laws, and regulations established in the 1991 City of Rocklin General Plan, as applicable to the proposed project:

#### *Noise Element*

Goal	To protect residents from health hazards and annoyance associated with excessive noise levels.
Policy 1	To use adopted noise compatibility guidelines to evaluate compatibility of proposed new development.
Policy 2	To require noise analysis of proposed development projects as part of the environmental review process and to require mitigation measures that reduce noise impacts to acceptable levels.
Policy 3	To require noise buffering or insulation in new development along major streets and highways, and along railroad tracks.
Policy 4	To control noise sources in residential areas by restricting truck traffic to designated truck routes.
Policy 5	To monitor noise generating land uses to assure compliance with acceptable noise levels.
Policy 6	To encourage sound mitigation, including but not limited to sound walls, along existing highways where noise is determined to exceed adopted standards.

## **IMPACTS AND MITIGATION MEASURES**

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### **Standards of Significance**

Generally, a project may have a significant effect on the environment if it would substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

According to the 1991 General Plan, uses considered sensitive to noise include the following: single-family residences, apartment, mobile home parks, motels, schools, libraries, churches, hospitals, and nursing or convalescent homes. Moderately noise-sensitive uses include assembly or meeting halls, community centers, theaters, cemeteries, water areas, retail stores and service facilities, open space parkstrips, neighborhood parks, community parks, amphitheaters, and office buildings (p. 96).

For this analysis, noise impacts associated with the proposed projects would be considered potentially significant if they:

- Exceed the City of Rocklin General Plan Element standard of 45 dB L<sub>dn</sub> as the acceptable interior noise level;
- Exceed the City of Rocklin General Plan Element standard of 60 dB L<sub>dn</sub> as the acceptable exterior noise level; or, where it is not possible to reduce noise in outdoor activity areas to 60 dB L<sub>dn</sub>, or less, using a practical application of the best available noise reduction measures, exterior noise level of up to 65 dB L<sub>dn</sub> may be allowed provided that available exterior noise reduction measures have been implemented and interior noise levels are in compliance with the 45 dB L<sub>dn</sub> standard; or,
- Exceed the City of Rocklin General Plan Noise Element noise level criterion of 70 dB L<sub>dn</sub> for park uses exposed to transportation noise sources.

Additionally, CEQA Guidelines state that implementation of the project would result in significant noise impacts if the project would do any of the following:

- Expose persons to, or generate an excessive groundborne vibration or groundborne noise levels;
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or,
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

### **Method of Analysis**

The proposed project includes 33 large residential lots ranging in size from 1.1 to 20 acres to accommodate the development of 558 single-family small residential units. In addition, a 5.3-acre parcel is designated for a neighborhood park, and acre parcel is designated for neighborhood commercial uses. Noise impacts due to and upon the development of these uses are evaluated based on noise level measurements conducted by Bollard Acoustical Consultants and others for similar uses. Traffic noise levels are based on the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model and traffic data prepared by the project traffic engineer. The FHWA Model, approved by the FHWA and Caltrans, is the standard methodology for predicting traffic noise levels.

### **Project-Specific Impacts and Mitigation Measures**

#### **4.6I-1 Increase in traffic noise levels to existing noise-sensitive receptors such as residential uses.**

Table 4.6-4 shows existing roadway noise levels, existing plus project noise levels, and the change attributable to the proposed project in traffic noise levels along roadways. The reference distance is 100 feet from road centerlines.

The City of Rocklin as the lead agency for the project does not consider an increase in noise substantial unless noise levels are above the City standards. If noise levels are above City standards, then the FICON criteria in Table 4.6-3 apply. The City's threshold for outdoor activity areas is 60 dB, or 65 dB where it is not possible to reduce noise in outdoor activity areas to 60 dB or less. According to Table 4.6-3, where the ambient noise levels are 60 to 65 dB, any traffic noise level increase in excess of 3 dB may be considered significant; where the ambient noise level are above 65 dB, any traffic noise level increase in excess of 1.5 dB may be considered significant.

Noise-sensitive receptors along Park Drive include existing residential uses. Table 4.6-4 indicates that the existing noise-sensitive receptors located along Park Drive, both north and south of Valley View Parkway, would experience traffic noise level increases of 5.6 and 8.0 dB, respectively. However, because the residences located along Park Drive are shielded from that roadway by existing noise barriers, the predicted existing plus project traffic noise levels in the nearest backyards to that roadway would be approximately 5 dB lower than the 58.5 and 60.9 dB levels shown in Table 4.5-4 (approximately 53.5 dB on Park Drive north of Valley View Parkway and 55.9 dB on Park Drive south of Valley View Parkway). Therefore, although the noise would increase over 3 dB on these roadway segments, existing sensitive receptors along Park Drive would not experience noise exceeding the City's standards for outdoor activity areas at residential uses. Therefore, the development of the proposed project would have a *less-than-significant* impact on existing residences located adjacent to those segments of Park Drive.

Mitigation Measure(s)

*None required.*

**Table 4.6-4**  
**Existing and Project Traffic Noise Levels, dB<sup>1,2</sup>**  
 Day/Night Average Level (Ldn)

Roadway	Segment Description	Existing	Existing + Project	Change, dB
Sierra College Blvd.	Hwy 193 to English Colony Wy.	64.8	65.0	0.2
	English Colony Wy. To King Rd.	65.7	66.4	0.6
	King Rd. to Taylor Rd.	63.9	64.7	0.8
	Taylor Rd. to Granite Dr.	64.3	64.6	0.3
	Granite Dr. to Interstate 80	63.9	64.1	0.2
	South of Interstate 80	65.9	66.0	0.1
English Colony Wy.	East of Sierra College Blvd.	51.0	54.6	3.6
Park Dr.	North of Valley View Pkwy.	47.9	58.5	5.6
	South of Valley View Pkwy.	47.9	60.9	8.0
	East of Sunset Blvd.	65.5	65.5	0.0
King Rd.	East of Sierra College Blvd.	57.4	59.2	1.7
Del Mar Ave.	South of King Rd.	51.6	51.6	0.0
	North of Pacific St.	58.4	58.4	0.0
Pacific St./Taylor Rd.	West of Sierra College Blvd.	63.9	63.7	-0.2
	East of Sierra College Blvd.	63.9	63.8	-0.1
Valley View Parkway	Sierra College to Park Drive	N/A	60.0	N/A
Internal roadways	Major internal loop roadways	N/A	51.0	N/A

Notes:

1. Calculated at 100 feet from road centers.
  2. The noise levels reported in this table do not account for shielding by existing noise walls (where they exist). Where such shielding exists, noise levels in this table would be reduced by 5 dB or more.
- Source: Bollard Acoustical Consultants, Inc. Noise Analysis, December 2005.

**4.6I-2 Impacts of existing plus project traffic noise at proposed residences within the Clover Valley development.**

The only major roadways which currently abut the project area are Park Drive and Sierra College Boulevard. Following construction of the project, Valley View Parkway is anticipated to carry appreciable traffic volumes. Part of this traffic will be generated by project residences, and part will result from the connection between Sierra College Boulevard and the Whitney Oaks area. As a result, impacts associated with traffic on these three roadways are considered in this assessment.

As noted in Table 4.6-4, traffic noise generated by the project at Park Drive south of Valley View Parkway will be approximately 61 dB Ldn, and 66 dB Ldn adjacent to Sierra College Boulevard north and south of Valley View Parkway. Although this noise is generated off the project site, the noise data

gathered from existing adjacent roadways was used by Bollard Acoustical Consultants to determine on-site roadway noise that could occur on Valley View Parkway.

According to Table 4.6-4, traffic noise levels from Valley View Parkway and the major internal loop roadways are predicted to be 60 dB Ldn or less at a distance of 100 feet from the roadway centerlines.

At residences proposed adjacent to Park Drive and Sierra College Boulevard, 6-foot tall masonry noise walls have been proposed, as indicated on the project fencing plans. Given an existing plus project traffic noise exposure of 65 dB Ldn along Sierra College Boulevard, the proposed noise barriers would reduce outdoor activity area noise exposure to 60 dB Ldn or less at those locations. Given an existing plus project traffic noise exposure of 61 dB Ldn along Park Drive, the proposed noise barriers would reduce outdoor activity area noise exposure to approximately 56 dB Ldn or less at those locations.

Because existing plus project traffic noise levels are predicted to be 60 dB Ldn or less at the outdoor activity areas of the residences located adjacent to the major project vicinity roadways (with proposed noise barriers), this impact is considered *less-than-significant*.

Mitigation Measure(s)

*None required.*

**4.6I-3 Impacts of existing and future railroad noise on proposed residences within the development.**

Due to the substantial setbacks and shielding of the UPRR tracks from view of the proposed residential lots by intervening topography, railroad noise levels are predicted to be well below the City of Rocklin 60 dB Ldn noise level standard applied to new residential uses affected by transportation noise sources. Specifically, railroad noise levels are predicted to range from 50 to 60 dB Ldn at the nearest proposed residential areas to the railroad tracks. As a result, this impact is considered *less-than-significant*.

Mitigation Measure(s)

*None required.*

**4.6I-4 Impacts of noise generated by proposed neighborhood commercial use on proposed residences within the development.**

A 5-acre parcel located at the corner of Sierra College Boulevard and Valley View Parkway (Large Lot 34) is proposed for neighborhood commercial uses as part of the proposed project. Although the specific nature of the use(s) which would ultimately be developed on this property is not known at this

time, noise associated with commercial activities (on-site circulation, truck deliveries, mechanical equipment, etc.) poses the potential for exceedance of the City's noise standards at nearby residential lots. As a result, this impact is considered *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce impacts related to proposed commercial uses to a *less-than-significant* level.

4.6MM-4 *It should be noted that the development of this commercial property will require discretionary entitlement from the City which will trigger further CEQA review. Also, Section 17.08.080 of the City's Zoning Ordinance requires a six-foot solid masonry wall on the property line between residential and non-residential uses, and the City typically restricts the heights of residential dwelling units that are adjacent to or across the street from commercial uses. Nonetheless, prior to approval of the final map, a site-specific acoustical review of the proposed neighborhood commercial use(s) shall be conducted and submitted to the City Engineer to ensure adequate noise attenuation features are included in the project design to mitigate potential impacts at nearby residential uses. These project design features may include, but not be limited to the following:*

- *Site plan modifications reducing proximity of loading areas, trash areas, and truck routes to residential areas;*
- *Use of berms in landscaped areas adjacent to residential uses; and*
- *Use of sound walls.*

**4.6I-5 Temporary project construction noise impacts due to on-site construction and off-site sewer line extension construction.**

The on-site construction and installation phase of the proposed sewer-line extension would be expected to increase noise levels during construction hours. Construction activities that could generate potentially significant noise levels include use of engine-powered equipment, power tools, impact sounds, and vehicles. Blasting could also occur with project construction both for on-site construction and off-site sewer line construction.

Specifically, construction activities would involve machines powered by diesel engines capable of producing noise in excess of the standards defined in the City of Rocklin General Plan Noise Element<sup>2</sup>. The Element states that noise levels from 70-75 decibels (db) are "normally unacceptable" for

residential land use, and that noise levels reaching above 75 db are “clearly unacceptable.”

For the sewer line extension, residents on either side of the street (probably within several hundred feet of the construction activities) would be exposed to noise from construction activities, construction equipment, and trucks traveling to-and-from the site. For land used as a golf course such as the Sunset Whitney Country Club, noise levels are defined as “normally unacceptable” after 75 db, and “clearly unacceptable” after 80 db.

Option 2A of the proposed sewer-line extension would require the installation of a pump station south of Clover Valley Park. This pump (lift) station would have two submersible pumps to drive the wastewater into the new sewer line. The secondary pump would operate periodically only when necessary and, based on existing lift stations in use by SPMUD, would not be anticipated to create operational noise impacts to adjacent residences.

Construction activities related to installation of the new 12-inch off-site sewer line in the streets of Rawhide, Midas, Argonaut and Union would be expected to disrupt the daily routines of residents in the proximity. Development would include digging a large trench, lowering the sewer pipe, and ultimately repaving the street. Typically, this construction process would be performed in segments, such that throughout the duration of the project, trenching, pipe-laying, and backfill activities would occur only along one portion of the entire alignment at any given time. If impenetrable rock surfaces would be discovered below the street surface during excavation, blasting could become necessary to continue the process.

The anticipated duration of the construction activities, which includes the installation of 9,000 linear feet of sewer pipe, would be approximately 90 to 180 working days. Installation activities would likely occur in segments and from street-to-street; consequently, disruption to individual streets and their residences would be short-term or temporary. However, the general duration of construction is dependent on factors including the weather and unforeseen obstructions such as impenetrable rock layers. Additionally, although all construction activities must adhere to the City’s Construction Noise Guidelines, which restricts noise-generating activities within or near residential areas to between 7 a.m. and 7 p.m. on weekdays, and between 8 a.m. and 7 p.m. on weekends to the satisfaction of the City Engineer or Building Official. Midas and Argonaut are heavily traveled residential collector streets that may require different construction hour limitations. Additionally, if blasting is required at the project site as part of project construction, such activities could result in adverse noise impacts at existing residences. As a result, this impact is considered *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would mitigate related potential impacts to a *less-than-significant* level.

- 4.6MM-5(a) *The construction contractor shall ensure that construction activities shall be limited to the hours specified within the encroachment permit, typically 8:00 a.m. to 5:00 p.m. during normal business days. Because Midas and Argonaut are heavily traveled residential collector streets, the time restrictions may differ (i.e. 8:30 a.m. to 4:30 p.m.) as a condition of the encroachment permit.*
- 4.6MM-5(b) *If blasting activities are to occur in conjunction with the improvements, the contractor shall conduct the blasting activities in compliance with state and local regulations. The contractor shall obtain a blasting permit from the City of Rocklin prior to commencing any on-site blasting activities. The permit application shall include a description of the work to be accomplished and a statement of the necessity for blasting as opposed to other methods considered including avoidance of hard rock areas and safety measures to be implemented such as use of blast blankets. The contractor shall coordinate any blasting activities with police and fire departments to insure proper site access and traffic control, and public notification including the media, nearby residents, and businesses, as determined appropriate by the Rocklin Police Department. Blasting specifications and plans shall include a schedule that outlines the time frame in which blasting will occur in order to limit noise and traffic inconvenience.*

**4.6I-6 Impacts of noise generated by proposed neighborhood park on proposed residences within the development.**

A 5.3-acre parcel located on the north side of Valley View Parkway (Lot 36) is proposed for a neighborhood park. Although the specific plans for this park have not yet been developed, the park would most likely be used for active purposes and could include basketball courts, turf fields for soccer, baseball, softball, etc., picnic areas, and children's play areas.

Active recreational aspects of park uses can generate substantial noise levels. Depending on the proximity of such areas (if proposed within this park site), noise levels could exceed City of Rocklin exterior noise level limits at the adjacent residential property (Lot 4). As a result, this impact is considered *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce impacts associated with the proposed park to a *less-than-significant* level.

*4.6MM-6 Prior to approval of the final map, a site-specific acoustical review of the proposed neighborhood park shall be conducted and submitted to the City Engineer for approval to ensure adequate noise attenuation features are included in the project design to mitigate potential impacts at nearby residential uses.*

**Cumulative Impacts and Mitigation Measures**

**4.6I-7 Cumulative increase in traffic noise levels.**

Table 4.6-5 shows cumulative roadway noise levels with and without the project, and the change in traffic noise levels along roadways attributable to the proposed project in combination with General Plan buildout. The reference distance is 100 feet from road centerlines.

The City of Rocklin considers noise increases significant only if they cause the City's noise standards to be exceeded or if the City's noise standards are already exceeded. The City's threshold for outdoor activity areas is 60 dB, or 65 dB where it is not possible to reduce noise in outdoor activity areas to 60 dB or less. According to Table 4.6-3, where the ambient noise levels are 60 to 65 dB, any traffic noise level increase in excess of 3 dB may be considered significant; where the ambient noise level are above 65 dB, any traffic noise level increase in excess of 1.5 dB may be considered significant.

Table 4.6-5 shows that the project roadway segments that will experience noise level increases above 3 dB are along Park Drive north and south of Valley View Parkway. Because the residences located along those segments of Park Drive are shielded from that roadway by existing noise barriers, the predicted cumulative plus project traffic noise levels in the nearest backyards to that roadway will be approximately 5 dB lower than those shown by in Table 4.6-5. As a result, the existing plus project traffic noise levels would be less than the City's 60 dB ldn exterior noise level standard (approximately 58.2 dB north of Valley View Parkway and 56.5 dB south of Valley View Parkway), so the project related increase would not be considered significant.

Although Table 4.6-5 indicates that the increase in traffic noise levels at existing noise sensitive land uses located along Park Drive will exceed 3 dB along Park Drive north and south of Valley View Parkway, the noise levels on these roadway segments would not be in excess of the City's noise threshold for outdoor activity areas at residential uses. Therefore, the development of the proposed project in combination with General Plan buildout would have a

*less-than-significant* impact on existing residences located adjacent to Park Drive.

Mitigation Measure(s)

*None required.*

<b>Table 4.6-5 Cumulative Traffic Noise Levels</b>					
Roadway	Segment Description	Day/Night Average Level, dB <sup>1,2</sup>			
		2025 GP No Project	2025 GP Plus Project	ΔdB	ΔdB
Sierra College Blvd.	Hwy 193 to English Colony Way	67.9	68.0	0.1	0.1
	English Colony Way to King Rd.	69.4	69.9	0.5	0.5
	King Rd. to Taylor Rd.	67.0	67.2	0.2	0.3
	Taylor Rd. to Granite Dr.	66.9	66.8	0.0	0.1
	Granite Dr. to Interstate 80	66.8	66.8	-0.1	0.0
	South of Interstate 80	69.1	69.1	0.0	0.0
English Colony Way	East of Sierra College Blvd.	60.1	61.1	1.0	1.2
Park Dr.	North of Valley View Parkway	56.8	63.2	6.1	6.5
	South of Valley View Parkway	56.8	61.5	4.6	5.0
	East of Sunset Blvd.	65.3	65.6	0.3	0.4
King Rd.	East of Sierra College Blvd.	59.9	61.5	1.5	1.3
Del Mar Ave.	South of King Rd.	58.0	55.8	-2.2	-3.1
	North of Pacific St.	61.9	61.8	-0.1	-0.1
Pacific St./Taylor Rd.	West of Sierra College Blvd.	66.8	66.4	-0.3	-0.4
	East of Sierra College Blvd..	65.7	65.6	-0.1	-0.1
Notes:					
1. Calculated at 100 feet from the road center.					
2. The noise levels reported in this table do not account for shielding by existing noise walls (where they exist). Where such shielding exists, noise levels in this table would be reduced by 5 dB or more.					
Source: Bollard Acoustical Consultants, Inc. Noise Report, 2005.					

**4.6I-8 Impacts of cumulative plus project traffic noise at proposed residences within the Clover Valley development.**

As noted in Table 4.6-5, traffic noise from Park Drive will be approximately 62 dB Ldn south of Valley View Parkway, and 70 dB Ldn adjacent to Sierra College boulevard north and south of Valley View Parkway.

According to Table 4.6-4, traffic noise levels from Valley View Parkway and the major internal loop roadways are predicted to be 60 dB Ldn or less at a distance of 100 feet from the roadway centerlines.

At residences proposed adjacent to Park Drive and Sierra College Boulevard, 6-foot tall masonry noise walls have been proposed, as indicated on the project fencing plans. Given a cumulative plus project traffic noise exposure of 70 dB Ldn along Sierra College Boulevard, the proposed 6-foot tall noise barriers would be insufficient to reduce outdoor activity area noise exposure to 60 dB Ldn or less at those locations, despite the advantage of being elevated relative to Sierra College Boulevard.

Given a cumulative plus project traffic noise exposure of 62 dB Ldn along Park Drive, the proposed noise barriers would reduce outdoor activity area noise exposure to approximately 57 dB Ldn or less at those locations. Because cumulative plus project traffic noise levels are predicted to exceed 60 dB Ldn at the outdoor activity areas of the residences located adjacent to Sierra College Boulevard even with proposed 6-foot tall barriers, this impact is considered *potentially significant*.

#### Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to cumulative plus project noise impacts to residences within the project site to a *less-than-significant* level.

4.6MM-8(a) *Prior to approval of the final map, the map shall indicate the following:*

- *The proposed 6-foot tall barriers along Sierra College Boulevard extending from lots 137 to 115 shall be increased in height to 8 feet, relative to backyard elevation.*
- *The proposed fences located along lots 191 to 208 shall be replaced with 8-foot tall solid noise barriers, relative to backyard elevation.*
- *The proposed fences located along lots 209-214 shall be replaced with 6-foot tall solid noise barriers, relative to backyard elevation.*

#### **Endnotes**

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<sup>1</sup> Bollard Acoustical Consultants, Inc. *Noise Analysis*. December 2005.

<sup>2</sup> City of Rocklin General Plan, 1990 (p. 90).