

City of American Canyon
Community Development Department



Oat Hill Multi-Family Project
Initial Study/Mitigated Negative Declaration

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Prepared by



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Appendices

Appendix A – Air Quality and Greenhouse Gas Emissions – CalEEMod Results

Appendix B – Biological Resources Technical Report

Appendix C – Soil Investigation

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Appendix E – Phase I Environmental Site Assessment for Parcel B

Appendix F – Environmental Noise Assessment

Appendix G – Traffic Impact Study (2020)

Appendix H – Traffic Impact Study (2021)

XI. LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

a. **Parcel A and Parcel B**

A project risks dividing an established community if the project introduces infrastructure, alters land use conditions in the surrounding community, or isolates an existing land use. Currently, the project site is undeveloped and consists of vacant land with ruderal vegetation and limited trees. Surrounding development in the project vicinity includes industrial businesses, such as RLM Enterprises, and a recreational vehicle (RV) park to the north, an office building to the northwest, Napa Junction Magnet Elementary School to the northeast, single-family residences, a Baptist Church, and American Canyon City Hall to the east, and undeveloped land to the south and west. The proposed residences would be compatible with the existing development in the project area. The proposed project involves construction on a vacant site. Therefore, the project would not divide an established community. In fact, the proposed Napa Junction Road extension would improve connectivity between the proposed residences and surrounding uses in the project area, which include schools, parks, and commercial uses. As such, the proposed project would not physically divide an established community and a *less-than-significant* impact would occur.

b. **Parcel A**

According to the City’s General Plan, Parcel A is designated as I:CS and zoned LI:CS. The proposed project includes a request for a General Plan Amendment from I:CS to RH-1, as well as a rezone from LI:CS to RH-1. Upon approval of both entitlements, the proposed project would develop 206 multi-family residential units on Parcel A, and the current designations would be amended to reflect the characteristics of the proposed project. Although the City has not anticipated residential uses on the project site, the proposed project would not conflict with City policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. For example, because the project would introduce new residents and increase the demand for recreational facilities, the project applicant would be required to pay the City’s parks and recreation impact fees or donate parkland and/or improvements to the City. In addition, in compliance with the Section 18.40.100 of the City’s Municipal Code, the proposed project would be required to include replacement trees for any that are removed within Parcel A. Implementation of the mitigation measures included within this IS/MND would ensure all environmental impacts of the proposed project have been reduced to a less-than-significant level.

Parcel B

According to the City’s General Plan, Parcel B is designated as RE and zoned RE. The proposed project includes a request for a General Plan Amendment from RE to RM, as well as a rezone from RE to RM. Upon approval of both entitlements, the proposed project would develop 85 multi-family residential units on Parcel B. Similar to the discussion above for Parcel A, the current designations would be amended to reflect the characteristics of the proposed project. In addition, although the City has not anticipated residential uses on the project site, the proposed project

would not conflict with City policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. For example, because the project would introduce new residents and increase the demand for recreational facilities, the project applicant would be required to pay the City's parks and recreation impact fees or donate parkland and/or improvements to the City. Tree removal associated with the extension of Napa Junction Road would similarly require compliance with Section 18.40.110 of the City's Municipal Code. Therefore, implementation of the mitigation measures included within this IS/MND would ensure all environmental impacts of the proposed project have been reduced to a less-than-significant level.

Conclusion

Implementation of the mitigation measures included within this IS/MND would ensure all potential environmental impacts associated with development within Parcel A and Parcel B have been reduced to a less-than-significant level. Based on the above, the proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and thus, a ***less-than-significant*** impact would occur.

XIII. NOISE. Would the project result in:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The following discussion is based primarily on an Environmental Noise Assessment prepared for the proposed project by Saxelby Acoustics (see Appendix F).²⁵ The Environmental Noise Assessment included consideration of development of both Parcel A and Parcel B.

- a. The following sections present information regarding sensitive noise receptors in proximity to the project site, the existing noise environment, and the potential for the proposed project to result in impacts during project construction and operation. The following terms are referenced in the sections below:
- Decibel (dB): A unit of sound energy intensity. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.
 - Average, or equivalent, sound level (L_{eq}): The L_{eq} corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour).
 - Day-Night Average Level (L_{dn}): The average sound level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours.

Sensitive Noise Receptors

Some land uses are considered more sensitive to noise than others, and, thus, are referred to as sensitive noise receptors. Land uses often associated with sensitive noise receptors generally include residences, schools, libraries, hospitals and passive recreational areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

²⁵ Saxelby Acoustics. *Environmental Noise Assessment, Oat Hill Apartments, City of American Canyon, California*. September 10, 2020.

In the vicinity of the project site, sensitive land uses include Napa Junction Magnet Elementary School to the northeast and single-family residences and a Baptist Church to the east.

Existing Noise Environment

The existing noise environment in the project area is primarily defined by traffic on SR 29. Other noise sources include airplane flyovers to and from the Napa County Airport, transportation noise from the Union Pacific Railroad line to the north of the project site and operational noise originating from a lumber processing facility to the southwest.

To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted two continuous noise level measurements in the vicinity of the project site. Noise measurement locations are shown in Figure 18, and a summary of the noise level measurement survey results is provided in Table 16.

Table 16 Summary of Existing Background Noise Measurement Data								
Site	Date	L _{dn}	Average Measured Hourly Noise Levels (dBA)					
			Daytime (7 AM to 10 PM)			Nighttime (10 PM to 7 AM)		
			L _{eq}	L ₅₀	L _{max}	L _{eq}	L ₅₀	L _{max}
LT-1	08/05/20 – 08/06/20	55	51	49	64	48	46	60
LT-2	08/05/20 – 08/06/20	55	49	47	66	48	46	61

Source: Saxelby Acoustics, 2020.

Standards of Significance

The City of American Canyon establishes an exterior noise level criterion of 65 dB L_{dn} or less within outdoor activity areas of residential land uses. Additionally, the City requires that cumulative noise exposure from exterior noise sources within noise-sensitive dwellings not exceed 45 dB L_{dn}.

The American Canyon Municipal Code establishes maximum noise limits for construction activities. Specifically, Section 8.12.080 limits construction noise at residential receptors to a maximum of 75 dBA between the hours of 7:00 AM and 7:00 PM and 60 dBA between 7:00 PM and 7:00 AM every day of the week.

Impact Analysis

The following sections provide an analysis of potential noise impacts associated with construction and operation of the proposed project.

Construction Noise – Parcel A and Parcel B

During construction of the proposed project, heavy-duty equipment would be used for demolition, grading, excavation, paving, and building construction, which would result in temporary noise level increases. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the project site would vary depending on proximity of construction activities to that point. Standard construction equipment, such as backhoes, dozers, and dump trucks would be used on-site.

Figure 18
Noise Measurement Locations



Table 17 shows predicted construction noise levels for development of the proposed project. Based on the table, typical construction activities would generate maximum noise levels up to 90 dB at a distance of 50 feet. Construction activities would be temporary and occur during normal daytime hours.

Table 17 Construction Equipment Noise	
Type of Equipment	Maximum Level, dB at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85
<i>Source: Federal Highway Administration, Roadway Construction Noise Model User's Guide, January 2006.</i>	

Noise would also be generated during the construction phase by increased truck traffic on area roadways, including truck traffic associated with heavy material and equipment transport to and from the construction site. Noise increases from truck traffic related to the material movement would be short duration, and likely occur during daytime hours.

The City of American Canyon establishes maximum noise limits for construction activities of 75 dBA between the hours of 7:00 AM and 7:00 PM and 60 dBA between 7:00 PM and 7:00 AM. The nearest residential uses are located approximately 320 feet to the east, as measured from the center of Parcel B. At 320 feet, the maximum construction noise levels would range 60 dBA to 74 dBA L_{max} in the backyards of the nearest residential uses. Construction in Parcel A is farther from the nearest sensitive receptor, and, thus, the Parcel A construction noise experienced by the nearest receptor would be less intense than the noise experienced from Parcel B development. Therefore, noise generated from on-site construction would not significantly impact noise levels in the surrounding environment.

In addition to construction activities within the on-site parcels, off-site improvements would include the Napa Junction Road extension. Construction of the Napa Junction Road extension would occur over a much shorter time and subject to the same maximum noise limits than the residential development. Although off-site improvements would take place near Napa Junction Elementary School, the school is in the process of being relocated due to concerns regarding seismicity in the project region. However, construction of the roadway extension would take place approximately 80 feet north of the nearest residential building. At 80 feet from the nearest sensitive receptor, the maximum construction noise levels associated with the roadway extension may exceed the City's 75 dBA noise limit. Therefore, mitigation would be required to ensure that roadway extension construction activities would not adversely affect noise levels in the surrounding environment.

Although construction activities are temporary in nature and would likely occur during normal daytime working hours, on-site and off-site construction-related noise may disturb sleep at existing noise-sensitive land uses in the vicinity of the project if construction activities were to occur outside the normal daytime hours. Therefore, substantial temporary or permanent ambient noise level impacts in the vicinity of the project that exceed general plan or noise ordinance standards could be considered significant.

Project Operational Noise – Parcel A and Parcel B

The proposed project would primarily generate traffic noise on nearby roadways. Transportation related noise within the project area and at sensitive receptors is discussed in further detail below.

Traffic Noise Increases

As further discussed in Section XVII. Transportation/Traffic, of this IS/MND, the proposed project would increase vehicle trips and noise on local roadways. For the purposes of this analysis, where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a 5.0 dB L_{dn} increase in roadway noise levels would be considered significant. Table 18 summarizes the modeled traffic noise levels at the nearest sensitive receptors along each roadway segment in the project vicinity.

Table 18 Predicted Traffic Noise Level and Traffic Noise Level Increases							
Roadway	Segment	Predicted Exterior Noise Level					
		Existing No Project	Existing Plus Project	Change	Future No Project	Future Plus Project	Change
Napa Junction Road	West of Theresa Avenue	47.3	52.2	4.9	47.8	52.4	4.6
Theresa Avenue	South of Napa Junction Road	60.2	60.5	0.3	60.7	61.0	0.3
Napa Junction Road	East of Theresa Avenue	60.6	61.1	0.5	61.1	61.6	0.4
Theresa Avenue	North of Eucalyptus Drive	62.5	62.8	0.3	63.1	63.4	0.3
<p>Note: All noise levels are predicted at closest sensitive receptors in terms of dBA, L_{dn}.</p> <p>Source: Saxelby Acoustics, 2020</p>							

As shown in Table 18, the maximum traffic noise increase would be approximately 4.9 dB along Napa Junction Road on the segment west of Theresa Avenue. Considering the proposed project would not increase traffic noise by 5.0 dB, the proposed project would not substantially increase traffic noise in the project vicinity.

Traffic Noise at New Sensitive Receptors

Recent rulings by the California Supreme Court have clarified that environmental analyses prepared under CEQA are intended to analyze a project’s impact on the environment, rather than the potential impact of the environment on the project. In the case of the proposed project,

potential impacts related to future traffic noise on new sensitive receptors within the project site, such as the proposed residences, would be an example of impacts of the environment on the project. Consequently, impacts of noise on future on-site receptors would not typically be considered a required topic of analysis under CEQA. Nevertheless, the City has elected to prepare an analysis of potential noise-related impacts on future residences within the project site to ensure that the proposed project complies with all City regulations intended to protect the health and welfare of the citizens of American Canyon.

As shown in Figure 19, the proposed project would be exposed to transportation noise levels of up to 56 dB at the outdoor activity area within Parcel B and 50 dB at the outdoor activity area within Parcel A. Therefore, new sensitive receptors would not be exposed to noise levels above the City of American Canyon General Plan standard of 65 dB for outdoor activity areas.

The City of American Canyon General Plan requires that interior noise levels of new residential units be 45 dB or less. Standard residential construction practices typically reduce interior noise 25 dB below the exterior noise. The proposed residences would be exposed to noise levels up to 57 dB within Parcel B and 55 dB within Parcel A. Based on a 25 dB reduction, the interior noise level would be approximately 22 dB within Parcel B and 20 dB within Parcel A. Therefore, interior traffic noise levels would be considered less than significant.

Conclusion

Based on the above, operation of the proposed project would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City's General Plan and the Municipal Code. However, considering temporary construction noise levels in the project area exceed general plan or noise ordinance, or applicable standards of other agencies standards, a **potentially significant** impact could occur.

Mitigation Measure(s)

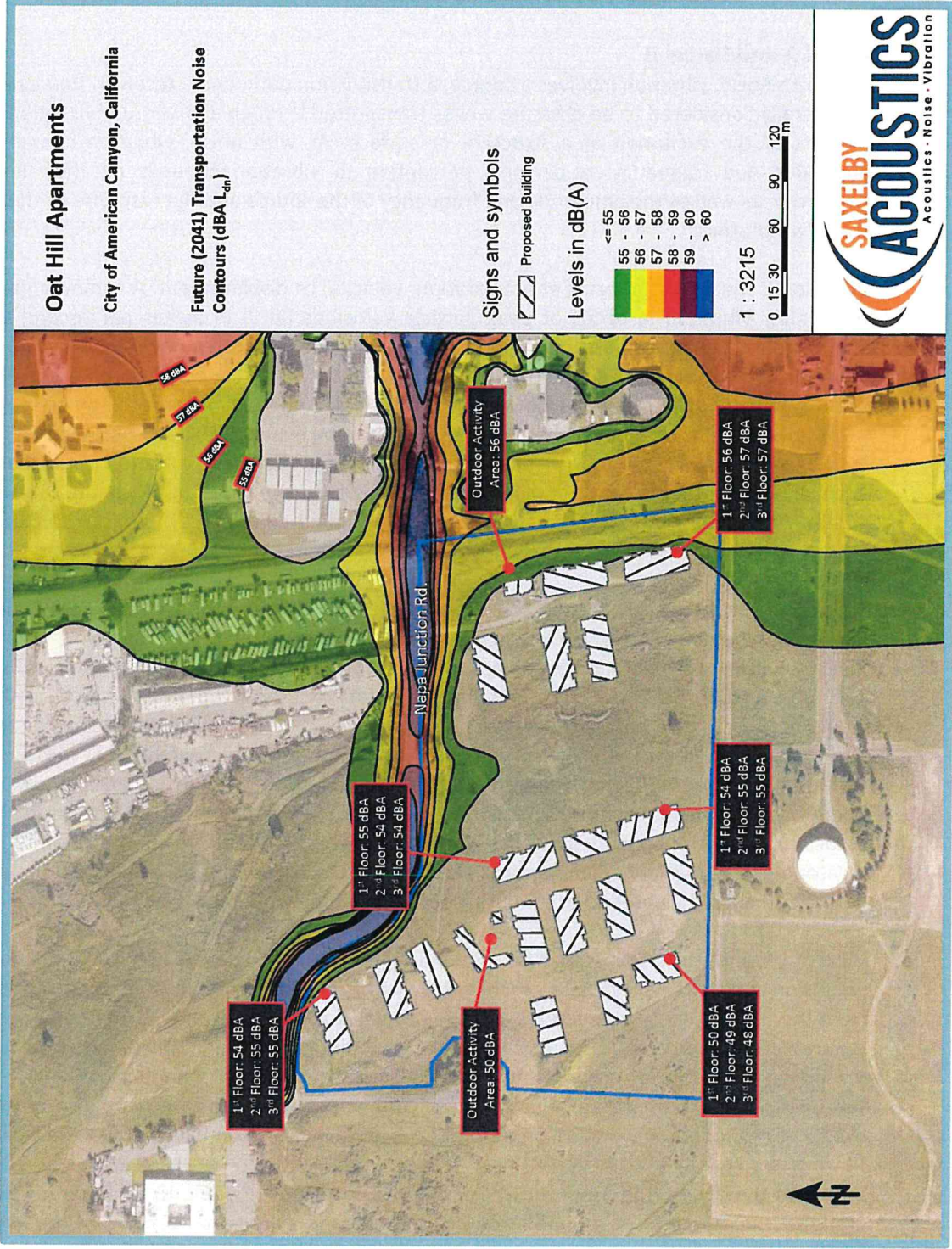
Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Parcel A and Parcel B

XIII-1. *Prior to the approval of grading permits, the City shall establish the following related to the use of construction equipment:*

- *Construction activities (excluding activities that would result in a safety concern to the public or constructions workers) shall be limited to between the daytime hours of 7:00 AM and 7:00 PM daily; Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers recommendations*
- *Equipment engine shrouds shall be closed during equipment operation;*
- *When not in use, motorized construction equipment shall not be left idling for more than five minutes; and*
- *Stationary equipment (power generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses or sufficiently shielded to reduce noise-related impacts.*

Figure 19
 Future Traffic Noise Contours



Construction noise BMPs shall be included in the grading plans and project improvement plans submitted by the applicant for review and approval by the Community Development Department.

b. **Parcel A and Parcel B**

Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to vibration depends on their individual sensitivity, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 19, which was developed by the California Department of Transportation (Caltrans), shows the vibration levels that would normally be required to result in damage to structures. As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and paving occur. Table 20 shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. Use of vibratory compactors/rollers could be required during construction of the proposed project. The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration. Although noise and vibration associated with the construction phases of the project would add to the noise and vibration environment in the immediate project vicinity, construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

Vibratory compactors/rollers may be used during on-site parking areas and Napa Junction Road extension construction. However, such activity would occur more than 26 feet north and south from the nearest existing structures and the proposed roadway alignment. A 26 foot or greater separation between existing structures and the groundborne vibration source, would be less than 0.2 in/sec PPV, and, thus, would not cause physical damage to structures or annoy nearby sensitive receptors. Therefore, the proposed project would not expose people to or generate excessive groundborne vibration or groundborne noise levels, and no impact would occur.

Based on the above, the proposed project would not expose people to or generate excessive groundborne vibration or groundborne noise levels and a ***less-than-significant*** impact would occur.

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 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. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)
Large Bulldozer	0.089	0.031
Loaded Trucks	0.076	0.027
Small Bulldozer	0.003	0.001
Auger/Drill Rigs	0.089	0.031
Jackhammer	0.035	0.012
Vibratory Hammer	0.070	0.025
Vibratory Compactor/roller	0.210 (less than 0.20 at 26 feet)	0.074

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.

c. **Parcel A and Parcel B**

The nearest airport to the site is the Napa County Airport, located approximately 1.75 miles north of the site. The site is included in the Napa County Airport Land Use Compatibility Plan. As shown in Figure 20, the project is located approximately 1.4 miles outside of the estimated 55 dB CNEL noise contour. In addition, according to Table 2-1 of the Napa County Airport Land Use Compatibility Plan, multi-family residential land uses exposed to noise levels less than 55 dB CNEL are "Clearly Acceptable." Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with airports. Thus, *less-than-significant* impact would occur.

Figure 20
Airport Noise Contours

