This section includes a summary of applicable regulations, a description of ambient noise conditions, and an analysis of potential noise impacts of the proposed project. Mitigation measures are recommended, as necessary, to reduce significant noise impacts. This section is based on a noise analysis prepared by Ambient Air Quality & Noise Consulting in February 2009, which is included in **Appendix F** of this DEIR.

3.11.1 ENVIRONMENTAL SETTING

ACOUSTIC FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency.

Amplitude

Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

Frequency

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (Ambient 2009b). Common community noise sources and associated noise levels, in dBA, are depicted in **Table 3.11-1**.

Addition of Decibels

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces a sound level of 70 dB when it passes an observer, two cars passing

simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Characteristics of Sound Propagation and Attenuation

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level decreases (attenuates) at a rate of approximately 6 decibels for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and, hence, can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 decibels for each doubling of distance from a line source, depending on ground surface characteristics. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation for soft surfaces results in an overall attenuation rate of 4.5 decibels per doubling of distance from the source.

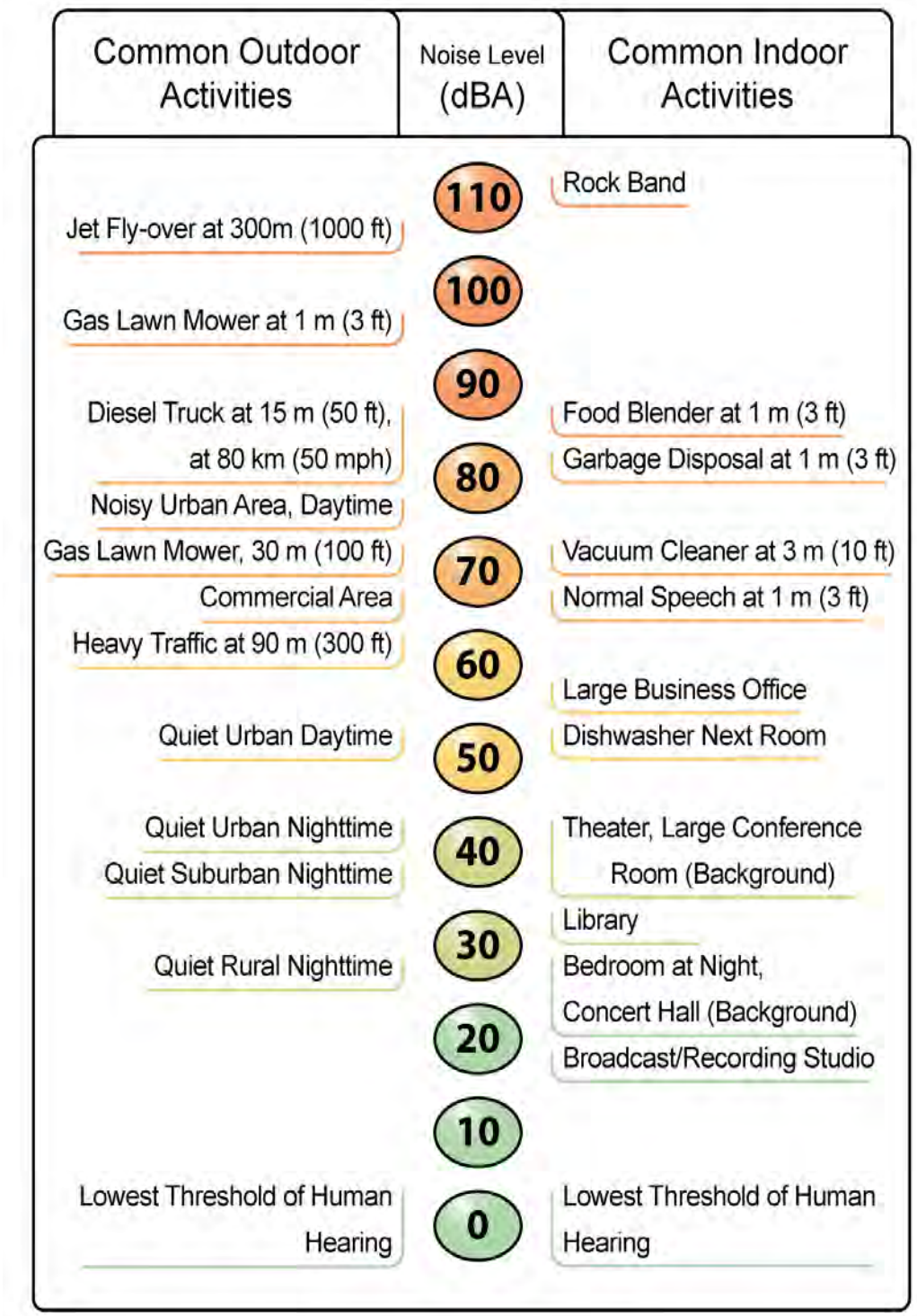
Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect traffic noise levels.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in minimum 5 dB of noise reduction. Taller barriers provide increased noise reduction.

TABLE 3.11-1
COMMON NOISE LEVELS NOISE DESCRIPTORS



The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound-pressure level in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies, which is referred to as the A-weighted sound level (expressed in units of dBA). The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. People's judgments of the relative loudness or annoyance of a sound correlates well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with environmental noise.

The intensity of environmental noise fluctuates over time, and several descriptors of time-averaged noise levels are typically used. For the evaluation of environmental noise, the most commonly used descriptors are L_{eq}, L_{dn}, CNEL, and SEL. The energy-equivalent noise level, L_{eq}, is a measure of the average energy content (intensity) of noise over any given period. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level, L_{dn}, is the 24-hour average of the noise intensity, with a 10-dBA "penalty" added for nighttime noise (10 P.M. to 7 A.M.) to account for the greater sensitivity to noise during this period. CNEL, the community equivalent noise level, is similar to L_{dn} but adds an additional 5-dBA penalty for evening noise (7 P.M. to 10 P.M.). Another descriptor that is commonly discussed is the single-event noise exposure level, also referred to as the sound-exposure level, expressed as SEL. The SEL describes a receiver's cumulative noise exposure from a single noise event, which is defined as an acoustical event of short duration (0.5 second), such as a backup beeper, the sound of an airplane traveling overhead, or a train whistle. Common noise level descriptors are summarized below:

Energy Equivalent Noise Level (Leq) – The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.

Minimum Noise Level (L_{min}) – The minimum instantaneous noise level during a specific period of time.

Maximum Noise Level (L_{max}) –The maximum instantaneous noise level during a specific period of time.

Day-Night Average Noise Level (DNL or L_{dn}) –The DNL was first recommended by the EPA in 1974 as a "simple, uniform and appropriate way" of measuring long-term environmental noise. DNL takes into account both the frequency of occurrence and the duration of all noise events during a 24-hour period, with a 10 dBA "penalty" for noise events that occur between the more noise-sensitive hours of 10:00 P.M. and 7:00 A.M. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.

Community Noise Equivalent Level (CNEL) – The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 P.M. to 10:00 P.M. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated L_{dn}.

Single Event Level (SEL) – The level of sound accumulated over a given time interval or event. Technically, the sound exposure level is the level of the time-integrated mean square A-weighted sound for a stated time interval or event, with a reference time of one second.

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.

- A change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial.

- A 10 dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

A limitation of using a single noise-level increase value to evaluate noise impacts, as discussed above, is that it fails to account for pre-project noise conditions. With this in mind, the Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level. The FICON recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL, L_{dn}). FICON-recommended noise evaluation criteria are summarized in **Table 3.11-2**.

TABLE 3.11-2
FEDERAL INTERAGENCY COMMITTEE ON NOISE
RECOMMENDED CRITERIA FOR EVALUATION OF INCREASES IN AMBIENT NOISE LEVELS

AMBIENT NOISE LEVEL WITHOUT PROJECT	INCREASE REQUIRED FOR SIGNIFICANT IMPACT
< 60 dB	5.0 dB, or greater
60–65 dB	3.0 dB, or greater
> 65 dB	1.5 dB, or greater

Source: Ambient 2009b

As depicted in **Table 3.11-2**, an increase in the traffic noise level of 5.0, or greater, would typically be considered to result in increased levels of annoyance where existing ambient noise levels are less than 60 dB. Within areas where the ambient noise level ranges from 60 to 65 dB, increased levels of annoyance would be anticipated at increases of 3 dB, or greater. Increases of 1.5 dB, or greater, could result in increased levels of annoyance in areas where the ambient noise level exceeds 65 dB. The rationale for the FICON-recommended criteria is that as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant increases in annoyance.

Effects of Noise on Human Activities

The extent to which environmental noise is deemed to result in increased levels of annoyance, activity interference, and sleep disruption varies greatly from individual to individual depending on various factors, including the loudness or suddenness of the noise, the information value of the noise (e.g., aircraft overflights, child crying, fire alarm), and an individual's sleep state and sleep habits. Over time, adaptation to noise events and

increased levels of noise may also occur. In terms of land use compatibility, environmental noise is often evaluated in terms of the potential for noise events to result in increased levels of annoyance, sleep disruption, or interference with speech communication, activities, and learning.

Speech Communication

For most noise-sensitive land uses, an interior noise level of 45 dBA L_{eq} is typically identified for the protection of speech communication in order to provide for 100 percent intelligibility of speech sounds. Assuming an average 20 dB reduction in sound level between outdoors and indoors (which is an average amount of sound attenuation that assumes windows are closed), this interior noise level equates to an exterior noise level of 65 dBA L_{eq}. For outdoor voice communication, an exterior noise level of 60 dBA L_{eq} allows normal conversation at distances up to 2 meters with 95 percent sentence intelligibility (Ambient 2009b). Based on this information, speech interference begins to become a problem when steady noise levels reach approximately 60 to 65 dBA.

Learning

Closely related to speech interference are the effects of noise on learning and, more broadly, on cognitive tasks. Recent studies have shown a strong relationship between noise and children's reading ability. Children's attention spans also appear to be adversely affected by noise. Adults are affected as well. Some studies indicate that, in a noisy environment, adults have increased difficulty accomplishing complex tasks. One of the issues associated with assessment of these effects is which noise metric correlates most closely with the impacts. For example, DNL, with its nighttime weighting, may not be the best measure of noise impacts on schools given that operational activities are often limited to the daytime hours.

As discussed above, an interior noise level of 45 dBA L_{eq} would typically provide for 100 percent speech intelligibility. The acceptability of interior noise levels are also source dependent, depending on the perceived intrusiveness of the source. For instance, traffic noise is generally considered to be less intrusive than noise generated by construction activities. With regard to transportation sources, the California Department of Transportation has adopted abatement criteria that limit the maximum interior average-hourly noise level within classrooms, as well as other noise-sensitive interior uses, to 52 dBA L_{eq}.

Annoyance and Sleep Disruption

With regard to potential increases in annoyance, activity interference, and sleep disruption, land use compatibility determinations are typically based on the use of the cumulative noise exposure metrics (i.e., CNEL or L_{dn}). Perhaps the most comprehensive and widely accepted evaluation of the relationship between noise exposure and the extent of annoyance was one originally developed by Theodore J. Schultz in 1978. Schultz's research findings provided support for L_{dn} as the descriptor for environmental noise.

Research conducted by Schultz identified a correlation between the cumulative noise exposure metric and individuals who were highly annoyed by transportation noise. The Schultz curve, expressing this correlation, became a basis for noise standards. When expressed graphically, this relationship is typically referred to as the Schultz curve. The Schultz curve indicates that approximately 13 percent of the population is highly annoyed at a noise level of 65 dBA L_{dn}. It also indicates that the percentage of people describing themselves as being highly annoyed accelerates smoothly between 55 and 70 dBA L_{dn}. A noise level of 65 dBA L_{dn} is a commonly referenced dividing point between lower and higher rates of people describing themselves as being highly annoyed.

The Schultz curve and associated research became the basis for many of the noise criteria subsequently established for federal, state, and local entities. Most federal and California regulations and policies related to transportation noise sources establish a noise level of 65 dBA CNEL/L_{dn} as the basic limit of acceptable noise exposure for residential and other noise-sensitive land uses. For instance, with respect to aircraft noise, both the Federal Aviation Administration (FAA) and the State of California have identified a noise level of 65 dBA L_{dn} as the dividing point between normally compatible and normally incompatible residential land use generally applied for determination of land use compatibility. For noise-sensitive land uses exposed to aircraft noise, noise levels in excess of 65 dBA CNEL/L_{dn} are typically considered to result in a potentially significant increase in levels of annoyance.

Allowing for an average exterior-to-interior noise reduction of 20 dB, an exterior noise level of 65 dBA CNEL/Ldn would equate to an interior noise level of 45 dBA CNEL/L_{dn}. An interior noise level of 45 dB CNEL/L_{dn} is generally considered sufficient to protect against activity interference at most noise-sensitive land uses, including residential dwellings, and would also be sufficient to protect against sleep interference (EPA 1974.) In California, the California Building Code establishes a noise level of 45 dBA CNEL as the maximum acceptable interior noise level for residential uses (other than detached single-family dwellings). Use of the 45 dBA CNEL/L_{dn} threshold is further supported by recommendations provided in the State of California Office of Planning and Research's *General Plan Guidelines* (2003), which recommend an interior noise level of 45 dB CNEL/L_{dn} as the maximum allowable interior noise level sufficient to permit "normal residential activity."

The cumulative noise exposure metric is currently the only noise metric for which there is a substantial body of research data and regulatory guidance defining the relationship between noise exposure, people's reactions, and land use compatibility. However, when evaluating environmental noise impacts involving intermittent noise events, such as aircraft overflights and train passbys, the use of cumulative noise metrics may not provide a thorough understanding of the resultant impact. The general public often finds it difficult to understand the relationship between intermittent noise events and cumulative noise exposure metrics. In such instances, supplemental use of single-event noise metrics, such as the SEL descriptor, may be helpful as a means of increasing public understanding regarding the relationship between these metrics and the extent of the resultant noise impact.

Although the use of supplemental noise descriptors can provide increased understanding of intermittent noise events and relationship to the cumulative noise metrics, current environmental regulations do not identify quantitative criteria, metrics, or computation methods pertaining to single-event noise exposure for determination of land use compatibility. However, with regard to aircraft noise exposure, FICON has provided non-regulatory guidance for estimating the expected percent of awakenings that may result from single aircraft noise events. For example, at an indoor sound exposure of SEL 80 dBA, the FICON data indicates that approximately 10 percent of exposed individuals would be awakened. Although some estimates of the percentage of people expected to be awakened when exposed to specific single-event noise levels inside a home have been provided, no quantitative determination as to what frequency of awakening would be acceptable has been made by federal, state, or local entities. Although no quantitative thresholds have yet been identified with regard to single-event noise exposure, the indication from several studies is that the noise threshold for significant occurrence of sleep disruption is higher than for speech interference.

EXISTING NOISE ENVIRONMENT

Noise-Sensitive Land Uses

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects, as well as uses where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other noise-sensitive land uses include hospitals, convalescent facilities, parks, hotels, churches, libraries, and other uses where low interior noise levels are essential.

Noise-sensitive land uses located near the project site consist primarily of residential dwellings. The nearest residential dwellings are located approximately 80 feet from the western property line, across San Benancio Road. Residential dwellings are also located approximately 190 feet north of the project site, across State Route 68. Additional noise-sensitive land uses located in the project area include San Benancio Middle School, which is located adjacent to the western boundary of the project site, and Toro Park Elementary School, which is located approximately 600 feet north of the project site, across State Route 68.

Ambient Noise Levels

An ambient noise survey was conducted on May 22, 2007, to document the existing noise environment at various locations in the project area. Measurements were conducted in accordance with the American National Standards Institute (ANSI) acoustical standards using a Larson Davis Model 820 sound-level meter. Ambient noise measurement locations and corresponding measured values (i.e., L_{eq}, L_{max}, and L_{min}) are summarized in **Table 3.11-3**. Based on the monitoring conducted, daytime average-hourly noise levels in the project vicinity averaged approximately 55 to 75 dBA L_{eq}. The dominant noise source

identified during the survey was vehicle traffic on area roadways. Existing traffic noise levels (in dBA CNEL) along area roadways and distance to existing roadway noise contours are summarized in **Table 3.11-4**.

TABLE 3.11-3
EXISTING AMBIENT NOISE LEVELS

LOCATION	PRIMARY NOISE SOURCES	MEASURED NOISE LEVEL (dBA)		
		L_{EQ}	L_{MIN}	L_{MAX}
State Route 68 at Torero Dr	Vehicular Traffic	74.8	49.6	85.6
State Route 68 at San Benancio Rd	Vehicular Traffic	73.9	48.7	87.2
River Rd at Las Palmas Rd	Vehicular Traffic	70.5	45.2	79.8
San Benancio Rd at San Benancio Middle School	Vehicular Traffic	54.8	43.1	77.6

Note: Noise measurements were conducted on May 22, 2007, using a Larson Davis Model 820 Type I sound-level meter. Based on short-term (i.e., 10-minute) measurements conducted during the daytime hours at approximately 25 feet from the near-travel-lane centerline.

Source: Ambient 2009b

TABLE 3.11-4
EXISTING TRAFFIC NOISE LEVELS

ROADWAY SEGMENT	PREDICTED NOISE LEVEL (dBA L_{DN}/CNEL)		
	50 FEET FROM CENTERLINE OF NEAR TRAVEL LANE	DISTANCE TO CONTOURS (FEET)	
		60	65
State Route 68, West of Josselyn Canyon Road	73.02	912	424
State Route 68, Josselyn Canyon Road to Olmsted Road	72.77	879	408
State Route 68, Olmsted Road to State Route 218	73.09	923	429
State Route 68, State Route 218 to Laureles Grade Road	73.60	998	463
State Route 68, Laureles Grade Road to San Benancio Drive	73.27	949	441
State Route 68, San Benancio Drive to Torero Drive	73.42	971	451
State Route 68, East of Torero Drive	72.68	866	402
State Route 218, North of State Route 68	66.02	356	166
Josselyn Canyon Road, South of State Route 68	55.84	64	WR
Olmsted Road, South of State Route 68	62.98	189	88
Laureles Grade Road, South of State Route 68	67.08	356	165
San Benancio Drive, South of State Route 68	59.33	108	51
Torero Drive, North of State Route 68	56.56	71	WR

Note: Traffic noise levels were predicted using the FHWA roadway noise prediction model based on traffic information obtained from the traffic analysis prepared for this project. Modeled traffic noise levels and contour distances do not take into account intervening terrain or natural/man-made features (e.g., berms, walls, buildings).

Source: Ambient 2009b

Groundborne Vibration

No major existing sources of groundborne vibration were identified in the project area. Vehicle traffic on area roadways, particularly heavy-duty trucks, can result in increased groundborne vibration. However, groundborne vibration levels associated with vehicle traffic are typically considered minor and would not exceed applicable criteria at the project site boundaries.

3.11.2 REGULATORY SETTING

LOCAL REGULATIONS

Noise

Monterey County General Plan

The *1982 Monterey County General Plan* Noise Element contains policies designed to protect the community from the harmful and annoying effects of exposure to excessive noise. The County's General Plan also identifies noise criteria for the determination of compatibility of proposed land uses within various noise environments. Monterey County General Plan policies related to noise are summarized below.

Goals and Policies

Goal 22 To maintain an overall healthy and quiet environment by trying to achieve living and working conditions free from annoying and harmful sounds.

Policies

22.2.1 The County shall require new development to conform to the established noise parameters.

22.2.2 The County shall require the appropriate standards of soundproofing construction in all multiple-residential structures as specified in the Building Code.

22.2.3 The County shall require environmental review of all proposed new development, expansion of industrial facilities, and quarry excavation and processing activities which may increase the noise level in surrounding areas or generate noise levels greater than those specified in Table 3 [Monterey County General Plan].

22.2.5 The County should require ambient sound levels to be less at night (10 P.M. to 7 A.M.) than during the day.

22.2.6 The County shall make available to the public methods and existing noise data, which can be employed to reduce unwanted noise from the environment.

22.3.1 The County shall develop cooperative working relationships between those uses that produce noise and those that are sensitive to noise to mitigate existing noise problems.

22.3.3 The County shall work with the California Department of Transportation to mitigate the effects of existing highway noise and to avoid future noise problems through careful analysis at the design stage of all new highway improvements.

The County's land use compatibility noise criteria are summarized in **Table 3.11-5**.

TABLE 3.11-5
1982 GENERAL PLAN LAND USE COMPATIBILITY NOISE CRITERIA

LAND USE CATEGORY		NOISE RANGES (LDN OR CNEL) DB			
		I	II	III	IV
Passively used open spaces		< 50	50–55	55–70	> 70
Auditoriums, concert halls, amphitheaters		< 50	50–65	65–70	> 70
Residential – low density, single-family, duplex, mobile homes		< 55	55–70	70–75	> 75
Residential – multi-family		< 60	60–70	70–75	> 75
Transient lodging - motels, hotels		< 60	60–70	70–80	> 80
Schools, libraries, churches, hospitals, nursing homes		< 60	60–70	70–80	> 80
Actively used open spaces-playgrounds, neighborhood parks		< 67	--	67–73	> 73
Golf courses, riding stables, water recreation, cemeteries		< 70	--	70–80	> 80
Office buildings, business commercial and professional		< 67	67–75	> 75	--
Industrial, manufacturing, utilities, agriculture		< 70	70–75	> 75	--
Noise Zone I	*Normally Acceptable*: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.				
Noise Zone II	*Conditionally Acceptable*: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice.				
Noise Zone III	*Normally Unacceptable*: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation feature included in the design.				
Noise Zone IV	*Clearly Unacceptable*: New construction or development should generally not be undertaken.				

Source: Ambient 2009b

As depicted in **Table 3.11-5**, new residential land uses and schools are considered normally acceptable in exterior noise environments of 55 dB CNEL/L_{dn} or less. This normally acceptable exterior noise level is considered the minimum exterior noise level that would ensure an acceptable interior noise level of 45 dBA CNEL/L_{dn}. Residential land uses in ambient noise environments of up to 70 dBA CNEL/L_{dn} are considered conditionally acceptable provided noise insulation features are included in the design to ensure that an

acceptable interior noise environment (i.e., 45 dBA CNEL/L_{dn}) is maintained. For newer residential construction, incorporation of central heating and air conditioning (HVAC) systems to allow windows to remain closed will normally suffice. For schools, an exterior noise level of 60 dBA CNEL/L_{dn} would be considered normally acceptable (Monterey County 1982). It is important to note that the County's General Plan noise criteria and policies are intended to apply to proposed new development.

Monterey County Noise Ordinance

The *Monterey County Noise Ordinance* is codified in Chapter 10.60 "Noise Control" of the County Code. The ordinance applies to "any machine, mechanism, device, or contrivance" within 2,500 feet of any occupied dwelling unit. Whereas the County's General Plan noise criteria apply to new proposed land uses, the noise ordinance is typically used for the control of noise from existing land uses. In accordance with the County's noise ordinance, stationary sources are limited to 85 dBA at a distance of 50 feet from the noise source.

Groundborne Vibration

There are no federal, state, or local regulatory standards for groundborne vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in **Table 3.11-6** and **Table 3.11-7**, respectively. The criteria differentiate between transient and continuous/frequent sources. Transient sources of groundborne vibration include intermittent events, such as blasting, whereas continuous and frequent events would include vehicle traffic on roadways.

TABLE 3.11-6
DAMAGE POTENTIAL TO BUILDINGS AT VARIOUS GROUNDBORNE VIBRATION LEVELS

STRUCTURE AND CONDITION	VIBRATION LEVEL (IN/SEC PPV)	
	TRANSIENT SOURCES	CONTINUOUS/FREQUENT INTERMITTENT SOURCES
Extremely Fragile Historic Buildings, Ruins, Ancient Monuments	0.12	0.08
Fragile Buildings	0.2	0.1
Historic and Some Old Buildings	0.5	0.25
Older Residential Structures	0.5	0.3
New Residential Structures	1.0	0.5
Modern Industrial/Commercial Buildings	2.0	0.5

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Ambient 2009b

TABLE 3.11-7
ANNOYANCE POTENTIAL TO PEOPLE AT VARIOUS GROUNDBORNE VIBRATION LEVELS

HUMAN RESPONSE	VIBRATION LEVEL (IN/SEC PPV)	
	TRANSIENT SOURCES	CONTINUOUS/FREQUENT INTERMITTENT SOURCES
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Severe	2.0	0.4

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Ambient 2009b

The groundborne vibration criteria recommended by Caltrans for evaluation of potential structural damage is based on building classifications, which take into account the age and condition of the building. For residential structures and newer buildings, Caltrans considers a minimum peak-particle velocity (ppv) threshold of 0.25 inches per second (in/sec) for transient sources and 0.04 in/sec for continuous/frequent sources to be sufficient to protect against building damage. Continuous groundborne vibration levels below approximately 0.02 in/sec ppv are unlikely to cause damage to any structure. In terms of human annoyance, continuous vibrations in excess of 0.04 in/sec ppv and transient sources in excess of 0.25 in/sec ppv are identified by Caltrans as the minimum perceptible level for ground vibration. Short periods of ground vibration in excess of 2.0 in/sec ppv can be expected to result in severe annoyance to people. According to Ambient Air Quality & Noise Consulting, short periods of ground vibration in excess of 0.1 in/sec ppv (0.2 in/sec ppv within buildings) can be expected to result in increased levels of annoyance.

3.11.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The following significance thresholds used for the assessment of noise-related impacts are based on the CEQA Guidelines and County noise standards.

- **Short-term Noise Impacts.** Short-term construction noise impacts would be considered significant if construction activities would result in a substantial increase in ambient noise levels during the more noise-sensitive evening and nighttime hours (i.e., 7:00 P.M. to 7:00 A.M.). In addition, noise-generating construction activities would be considered to have a significant impact if predicted interior noise levels at nearby schools would exceed 45 dBA L_{eq}, which is the generally considered to be the level necessary to maintain speech communication in an interior environment. For school uses, the 45 dBA L_{eq} noise standard, which represents the hourly-average noise level, is considered more protective than the 45 dBA CNEL noise level, which is based on a 24-hour average.

- **Exposure of Noise-Sensitive Receptors to Stationary-Source Noise.** Long-term stationary-source noise impacts would be considered significant if the proposed project would result in a substantial increase in ambient noise levels at nearby noise-sensitive land uses or if the proposed project would result in operational noise levels that would exceed the County's noise ordinance standard of 85 dBA at 50 feet from the source. In addition, noise-generating stationary sources would be considered to have a significant impact if predicted interior stationary-source noise levels at nearby schools would exceed 45 dBA L_{eq}.

- **Exposure of Noise-Sensitive Receptors to Transportation Noise.** Long-term transportation noise impacts would be considered significant if the proposed project would result in a substantial increase in ambient noise levels (**Table 3.11-3)** or if predicted traffic noise levels at proposed residential dwellings would exceed the County's land use compatibility noise standards (**Table 3.11-5**).

- **Exposure to Groundborne Vibration.** Groundborne vibration levels would be considered significant if predicted short-term construction or long-term operational groundborne vibration levels attributable to the proposed project would exceed recommended criteria (**Tables 3.11-6** and **3.11-7**) at nearby existing or proposed on-site structures.

- **Contribution to Cumulative Noise Levels.** Implementation of the proposed project would be considered significant if the proposed project would result in a substantial contribution to projected future cumulative noise levels at either existing or proposed noise-sensitive receptors.

For purposes of this analysis, significant increases in ambient noise levels were based on FICON-recommended criterion (**Table 3.11-2**). Accordingly, significant increases in ambient noise levels would be defined as an increase of 5 dBA, or greater, where the ambient noise environment is less than 60 dBA; 3.0 dBA, or greater, where the ambient noise environment is between 60 and 65 dBA; and an increase of 1.5 dBA, or greater, where the ambient noise environment exceeds 65 dBA. The rationale for these criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant annoyance.

Temporary noise impacts associated with the proposed project would be associated with short-term construction-related activities. Long-term permanent increases in noise levels would occur associated with on-site operational activities, as well as potential increases in traffic noise levels along area roadways. Potential increases in groundborne vibration levels would be primarily associated with short-term construction-related activities. For purposes of this analysis and where applicable, the County of Monterey noise standards were used for evaluation of project-related noise impacts.

METHODOLOGY

A noise analysis was prepared by Ambient Air Quality & Noise Consulting in February 2009, which has been included in **Appendix F.** The noise analysis predicted traffic noise levels using the Federal Highway Administration (FHWA) roadway noise prediction model based on traffic information obtained from the traffic analysis prepared by Higgins Associates (now Hatch Mott MacDonald) in October 2010 and included in **Appendix G.**

PROJECT IMPACTS AND MITIGATION MEASURES

Short-Term Exposure to Construction Noise

Impact 3.11-1 Implementation of the proposed project could result in construction-related noise that would exceed applicable County noise standards at nearby noise-sensitive land uses such as residential dwellings (on- and off-site) and schools. This would be considered a **potentially significant short-term impact.**

Construction noise in any one particular area would be temporary and would include noise from activities such as excavations, demolition, truck hauling of material, pouring of concrete, and use of power hand tools. Construction noise typically occurs intermittently and varies depending on the nature of the construction activities being performed. Noise generated by construction equipment, including excavation equipment, material handlers, and portable generators, can reach high levels for brief periods. The United States Environmental Protection Agency (EPA) has found that intermittent individual equipment noise levels range from approximately 74 dBA to more than 89 dBA for brief periods. **Table 3.11-8** lists typical uncontrolled noise levels generated by individual pieces of construction equipment at a distance of 50 feet. The highest noise levels would occur during activities involving the use of heavy-duty off-road equipment, including grading and excavation activities. Exterior building construction and finishing activities would be anticipated to generate slightly lower noise levels of approximately 74 to 75 dBA L_{eq} at 50 feet.

TABLE 3.11-8
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

EQUIPMENT	TYPICAL NOISE LEVEL (dBA L_{MAX}) 50 FT FROM SOURCE
Roller	74
Concrete Vibrator, Saw, Pump	76
Backhoe	80
Air Compressor, Generator	81
Compactor, Concrete Pump	82
Crane, Mobile	83
Dozer, Grader, Loader, Concrete Mixer, Impact Wrench, Pneumatic Tool	85

EQUIPMENT	TYPICAL NOISE LEVEL (DBA L_{MAX}) 50 FT FROM SOURCE
Jack Hammer	88
Paver	89

Source: Ambient 2009b

As discussed earlier in this report, noise-sensitive land uses located near the project site consist primarily of residential dwellings. The nearest residential dwellings are located approximately 80 feet from the western property line, across San Benancio Road, and approximately 190 feet north of the project site, across State Route 68. San Benancio Middle School is located adjacent to the western boundary of the project site. Toro Park Elementary School is located approximately 600 feet north of the project site, across State Route 68. Nearby residential dwellings and the San Benancio Middle School would be located in the line of sight of proposed on-site construction activities. Toro Park Elementary School would be largely shielded from direct line of sight by surrounding residential development. Predicted construction-related noise impacts to these nearest noise-sensitive receptors are discussed in more detail below.

Residential Dwellings

Predicted construction noise levels at the nearest residential dwellings were calculated assuming a maximum average-hourly construction noise level of 84 dBA L_{eq} and an average noise attenuation rate of 6 dBA per doubling of distance from the nearest areas of proposed on-site construction. Based on these assumptions, predicted noise levels at the nearest residential dwellings located along San Benancio Road could reach levels of approximately 80 dBA L_{eq}. Predicted construction-generated noise levels at residential dwellings located north of the project site, across State Route 68, could reach levels of approximately 72 dBA L_{eq}. Noise levels generated by construction operations near residential land uses during the more noise-sensitive nighttime hours (i.e., 10 P.M. to 7 A.M.) are of increased concern. Because exterior ambient noise levels typically decrease during the nighttime hours as community activities (e.g., commercial activities, vehicle traffic) decrease, construction activities performed during these more noise-sensitive periods of the day can result in increased annoyance and potential sleep disruption for occupants of nearby residential dwellings.

San Benancio Middle School

Based on the above noise levels and assuming an average noise-attenuation rate of 6 dB per doubling of distance from the source, predicted exterior noise levels at San Benancio Middle School could reach levels of up to approximately 68 dB along the northern exterior façades of existing classrooms and approximately 64 dBA L_{eq} along the eastern building façades. Although the school is located adjacent to the project site, it is actually located farther from potential construction activities than the residential uses located along the other side of San Benancio Road (see **Figure 2-5b**). Therefore, noise levels generated by

construction operations would be lower at the school than at the residential uses (68 and 64 dBA versus 80 and 72 dBA).

Predicted interior noise level can be estimated by subtracting the combined noise transmission loss (i.e., noise reduction) for building façade components (i.e., walls, doors, windows) from the predicted exterior noise level. The transmission loss of the building components is dependent on the materials and construction methods used. For instance, double-glazed windows typically provided greater noise reduction than single-glazed windows, and stucco walls typically provide greater noise reduction than wood siding. Additional building construction methods, such as the use of insulation in wall cavities, increased wall thickness, and decreased stud spacing, as well as measures designed to decrease air infiltration, such as baffled vents, also contribute to increased exterior-to-interior noise reductions. Buildings constructed in accordance with current building and energy-efficiency standards typically achieve minimum exterior-to-interior noise reductions of 25 to 30 dBA, with windows closed. Older buildings typically achieve average noise reductions of approximately 20 dBA, with windows closed. The absorptive characteristics of interior rooms, such as carpeted floors, draperies, and furniture, can result in further reductions in interior noise. Assuming a minimum average exterior-to-interior noise reduction of 20 dBA, with windows closed, predicted interior noise levels along the northern and eastern building façades would be approximately 48 and 44 dBA L_{eq}, respectively.

Toro Park Elementary School

The nearest proposed on-site construction activities would occur at a distance of approximately 850 feet from Toro Park Elementary School. Based on this distance and the assumptions discussed above, predicted maximum exterior noise levels at Toro Park Elementary School would be approximately 54 dBA L_{eq}. Assuming a minimum average exterior-to-interior noise reduction of 20 dBA, with windows closed, predicted interior noise levels along the southern building façades would be approximately 34 dBA L_{eq}. In comparison to ambient noise levels, construction-generated noise levels at Toro Park Elementary School would be largely masked by vehicle traffic noise emanating from State Route 68. Predicted interior noise levels would not exceed the interior noise threshold of 45 dBA L_{eq}.

The proposed project does not include restrictions on the hours during which construction activities would occur. As a result, construction activities occurring during the more noise-sensitive nighttime hours could result in increased levels of annoyance and potential sleep disruption for occupants of nearby noise-sensitive land uses. Given that the project area would likely be developed in multiple phases over a period of years, there is also the potential for construction activities to occur in close proximity to proposed on-site residential land uses. In addition, predicted interior noise levels at San Benancio Middle School could exceed 45 dBA L_{eq} when construction activities occur within approximately 450 feet of the school buildings. In such instances, construction activities could interfere with instructional activities at San Benancio Middle School. Therefore, construction- and

demolition-generated noise would be considered to be a **significant short-term impact**. Implementation of the following mitigation measures would reduce this short-term impact to a **less than significant** level.

Mitigation Measures

MM 3.11-1a Prior to commencement of construction activities, the project applicant(s) shall submit for review and approval by the Director of the Planning Department, final construction documents and improvement plans identifying the specific measures that will be implemented to reduce noise levels generated during construction. During the course of construction of on- and off-site improvements, the project applicant shall implement mitigation measures to reduce significant noise impacts to noise-sensitive land uses. Measures for attenuating noise during construction include, but are not limited to, the following:

- Noise-generating construction operations (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to the hours between 7 A.M. to 7 P.M. Monday through Friday.
- Construction equipment and equipment staging areas shall be located at the farthest distance possible from nearby noise-sensitive land uses.
- 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.

The noise reduction measures demonstrated on final improvement plans will be based on the ultimate location and timing of construction relative to the school. Any combination of measures is acceptable as long as they demonstrate compliance with County noise standards.

MM 3.11-1b Prior to issuance of a building or grading permit for on- and off-site improvements, the project applicant shall provide the Monterey County Planning Department with the name and telephone number of the individual empowered to manage construction noise generated by the proposed project. This information shall also be included in the final construction documents and improvement plans required through implementation of mitigation measure **MM 3.11-1a**. An information sign shall be posted at the construction site entrance that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report

complaints regarding excessive noise levels. The designated construction contact shall record all noise complaints received and actions taken in response, and submit this record to the Monterey County Planning Department upon request.

MM 3.11-1c Prior to the start of on- and off-site grading activities and during the course of construction of Road D, Lots #6 through #12, Lots #12 through #22, park alterations, and the western portion of the multipurpose trail, the project applicant shall either:

1) Install temporary barriers to reduce significant noise impacts to San Benancio Middle School, if work is to be performed while school is in session. The temporary barriers shall be constructed along the nearest project site boundary to San Benancio Middle School in order to interrupt the line of sight between heavy-duty equipment operating at the construction site and San Benancio Middle School. Based on the analysis and modeling conducted, the temporary barriers shall be constructed to a minimum height of 8 feet above ground surface with no visible air gaps between construction panels or at the ground surface. Barrier construction materials may consist of, but are not necessarily limited to, the use of sound-rated curtains and/or wood panels; or

2) As an alternative to temporary barriers, the applicant may utilize permanent barriers (such as boundary fences and walls) that are part of the project. Any such permanent feature must prove at least as effective as a temporary barrier, and must not cause secondary noise impacts in its construction or placement; or

3) Prior to construction in the areas specified, the applicant shall submit to the Director of Planning for review and approval a site-specific acoustical analysis based on the final improvement plans and construction equipment to be used. The findings of any such analysis shall identify estimated noise levels at nearest sensitive receptors, and provide effective attenuation measures that are at least as effective as options a) and b), and achieve compliance with Monterey County noise standards.

MM 3.11-1d A minimum of one week prior to commencing on- and off-site construction activities within the areas specified in mitigation measure **MM 3.11-1c**, the project applicant shall provide written notification to San Benancio Middle School so that any necessary precautions (such as rescheduling or relocation of interior noise-sensitive activities) can be implemented. The written notice shall include the name and telephone

number of the individual empowered to manage construction noise from the project.

Implementation of mitigation measures **MM 3.11-1a** through **MM 3.11-1d** would reduce the short-term construction-generated noise impacts to nearby sensitive receptors. The use of exhaust mufflers and engine shrouds would reduce individual equipment noise levels by approximately 10 dBA. The temporary sound barriers would reduce construction-generated noise levels by a minimum of approximately 5 dBA. With implementation of the above mitigation measures, predicted interior noise levels at San Benancio Middle School would be reduced to approximately 43 dBA L_{eq} or less. Therefore, the short-term construction-generated noise impacts to nearby sensitive receptors associated with the proposed project would be reduced to a **less than significant** level.

Long-Term Exposure to Stationary-Source Noise

Impact 3.11-2 The proposed project could result in new stationary-source noise, generated by new residential and commercial land uses and pump stations, which could exceed applicable County noise standards at nearby noise-sensitive land uses. Although increases in ambient noise levels from residential land uses are often sporadic and are typically limited to the less noise-sensitive daytime hours and increases in ambient noise levels associated with the proposed office and commercial land uses would not exceed the County's noise standard of 85 dBA at 50 feet, the predicted noise levels associated with the proposed pump stations could potentially exceed exterior and interior noise criteria for the maintenance of speech communication and activity interference. Therefore, the stationary source noise impacts would be considered a **potentially significant impact.**

The proposed project includes planned development of residential and commercial land uses, including wine tasting and office land uses. The proposed project would also include the installation of three booster water-pump stations. Noise levels commonly associated with these uses and impacts to nearby noise-sensitive land uses are discussed in more detail below.

Residential Land Uses

Stationary-source noise associated with residential development is primarily associated with the operation of central air conditioning units. Noise levels associated with residential-use air conditioners typically average approximately 60 dBA, or less, at 5 feet. To a lesser extent, noise from people talking, amplified music, and use of landscape maintenance equipment may also contribute to intermittent increases in ambient noise levels. However, increases in ambient noise levels from such sources are often sporatic and are typically limited to the less noise-sensitive daytime hours. Implementation of the proposed project would not result in the operation of any major on-site stationary noise sources that would exceed the County's noise ordinance standard of 85 dBA at 50 feet. Noise generated by the

proposed residential dwellings would not result in an increase in ambient noise levels at nearby noise-sensitive land uses. No existing stationary sources of noise were identified in the project area that would affect proposed residential land uses. Therefore, increased exposure of sensitive land uses to stationary-source noise associated with proposed residential land uses would be considered a **less than significant impact**.

Commercial Land Uses

The proposed project includes development of approximately 110,000 square feet of commercial land use, including office and wine-tasting facilities, on the eastern parcel of the project site, along River Road. Noise sources commonly associated with such uses can include occasional parking lot activities (e.g., opening and closing of vehicle doors, people talking), material delivery and truck unloading activities (e.g., use of forklifts, hydraulic lifts), trash compactors, and air compressors. Noise commonly associated with commercial land uses, such as idling trucks, vehicle backup alarms, decompression of trailer truck brakes, forklifts, and other material loading and unloading activities, can generate intermittent noise levels of approximately 90 dBA L_{max} at 10 feet. Average-hourly noise levels associated with commercial sources are approximately 60 dBA L_{eq} at 50 feet. Noise-generating activities associated with these uses would typically occur during the daytime hours of operation.

The nearest existing noise-sensitive land uses in the vicinity of proposed on-site commercial land uses include residential dwellings located approximately 850 feet to the south, along River Road. Based on the noise levels identified above and assuming that the proposed commercial uses were to include truck unloading activities, predicted average-hourly noise levels at the nearest existing residential land uses would be approximately 35 dBA L_{eq} or less. Intermittent noise levels would be approximately 51 dBA L_{max} at these same receptors. Assuming an average exterior-to-interior noise reduction of 20 dB, predicted interior project-generated noise levels at the nearest existing residential dwellings would be approximately 15 dBA L_{eq} or less.

The nearest proposed residential land uses are located adjacent to and south of the proposed commercial development, across the proposed River Terrace Drive. Depending on final site design and assuming that truck loading/unloading activities would be associated with the proposed wine-tasting facilities, predicted noise levels at these nearest proposed residential land uses could reach levels of approximately 54 dBA L_{eq} and 70 dBA L_{max} when activities occur within 100 feet of the residential property line. Assuming an average exterior-to-interior noise reduction of 20 dB, predicted interior project-generated noise levels at the nearest proposed residential dwellings would be approximately 34 dBA L_{eq} or less.

Operational noise levels associated with the proposed office and commercial land uses would not exceed the County's noise standard of 85 dBA at 50 feet. In addition, predicted noise levels at nearby existing and proposed residential land uses would not exceed an exterior noise level of 60 dBA L_{eq}, which is the level commonly identified for the

maintenance of speech communication in an exterior environment. Predicted interior noise levels at nearby existing and proposed residential dwellings would not exceed 45 dBA L_{eq}, which is the level commonly identified for the maintenance of speech communication in an interior environment. Because noise-generating activities from such sources would be intermittent and would not occur on a continuous hourly basis over a 24-hour period, predicted average-daily interior noise levels at nearby existing and proposed residential land uses would not be anticipated to exceed 45 CNEL/L_{dn}, which is the noise level commonly recommended for the protection of activity interference in an interior environment. For these reasons, noise generated by the proposed commercial land uses would be considered **less than significant**.

Proposed Pump Stations

The proposed project includes the installation of various booster pumps and sanitary sewer lift stations within the boundaries of the project site. The proposed sanitary sewer lift stations would be located adjacent to proposed residential lots, whereas the proposed booster pumps would be located at distances of approximately 300 feet from proposed residential lots. Specific design and equipment requirements have not yet been identified for these facilities. However, noise-producing equipment typically associated with these types of facilities includes electrical pump motors, transformers, and emergency-power generators. Depending on the type and size of the equipment required, operational noise levels associated with large pumps can reach levels of approximately 65 L_{eq} at 10 feet. However, larger pumps often used at pump stations are often located below the ground surface, which substantially reduces detectable operational noise levels at the surface. In such instances, operational noise levels can be reduced by approximately 10 dBA or more. Operational noise levels associated with emergency-power generators can reach levels of approximately 90 dBA L_{eq} at 10 feet.

According to Ambient Air Quality & Noise Consulting, predicted pump operational noise levels at the nearest residential land uses could reach levels of approximately 65 to 90 dBA L_{eq} at the nearest property line, depending on the specific equipment installed and facility design. Operation of the emergency standby generator would occur on an intermittent, as-needed basis during power outages and routine maintenance operations. In the event that emergency-power generators would also be operating, combined operational noise levels could reach levels of approximately 90 dBA L_{eq} at the property line of the nearest residential land use. Based on this noise level and assuming an average exterior-to-interior noise reduction of 20 dB, predicted interior noise levels of nearby residential dwellings could reach levels of approximately 70 dBA L_{eq}. It is important to note, however, that actual noise levels will depend on various factors, including the type and number of pieces of equipment installed, noise shielding incorporated in the site design, and distance. In addition, the operation of the emergency standby generator would occur on an intermittent, as-needed basis during power outages and routine maintenance operations only. These facilities and related operational characteristics have not been sufficiently defined at this time. Assuming a maximum exterior noise level of 90 dBA L_{eq}, with the incorporation of emergency-power generators, and an average exterior-to-interior noise

reduction of 20 dB, predicted average-daily interior noise levels could potentially exceed 45 dBA CNEL/L_{dn}, depending on the hours of daily use. Given that predicted noise levels could potentially exceed exterior and interior noise criteria for the maintenance of speech communication and activity interference, stationary-source noise impacts associated with the proposed pump stations would be considered a **potentially significant impact**.

Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM 3.11-2 Prior to construction of the booster pumps and sanitary lift stations, the project applicant shall submit for review and approval by the Director of the Planning Department, an acoustical analysis for the proposed booster pumps and sanitary lift stations. The acoustical analysis shall demonstrate that pump station design will reduce operational noise levels sufficient to achieve the applicable Monterey County noise standard, which is currently identified as 85 dBA at 50 feet away. Measures may include, but are not necessarily limited to, the use of sound barriers, equipment enclosures, and incorporation of noise-reduction site/facility design features.

The acoustical analysis shall demonstrate that placement of the pump shall be sited to ensure that the operational noise standard of 55 dBA L_{eq} for the daytime hours (i.e., 7 A.M. to 10 P.M.) and 50 dBA L_{eq} for the nighttime hours (i.e., 10 P.M. to 7 A.M.) will not be exceeded at the property line of nearby sensitive noise receptors (i.e. Lots #66, #67, #84, #44, and #144). The recommended noise criteria are intended to ensure that operational noise levels would not exceed commonly applied noise levels for the maintenance of speech communication in exterior/interior environments of receiving land uses and, in the event that operations would occur continuously over a 24-hour period, would not exceed the commonly applied exterior and interior noise criteria for the protection of activity interference (i.e., 60 and 45 dBA CNEL/L_{dn}, respectively).

Implementation of the above mitigation measure would ensure that the predicted noise levels at the nearest noise-sensitive land uses would not exceed the Monterey County noise standard of 85 dBA at 50 feet or commonly identified noise criteria for the maintenance of speech communication and protection from activity interference. Therefore, long-term exposure due to stationary noise sources would be reduced to a **less than significant level**.

Increases in Ambient Noise Levels at Noise-Sensitive Land Uses

Impact 3.11-3 Implementation of the proposed project would contribute to an increase in ambient traffic noise levels along State Route 68. However, based on

the modeling conducted, development of the proposed project would result in predicted increases in traffic noise levels of approximately 0.1 dBA, or less, along State Route 68 and approximately 0.9 dBA CNEL along River Road, south of State Route 68, neither of which would be considered a substantial increase in traffic noise levels. Therefore, increases in ambient noise levels attributable to the proposed project would be considered a **less than significant impact.**

Ambient noise levels in the project area are influenced by vehicular traffic on area roadways, particularly State Route 68. The FHWA roadway noise prediction model was used to predict traffic noise levels along primarily affected roadway segments. Predicted noise levels were calculated for both baseline conditions, with and without implementation of the proposed project, based on traffic volumes obtained from the traffic analysis prepared for this project (HMM 2010). Predicted traffic noise levels under background traffic conditions, with and without implementation of the proposed project, are summarized in **Table 3.11-9**.

TABLE 3.11-9
PREDICTED TRAFFIC NOISE LEVELS UNDER BACKGROUND TRAFFIC CONDITIONS

ROADWAY SEGMENT	PREDICTED NOISE LEVEL AT 50 FEET FROM CENTERLINE OF NEAR TRAVEL LANE (dBA L_{DN}/CNEL)			
	WITHOUT PROJECT	WITH PROJECT	INCREASE	SIGNIFICANT?
State Route 68, West of Josselyn Canyon Road	73.48	73.52	0.04	No
State Route 68, Josselyn Canyon Road to Olmsted Road	73.26	73.30	0.04	No
State Route 68, Olmsted Road to State Route 218	73.65	73.69	0.04	No
State Route 68, State Route 218 to Laureles Grade Road	74.03	74.09	0.06	No
State Route 68, Laureles Grade Road to San Benancio Drive	73.69	73.76	0.07	No
State Route 68, San Benancio Drive to Torero Drive	73.85	73.93	0.08	No
State Route 68, East of Torero Drive	73.18	73.29	0.11	No
State Route 218, North of State Route 68	66.43	66.47	0.04	No
Josselyn Canyon Road, South of State Route 68	55.84	55.84	0	No
Olmsted Road, South of State Route 68	63.15	63.15	0	No
Laureles Grade Road, South of State Route 68	67.19	67.23	0.04	No
San Benancio Drive, South of State Route 68	59.78	59.91	0.13	No
Torero Drive, North of State Route 68	56.56	56.57	0.01	No
River Road, South of State Route 68	59.96	60.86	0.9	No

Notes:
1. Traffic noise levels were predicted using the FHWA roadway noise prediction model based on traffic information obtained from the traffic analysis prepared for this project. Modeled estimates assume no natural or man-made shielding (e.g., vegetation, berms, walls, buildings).

ROADWAY SEGMENT	PREDICTED NOISE LEVEL AT 50 FEET FROM CENTERLINE OF NEAR TRAVEL LANE (dBA L_{DN}/CNEL)			
	WITHOUT PROJECT	WITH PROJECT	INCREASE	SIGNIFICANT?

2. Significant increase is defined as an increase of 5 dBA in areas where ambient noise levels are less than 60 dBA CNEL/Ldn; an increase of 3 dBA where ambient noise levels range from 60 to 65 dBA L_{dn}/CNEL; and an increase of 1.5 dBA where ambient noise levels at noise-sensitive receptors exceed 65 dBA L_{dn}/CNEL

Source: Ambient 2009b

As noted in **Table 3.11-9**, implementation of the proposed project would not result in a substantial increase in ambient traffic noise levels along area roadways. Based on the modeling conducted, development of the proposed project would result in predicted increases in traffic noise levels of approximately 0.1 dBA, or less, along State Route 68. Predicted increase in traffic noise levels along other area roadways, including Torero Drive and San Benancio Road, would be approximately 0.1 dBA CNEL. Predicted increases in traffic noise levels along River Road, south of State Route 68, would be approximately 0.9 dBA CNEL. Implementation of the proposed project would not result in a significant increase in traffic noise levels along area roadways. Therefore, increases in ambient noise levels attributable to the proposed project would be considered a **less than significant impact.**

Compatibility of Proposed Land Uses with Projected Ambient Noise Levels

Impact 3.11-4 Implementation of the proposed project would result in the development of noise-sensitive residential land uses adjacent to areas that may not be compatible with projected ambient noise levels. This would be considered a **potentially significant impact.**

As noted in **Table 3.11-5**, the County's normally acceptable exterior noise standard for residential land uses is less than 55 dBA L_{dn}/CNEL. Residential land uses are considered conditionally acceptable in areas where noise ranges 55 to 70 dBA L_{dn}/CNEL, provided sufficient mitigation measures are incorporated to ensure that interior noise levels are reduced to within acceptable levels (i.e., 45 dBA L_{dn}/CNEL). Residential land uses are considered normally unacceptable in areas where the ambient noise level would exceed 70 dBA L_{dn}/CNEL. Major nearby noise sources potentially affecting the proposed development include vehicle traffic on area roadways and the Laguna Seca Raceway, as well as the Monterey Peninsula and Salinas Municipal Airports. Noise levels associated with these sources and impacts to proposed on-site receptors are discussed separately below.

Roadway Traffic Noise

Proposed residential land uses would be primarily affected by traffic noise from State Route 68, located along the northern boundary of the project site, as well as River Road, which is located along the eastern boundary of the project site. Predicted traffic noise contours for adjacent roadways are summarized in **Table 3.11-10** and depicted in **Figures 3.11-1a** through **3.11-1d**.

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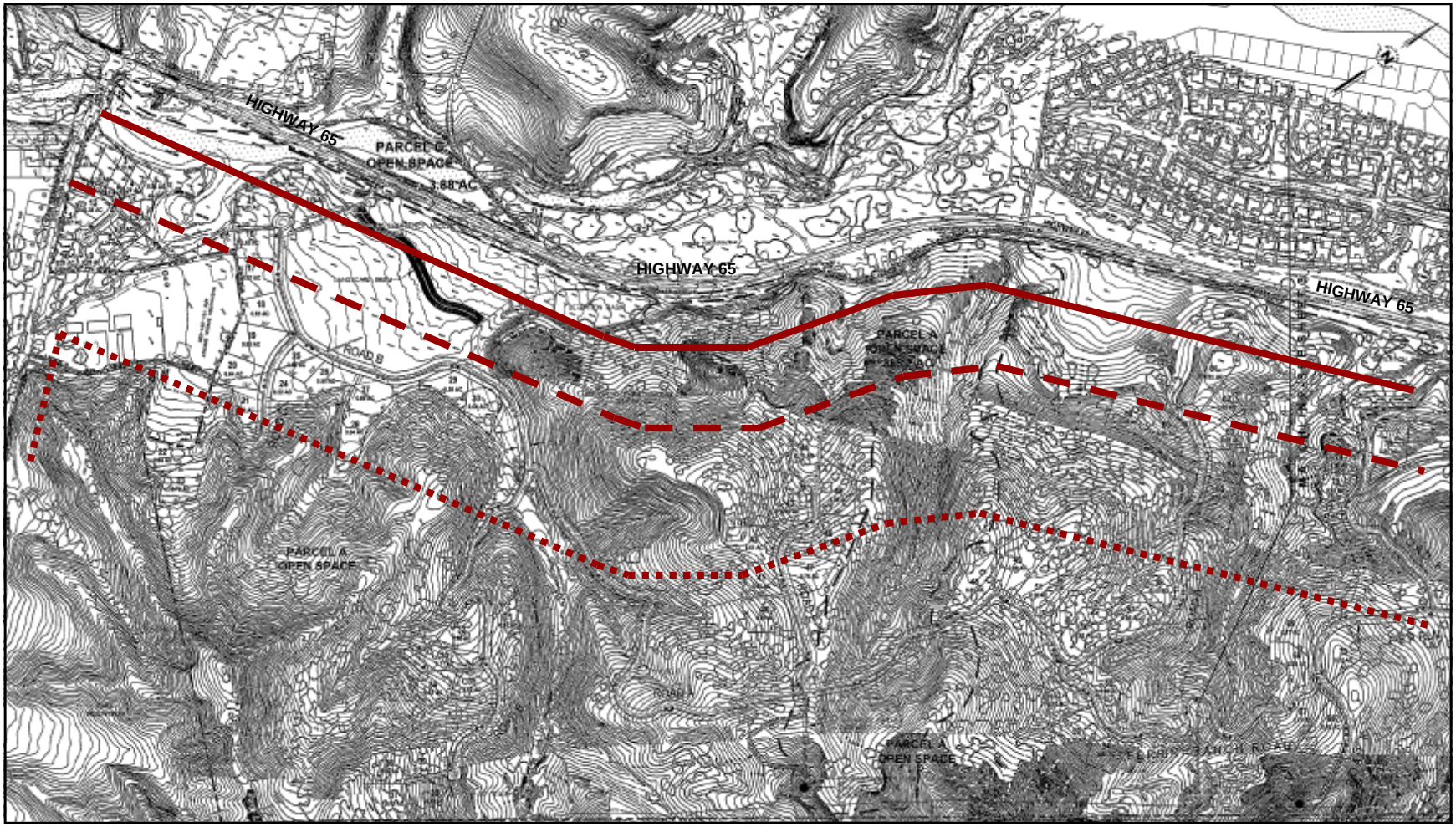

Image Source: Whitson Engineers 2005

PREDICTED TRAFFIC NOISE CONTOURS

65 dBA CNEL/L_{dn}
60 dBA CNEL/L_{dn}
55 dBA CNEL/L_{dn}

Notes: Based on forecasted year 2030 cumulative-plus-project traffic conditions. Predicted noise contours are approximate and may not fully account for shielding provided by intervening terrain or structures. Predicted noise contours should be interpreted as bands of similar noise exposure, rather than lines of absolute demarcation.

FIGURE 3.11-1A
NOISE CONTOURS - WESTERN PARCEL

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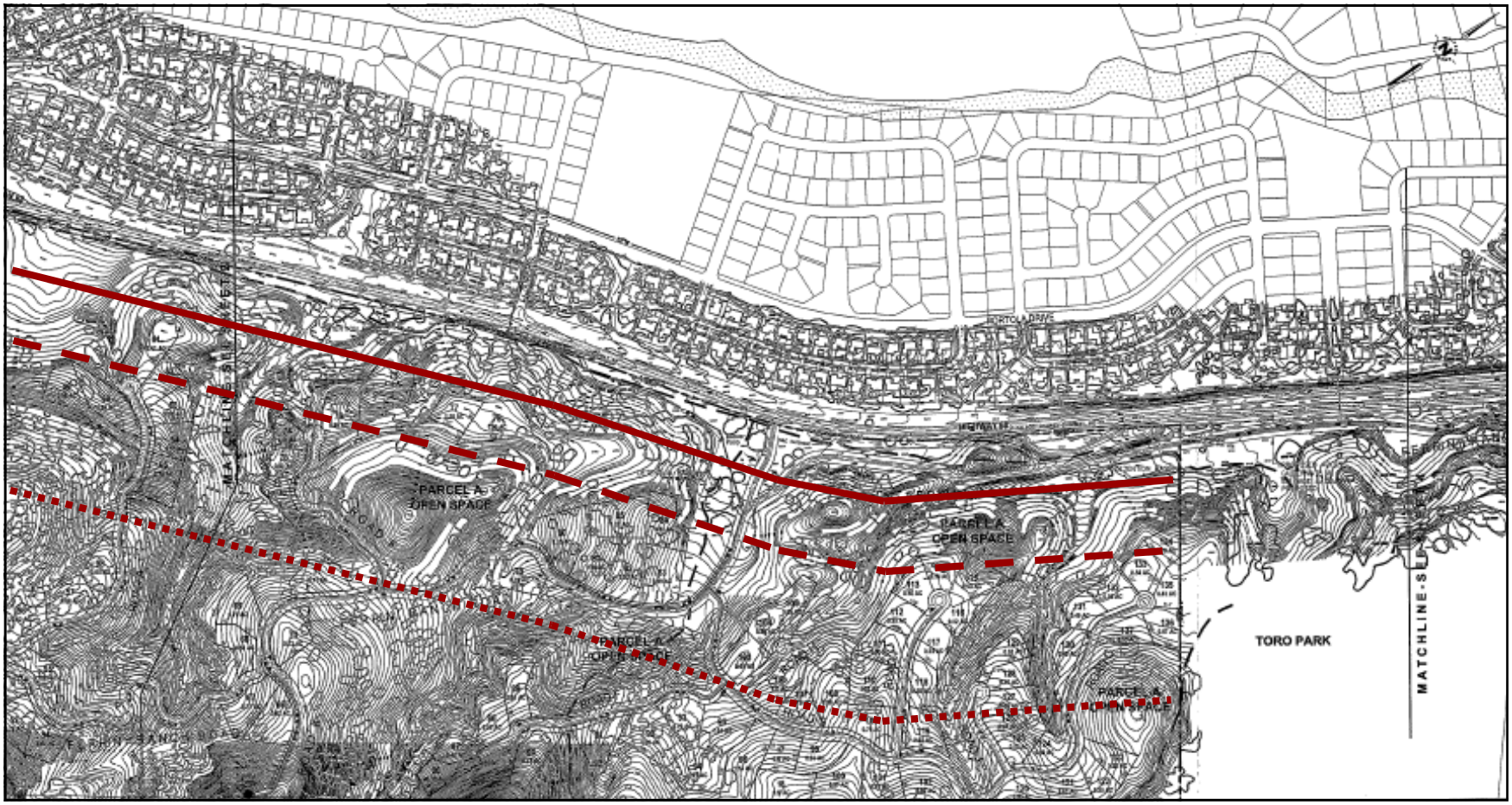

Image Source: Whitson Engineers 2005

PREDICTED TRAFFIC NOISE CONTOURS

65 dBA CNEL/L_{dn}
60 dBA CNEL/L_{dn}
55 dBA CNEL/L_{dn}

Notes: Based on forecasted year 2030 cumulative-plus-project traffic conditions. Predicted noise contours are approximate and may not fully account for shielding provided by intervening terrain or structures. Predicted noise contours should be interpreted as bands of similar noise exposure, rather than lines of absolute demarcation.

FIGURE 3.11-1B
NOISE CONTOURS: WESTERN PARCEL

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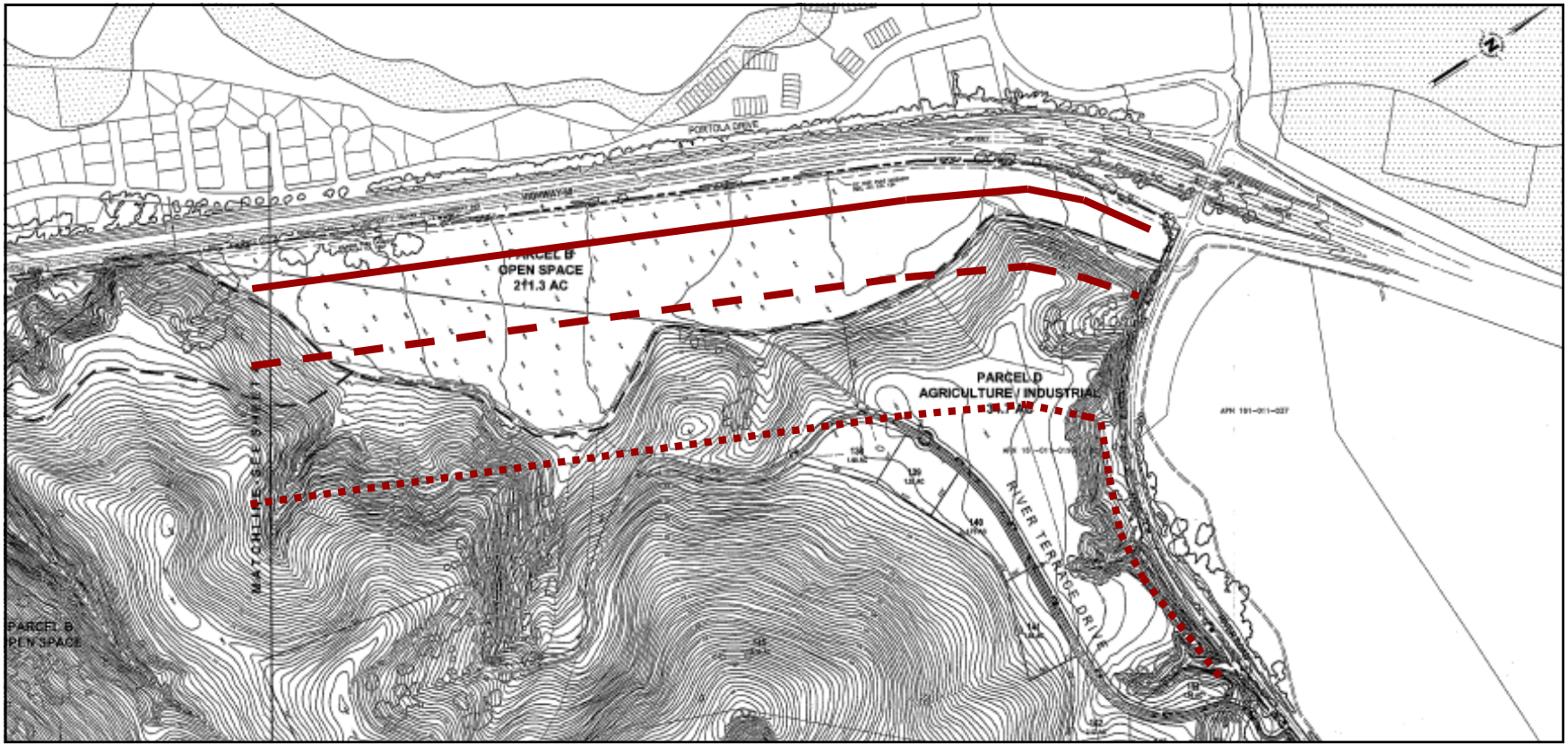

Image Source: Whitson Engineers 2005

PREDICTED TRAFFIC NOISE CONTOURS

65 dBA CNEL/L_{dn}
60 dBA CNEL/L_{dn}
55 dBA CNEL/L_{dn}

Notes: Based on forecasted year 2030 cumulative-plus-project traffic conditions. Predicted noise contours are approximate and may not fully account for shielding provided by intervening terrain or structures. Predicted noise contours should be interpreted as bands of similar noise exposure, rather than lines of absolute demarcation.

FIGURE 3.11-1C
NOISE CONTOURS - EASTERN PARCEL

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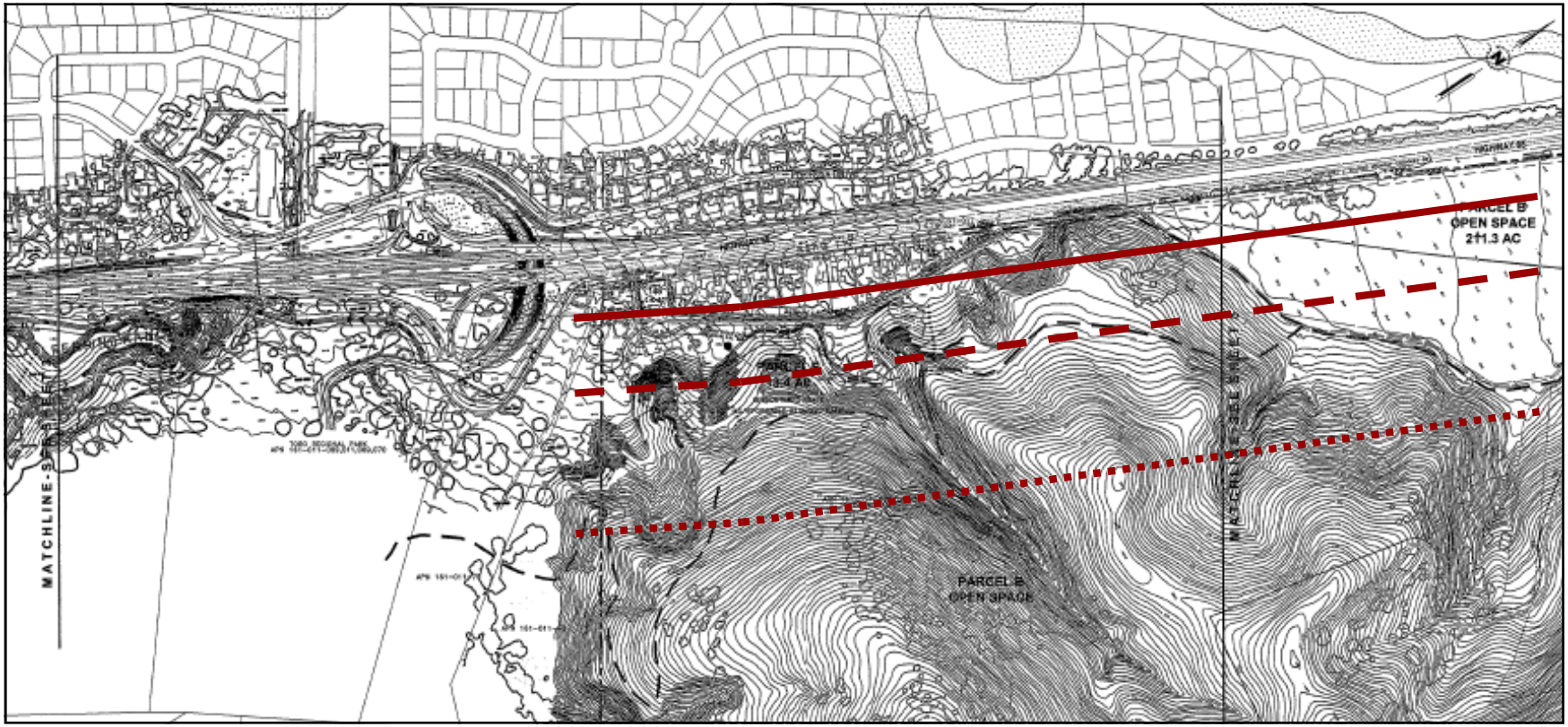

Image Source: Whitson Engineers 2005

PREDICTED TRAFFIC NOISE CONTOURS

65 dBA CNEL/L_{dn}
60 dBA CNEL/L_{dn}
55 dBA CNEL/L_{dn}

Notes: Based on forecasted year 2030 cumulative-plus-project traffic conditions. Predicted noise contours are approximate and may not fully account for shielding provided by intervening terrain or structures. Predicted noise contours should be interpreted as bands of similar noise exposure, rather than lines of absolute demarcation.

FIGURE 3.11-1D
NOISE CONTOURS - EASTERN PARCEL

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TABLE 3.11-10
PREDICTED FUTURE CUMULATIVE TRAFFIC NOISE LEVELS AND CONTOURS

ROADWAY SEGMENT	PREDICTED NOISE LEVEL (dBA L_{DN}/CNEL)			
	50 FEET FROM CENTERLINE OF NEAR TRAVEL LANE	DISTANCE TO CONTOURS (FEET)		
		55	60	70
State Route 68, San Benancio Drive to Torero Drive	75.30	1,295	601	279
State Route 68, Torero Drive to River Road	74.77	1,193	554	257
River Road, South of State Route 68	60.53	130	61	WR
San Benancio Road, South of State Route 68	62.85	186	87	WR

Note: Traffic noise levels were predicted using the FHWA roadway noise prediction model based on data provided in the traffic analysis prepared for this project. Modeled estimates assume no natural or man-made shielding (e.g., vegetation, berms, walls,).

Source: Ambient 2009b

The predicted 55 dBA CNEL noise contour for State Route 68 would extend onto the project site at distances of approximately 1,295 feet from the roadway centerline near the western boundary and to approximately 1,193 feet near the eastern boundary. The predicted 55 dBA CNEL noise contour for River Road and San Benancio Road would extend to distances of approximately 186 and 130 feet, respectively, from the roadway centerlines. It is important to note that the predicted noise contours identified in **Table 3.11-10** do not take into account shielding that may occur due to intervening terrain or structures, which can provide additional and significant noise attenuation at specific locations.

Based on the traffic noise modeling conducted, proposed residential land uses could be located within the projected future 55 dBA CNEL noise contours of adjacent roadways, which would exceed the County's "normally acceptable" exterior noise level. These would include proposed Lots #1 though #21, Lots #24 through #30, Lots #41 through #47, Lot #50, Lots #59 through #65, Lots #71 through #83, Lots #103 through #119, Lots #126 through #138, and Lot #146. Proposed residential land uses located within the projected future 60 to 65 dBA CNEL traffic noise contour include Lots #1 through #6, Lots #13 through #17, Lots #59 through #62, Lots #75 and #76, Lots #84 and #85, and Lots #132 through #134. Lot #146, located adjacent to State Route 68, is located within the projected 70 dBA CNEL noise contour. Predicted maximum exterior traffic noise levels at the property line of this nearest lot (i.e., Lot #146) would be approximately 74 dBA CNEL. With the exception of Lot #146, predicted future cumulative traffic noise levels at proposed residential land uses would not exceed the County's normally unacceptable exterior noise standard of 70 dBA CNEL.

Based on the modeling conducted and assuming an average exterior-to-interior noise reduction of 15 dB (with windows open), predicted interior noise levels at lots proposed within the projected 60 to 65 dBA CNEL traffic noise contours could exceed the County's interior noise standard of 45 dBA CNEL. In most instances, the inclusion of central heating and air conditioning units would allow windows to remain closed, which would be

sufficient to reduce interior noise levels to acceptable levels. However, even with windows closed, lots proposed within the projected 60 dBA CNEL, or greater, noise contour could still exceed the County's interior noise standard and would require additional noise-reduction measures to reduce predicted interior noise levels to within the County's interior noise standard of 45 dBA CNEL, or less. Exterior noise-reduction measures would also be required for proposed Lot #146 to reduce exterior noise levels to within the County's conditionally acceptable noise standard, which is below 70 dBA CNEL).

Predicted traffic noise levels at proposed commercial and office land uses would not exceed the County's normally acceptable noise level of 67 dBA L_{dn}/CNEL. However, because predicted exterior traffic noise levels at proposed residential land uses would exceed the County's normally acceptable noise standard of 55 dBA CNEL, the compatibility of proposed residential land uses with projected future on-site traffic noise levels would be considered a **potentially significant impact**. Implementation of the following mitigation measures would reduce exposure of proposed residential land uses to potential traffic noise levels that exceed Monterey County's normally acceptable exterior noise level, which would reduce this impact to a **less than significant level**.

Mitigation Measures

MM 3.11-4a Prior to issuance of building permits, the project applicant(s) shall incorporate into the final building design and improvement plans measures to reduce exposure to cumulative increases in ambient noise levels generated from mobile sources. Measures that would reduce the ambient noise levels to acceptable levels include, but are not limited to, the following:

1) The final design of all residential dwelling units shall include mechanical heating ventilation and air conditioning (i.e., HVAC) systems so that windows can remain closed during inclement weather conditions.

2) The final design of residential dwellings on Lots #1 through #6, Lots #13 through #17, Lots #59 through #62, Lot #75, Lot #76, Lot #84, Lot #85, Lots #132 through #134, and Lot #146 shall include additional noise insulation features such as sealed door frames, caulked or insulated exterior pipes, ducts, and sheathing panels, insulation in cavity spaces. Exterior ducts and vents shall be located away from noise sources.

Construction of homes in compliance with the California Building Code should address most of these noise protection measures.

MM 3.11-4b Prior to issuance of building permits for Lots #1 through #6, Lots #13 through #17, Lots #59 through #62, Lot #75, Lot #76, Lot #84, Lot #85, and Lots #132 through #134, the Monterey County Planning Department

shall also require that the project applicant design the residential development with the following:

1) Exterior walls shall have a sound-transmission-class rating of STC 39 or better; and

2) Windows and exterior doors shall have a sound-transmission-class rating of at least STC 32 for stucco or brick homes and STC 38 for siding homes.

Construction of homes in compliance with the California Building Code should address most of these noise protection measures.

MM 3.11-4c Prior to issuance of a building permit for Lot #146, the Monterey County Planning Department shall require that the project applicant design the residence with the following:

1) Exterior walls shall have a sound-transmission-class rating of STC 44 or better.

2) Windows and exterior doors shall have a sound-transmission-class rating of at least STC 36 for stucco or brick home and STC 40 for siding home.

Construction of homes in compliance with the California Building Code should address most of these noise protection measures.

MM 3.11-4d Prior to issuance of building permits for residential dwelling units on Lots #1 through #6, Lots #10 and #11, Lots #13 through #17, Lots #59 through #62, Lot #75, Lot #76, Lot #84, Lot #85, Lots #132 through #134, and Lot #146, the project applicant(s) shall submit plans that include features that shield exterior activity areas from the line of sight of State Route 68 and San Benancio Road (Lots #1, #10, and #11 only). Shielding may include, but is not limited to, the placement of buildings, terrain features (berms), walls, or solid fencing between the source and the receptor. If walls or fences are proposed, these barriers shall be constructed to a minimum height of 6 feet. Barriers shall be constructed of a solid material (e.g., earthen berm, wood, concrete, masonry, or combination thereof) with no visible air gaps at the base or between construction materials. If wood materials are used, materials shall be overlapped or tightly fitted (e.g., tongue and groove) to ensure that visible air gaps do not occur due to material shrinkage resulting from changes in ambient temperature/moisture content of the material. As an alternative to line of sight shielding, individual building permit applications may include a lot-specific acoustical analysis for review and approval by the

Director of Planning. The findings of any such analysis shall identify estimated noise levels at the lot's exterior and interior spaces, and for any projected exceedance of acceptable noise levels, provide effective attenuation measures to achieve compliance with Monterey County noise standards.

Implementation of the above mitigation measures specify widely recognized construction techniques used to mitigate environmental noise by design. Newer construction techniques for residential units, with windows closed, typically provide an exterior-to-interior noise reduction of approximately 20 to 25 dBA. Interruption of line of sight associated with the construction of proposed barriers would reduce exterior traffic noise levels in outdoor activity areas by a minimum of approximately 5 dBA. With implementation of recommended mitigation measures, predicted interior noise levels of proposed residential dwellings would not exceed the County's normally unacceptable exterior noise standards of 70 dBA CNEL and predicted interior noise levels would be reduced to below 45 dBA CNEL. Therefore, exposure of noise sensitive receptors to potential traffic noise levels would be reduced to a **less than significant** level.

Mazda Raceway Laguna Seca

The Mazda Raceway Laguna Seca (Laguna Seca Raceway) is located approximately 0.8 miles northwest of the project site. Noise levels at the raceway are dependent on the type of event, vehicle type, and number of vehicles participating in on-site venues. According to Ambient Air Quality & Noise Consulting, activities on the raceway are generally limited to maximum noise levels of 85 dB to 105 dB at a distance of 50 feet from the track centerline, depending on the venue conducted. However, some events are unrestricted in terms of noise level generation, and raceway staff has indicated that noise levels of up to 113 dB have been observed.

The project site is not located within the projected 60 dBA CNEL noise contour of the Laguna Seca Raceway. However, maximum intermittent noise levels associated with racing events could be perceptible at the proposed project site. Based on a maximum intermittent noise level of 113 dB at 50 feet from the track centerline, predicted maximum noise levels at the western boundary of the project site could reach levels of approximately 75 dBA L_{max}. It is important to note that the predicted noise levels do not account for shielding due to intervening terrain or structures. Although racing events would be limited to the daytime hours, maximum intermittent noise levels may be detectable in the outdoor activity areas of on-site dwelling units. Being subjected to unknown or unplanned noise events can result in increased levels of annoyance and potential activity interference. Therefore, this would be considered a **potentially significant impact**. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM 3.11-4e Prior to or concurrent with recordation of the final subdivision map, the project applicant shall prepare and record a notification agreement disclosing to all future residents at the project site the presence of the Mazda Raceway at Laguna Seca and the potential for elevated noise levels during events at the raceway. All future residents shall be notified of the potential noise exposure prior to entering into an agreement to purchase a residential lot within the project site.

Implementation of mitigation measure **MM 3.11-4e** would ensure that occupants of proposed dwelling units are made aware of potential increases in noise levels associated with nearby racing events prior to purchase, which would reduce this impact to a **less than significant** level.

Public and Private Airports

The nearest airports to the project site are the Carmel Valley Airport, which is located approximately 5.75 miles south of the project site and is currently closed; the Salinas Municipal Airport, located approximately 6 miles northeast of the project site; and the Monterey Municipal Airport, located approximately 6 miles west of the project site. According to Ambient Air Quality & Noise Consulting, the proposed project is not located within the predicted 60 dBA CNEL noise contours of these airports. There are no existing private airstrips within 2 miles of the project site. Implementation of the proposed project would not affect airport operations, nor would implementation of the proposed project result in the development or relocation of any noise-sensitive land uses within 2 miles of any airport or airstrip. As a result, implementation of the proposed project would not result in increased exposure of individuals to excessive aircraft noise levels associated with the existing airports. Therefore, exposure to airport noise levels would be considered a **less than significant impact**.

Exposure to Groundborne Vibrations

Impact 3.11-5 Implementation of the proposed project would result in short-term construction activities that may result in groundborne vibrations that exceed 0.2 inches per second peak particle velocity (ppv). However, ground vibration generated by construction equipment would be less than 0.09 inches per second ppv at 25 feet. Therefore, this would be considered a **less than significant impact.**

Ground vibration spreads through the ground and diminishes in strength with distance. The effects of ground vibration can vary from no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is

primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage.

Long-term operational activities associated with the proposed project would not involve the use of any equipment or processes that would result in potentially significant levels of ground vibration. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Groundborne vibration levels associated with construction equipment are summarized in **Table 3.11-11**. Construction activities associated with the proposed development would likely require the use of various tractors, trucks, and jackhammers.

TABLE 3.11-11
REPRESENTATIVE VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

EQUIPMENT	PEAK PARTICLE VELOCITY AT 25 FEET (IN/SEC PPV)
Large Tractors	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Tractors	0.003

Source: Ambient 2009b

Based on the vibration levels presented in **Table 3.11-11**, ground vibration generated by construction equipment would be less than 0.09 inches per second ppv at 25 feet. Since ground vibration levels diminish in strength with increased distance from the source, the predicted vibration levels at the nearest off-site structures would not be anticipated to exceed even the most conservative threshold of 0.2 inches per second ppv. Therefore, short-term groundborne vibration impacts would be considered a **less than significant impact**. No mitigation measures are necessary.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Exposure to Cumulative Increase in Transportation Noise

Impact 3.11-6 Implementation of the proposed project, combined with other reasonably foreseeable projects, may result in a cumulative increase in transportation noise levels that may be unacceptable to noise-sensitive land uses. However, predicted near-term increases in traffic noise levels attributable to the proposed project would be approximately 0.2 dBA or less. As future development in the region and corresponding traffic volumes along area roadways increase, the proposed project's contribution to cumulative increases in traffic noise levels would be anticipated to decline. Therefore, the proposed project's contribution to cumulative traffic noise levels would be considered a **less than significant cumulative impact.**

Noise generated by the proposed residential land uses, as perceived at nearby land uses, would be primarily associated with increases in vehicle traffic on area roadways. As discussed in **Impact 3.11-3**, predicted near-term increases in traffic noise levels attributable to the proposed project would be less than 1.0 dBA. As future development in the region and corresponding traffic volumes along area roadways increase, the project's contribution to cumulative increases in traffic noise levels would be anticipated to decline. Therefore, the proposed project's contribution to cumulative traffic noise levels would be considered **less than significant**. No mitigation measures are necessary.

REFERENCES/DOCUMENTATION

Ambient Air Quality & Noise Consulting (Ambient). 2009b. *Noise Impact Assessment, Ferrini Ranch, Monterey County*. February 11, 2009.

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