

NOISE IMPACT ANALYSIS
VALLEY PLAZA
CITY OF EL MONTE, CALIFORNIA

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NOISE SETTING

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally considered to be unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The decibel (dB) scale is used to quantify sound pressure levels. Although decibels are most commonly associated with sound, "dB" is a generic descriptor that is equal to ten times the logarithmic ratio of any physical parameter versus some reference quantity. For sound, the reference level is the faintest sound detectable by a young person with good auditory acuity.

Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called "A-weighting," written as dB(A). Any further reference in this discussion to decibels written as "dB" should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called LEQ), or alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Ldn (day-night) or the Community Noise Equivalent Level (CNEL). The CNEL metric has gradually replaced the Ldn factor, but the two descriptors are essentially identical.

CNEL-based standards are generally applied to transportation-related sources because local jurisdictions are pre-empted from exercising direct noise control over vehicles on public streets, aircraft, trains, etc. The City of El Monte therefore regulates the noise exposure of the receiving property through land use controls.

For "stationary" noise sources, or noise sources emanating from private property, such as a parking structure, the City does have legal authority to establish noise performance standards designed to not adversely impact adjoining uses. These standards are typically articulated in the jurisdictional Municipal Code. These standards recognize the varying noise sensitivity of both transmitting and receiving land uses. The property line noise performance standards are normally structured according to land use and time-of-day.

NOISE COMPATIBILITY GUIDELINES

The City of El Monte considers noise compatibility standards in evaluating land use projects. A proposed land use must be shown to be compatible with the ambient noise environment, particularly for noise sources over which direct City control is preempted by other agencies. Such sources

include vehicle traffic on public streets, aircraft or trains. Since the City cannot regulate the noise level from the source, it exercises its land use decision authority to insure that noise/land use incompatibility is minimized.

As shown in Figure 1, community noise exposures are recommended as normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable for various classes of land use sensitivity. The City of El Monte guidelines recommend an exterior noise exposure of less than 60 dB CNEL in usable outdoor space for residential noise sensitive uses as “normally acceptable” and up to 70 dB CNEL are considered “conditionally acceptable” and may be permitted if noise mitigation is included in the design.

Although the El Monte guidelines allows exterior noise levels of up to 70 dB CNEL, a noise level of 65 dB is the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice. A noise exposure of 65 dB CNEL is typically recommended as the exterior noise land use compatibility guideline for new residential dwellings in California. CNEL-based standards generally apply to usable outdoor recreational space at backyards, patios or balconies. Interior exposures of noise-sensitive uses are controlled through adequate structural attenuation.

Because retail/commercial/office uses are not occupied on a 24-hour basis, the exterior noise exposure standard for less sensitive land uses is generally less stringent. Unless commercial projects include noise-sensitive uses such as outdoor dining, noise exposure is generally not considered a commercial facility siting constraint for typical project area noise exposures. The City of El Monte noise compatibility guidelines recommend 70 dB CNEL as “normally acceptable” and 75 dB CNEL as a “conditionally acceptable” exterior noise exposure for commercial uses such as the proposed retail and office uses.

An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings and hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in any residential use, included single-family dwelling units. Since normal noise attenuation within residential structures with closed windows is 25-30 dB, an exterior noise exposure of 70-75 dB CNEL allows the interior standard to be met without any specialized structural attenuation (dual paned windows, etc.), but with closed windows and fresh air supply systems or air conditioning in order to maintain a comfortable living environment. An interior noise threshold of 50 dB CNEL is typically applied to commercial uses.

**Figure 1
City of El Monte Noise Compatibility Guidelines**

Land Use	Community Noise Exposure (Ldn or CNEL)					
	55	60	65	70	75	80
Residential	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Transient Lodging – Motel, Hotel	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters ¹	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports ¹	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Playgrounds, Parks	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Golf Course, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial, and Professional	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable

Source: Modified by Cotton/Bridges/Associates from 1998 State of California General Plan Guidelines.



Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved meet conventional Title 24 construction standards. No special noise insulation requirements.



Conditionally Acceptable: New construction or development shall be undertaken only after a detailed noise analysis is made and noise reduction measures are identified and included in the project design.



Normally Unacceptable: New construction or development is discouraged. If new construction is proposed, a detailed analysis is required, noise reduction measures must be identified, and noise insulation features included in the design.



Clearly Unacceptable: New construction or development clearly should not be undertaken.

NOISE STANDARDS

For noise generated on one property affecting an adjacent use, the City of El Monte limits the amount of noise crossing the boundary between the two uses. For regulated on-site sources of noise generation, the El Monte noise ordinance prescribes limits that are considered an acceptable exposure for residential uses in proximity to regulated noise sources. The L₅₀ metric used in the El Monte noise ordinance is the level exceeded 50% of the measurement period of thirty minutes in an hour. One-half of all readings may exceed this average standard with larger excursions from the average allowed for progressively shorter periods. The larger the deviation, the shorter the allowed duration up to a never-to-exceed 20 dB increase above the 50th percentile standard. Nighttime noise levels limits are reduced by 5 dB to reflect the increased sensitivity to noise occurring during that time period.

The City L₅₀ noise standard is 65 dB during the day (7 a.m. – 10 p.m.), and 60 dB at night (10 p.m. – 7 a.m.). These noise standards are shown in Table 1. The Municipal Code also states that if a residential use is located within a commercial or industrial zone, the ambient noise level shall not exceed fifty (50) dBA between the hours of ten p.m. and seven a.m. For this project the neighboring uses such as the McDonalds restaurant will be held to more stringent standards for residential uses at the project site.

Development of the project parcel places potential noise limits upon remaining commercial uses. However, freeway proximity and background noise levels are likely higher than the noise standards such that a determination of the McDonalds restaurant as an offending noise source is likely not possible. As subsequently discussed, this “new” constraint is not anticipated to be a significant source of impact.

Jurisdictions typically allow for a relaxation of standards if baseline noise levels already exceed the Table 1 values. If the ambient noise level is greater than the identified noise standards, the noise standard becomes the ambient noise level without the offending noise.

The Ordinance also restricts hours of construction to hours of lesser noise sensitivity with heavy equipment to operate only from 6 a.m. to 7 p.m. during the week and on 8 a.m. to 7 p.m. on Saturdays and Sundays. Construction is not permitted on Federal Holidays.

Table 1
EL MONTE NOISE ORDINANCE LIMITS
(Exterior Noise Level not to be Exceeded)

Zone	Day 7:00 a.m. to 10:00 p.m.	Night 10:00 p.m. to 7:00 a.m.
Single-family	50 dBA	45 dBA
Multifamily	55 dBA	50 dBA
Commercial	65 dBA	60 dBA

Zone	Day 7:00 a.m. to 10:00 p.m.	Night 10:00 p.m. to 7:00 a.m.
Industrial	70 dBA	70 dBA

Source: El Monte Municipal Code Section 8.36.040

The not to exceed value for these standards is as follows:

- 1) The noise standard for a cumulative period of more than thirty (30) minutes in any hour; or
- 2) The noise standard plus five (5) dB(A) for a cumulative period of more than five (5) but less than fifteen (15) minutes in any hour; or
- 3) The noise standard plus ten (10) dB(A) for a cumulative period of more than one (1) but less than five (5) minutes in any hour; or
- 4) The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one (1) minute in any hour

BASELINE NOISE LEVELS

A short term on-site noise measurement was made in order to document the existing baseline level in the project area. This helps to serve as a basis for projecting future noise exposure from the project upon the surrounding community and noise from the community on the project. Noise monitoring was conducted on Friday, June 12, 2015, at approximately 11:50-12:15 p.m., at the location shown on Figure 2 and summarized below.

Measured Noise Levels (dBA)

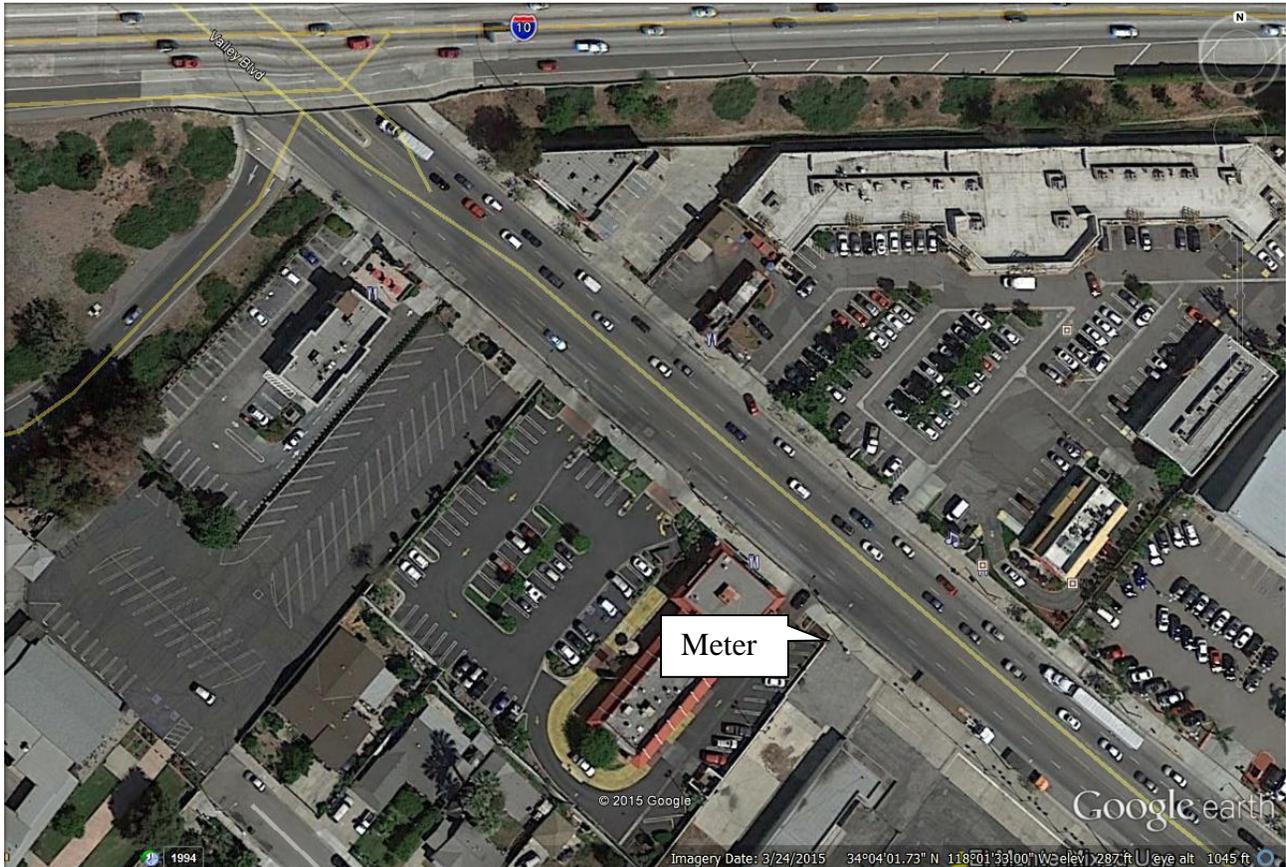
	Leq	L ₂₅ (15 min)	L ₈ (5 min)	L ₂ (1 min)
Measured Noise Levels	67	67	70	72
Exterior Noise Limit Daytime	65	70	75	80
Exterior Noise Limit Nighttime	60	65	70	75

Monitoring experience shows that 24-hour weighted CNELs can be reasonably well estimated from mid-afternoon hour noise readings. CNELs are approximately equal to afternoon hour Leq plus 2 dB (Caltrans Technical Noise Supplement, 2009).

The noise meter is representative of noise levels along the project perimeter closest to Valley Boulevard, the I-10 freeway and the McDonalds restaurant. At approximately 50 feet from the Valley Boulevard centerline, existing noise levels are expected to be approximately 69-70 dB CNEL. With limited additional traffic volume growth, future traffic noise levels may increase. However, decibels are a logarithmic progression. If all activity levels were to increase by +25%, future noise levels would only increase by +1 dB. Such an increase is imperceptible to human ears. Future project site noise levels will be almost indistinguishable from currently measured levels.

Levels near 70 dB CNEL in any usable residential outdoor space would exceed General Plan Noise Element Standards but are readily mitigated by standard design features.

Figure 2
Noise Meter Location



NOISE IMPACTS

IMPACT SIGNIFICANCE CRITERIA

Noise impacts are considered significant if:

1. They create violations of noise standards, or,
2. They substantially worsen an already excessive noise environment, or,
3. They substantially increase an existing quiet environment even if noise standards are not violated by the proposed action.

Three characteristic noise sources are typically identified with land use intensification such as that proposed for the development of the El Monte Valley Plaza project. Construction activities, especially heavy equipment, will create short-term noise increases near the project site. Such

impacts would be important for any nearby noise-sensitive receptors, such as any existing residential uses. Upon completion, project-related traffic will cause an incremental increase in area-wide noise levels throughout the project area. Traffic noise impacts are generally analyzed both to insure that the project does not adversely impact the acoustic environment of the surrounding community, as well as to insure that the project site is not exposed to an unacceptable level of noise resulting from the ambient noise environment acting on the project. Finally, the project analysis needs to examine noise from the proposed uses upon sensitive uses.

According to the current CEQA Appendix G guidelines, noise impacts are considered potentially significant if they cause:

- a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Noise levels exceeding the City of El Monte Noise Standards would be considered significant.
- b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

CEQA Guidelines also identify potential impact significance due to aircraft noise. There are no airports in very close proximity to the site where aircraft noise would be an issue.

The term "substantial increase" is not defined by any responsible agency. The limits of perceptibility by ambient grade instrumentation (sound meters) or by humans in a laboratory environment is around 1.5 dB. Under ambient conditions, people generally do not perceive that noise has clearly changed until there is a 3 dB difference. A threshold of 3 dB is commonly used to define "substantial increase." An increase of +3 dBA CNEL in traffic noise would be consistent a significant impact.

CONSTRUCTION NOISE IMPACTS

Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated by large, earth-moving equipment sources for demolition and grading. During construction and paving, equipment is generally less noisy.

Construction noise tends to occur in discrete phases dominated initially by demolition and/or earth-moving sources and later for finish construction and paving. Figure 3 shows the typical range of construction activity noise generation as a function of equipment used in various building phases. The earth-moving sources are seen to be the noisiest with equipment noise ranging up to about 90 dB(A) at 50 feet from the source. Spherically radiating point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, or about 6 dB in 100 feet of propagation. The impact radius pre-supposes a clear line-of-sight and no other machinery or

equipment noise that would mask project construction noise. With buildings and other barriers to interrupt line-of-sight conditions, the potential “noise envelope” around individual construction sites is reduced. Construction noise impacts are, therefore, somewhat less than that predicted under idealized input conditions.

The closest existing sensitive uses to the project site are the single family homes to the south. A 12 foot landscape buffer separates the existing residential uses south of the site from project activities. Beyond the landscape buffer is a paved parking area and drive aisle. The closest proposed structure has an 80 foot setback to the project property line and an additional 40 feet to the nearest off-site residential receiver. Activities associated with roadway paving will therefore be 50 feet from the closest existing residence and more than 120 feet from the nearest on-site structure with a much larger setback to the remainder of the site. It is not likely that the heaviest equipment would operate closest to the property line, but construction noise at the adjacent sensitive uses could be as high as 85 dB during paving of the parking area and 77 dB during grading of the building pads. Existing 6-foot walls along the shared project alignment would provide about 6 dB of noise attenuation for an maximum construction noise level of 71 dB during the noisiest construction activities.

Construction noise is mitigated by construction by compliance to the allowable hours of operation of 6 a.m. to 7 p.m. during the week and on 8 a.m. to 7 p.m. on Saturdays and Sundays. Construction is not permitted on Federal Holidays. The temporary nature of construction noise and reasonable distance set-back from noisiest activities are expected to maintain short-term construction noise impacts at less-than-significant levels.

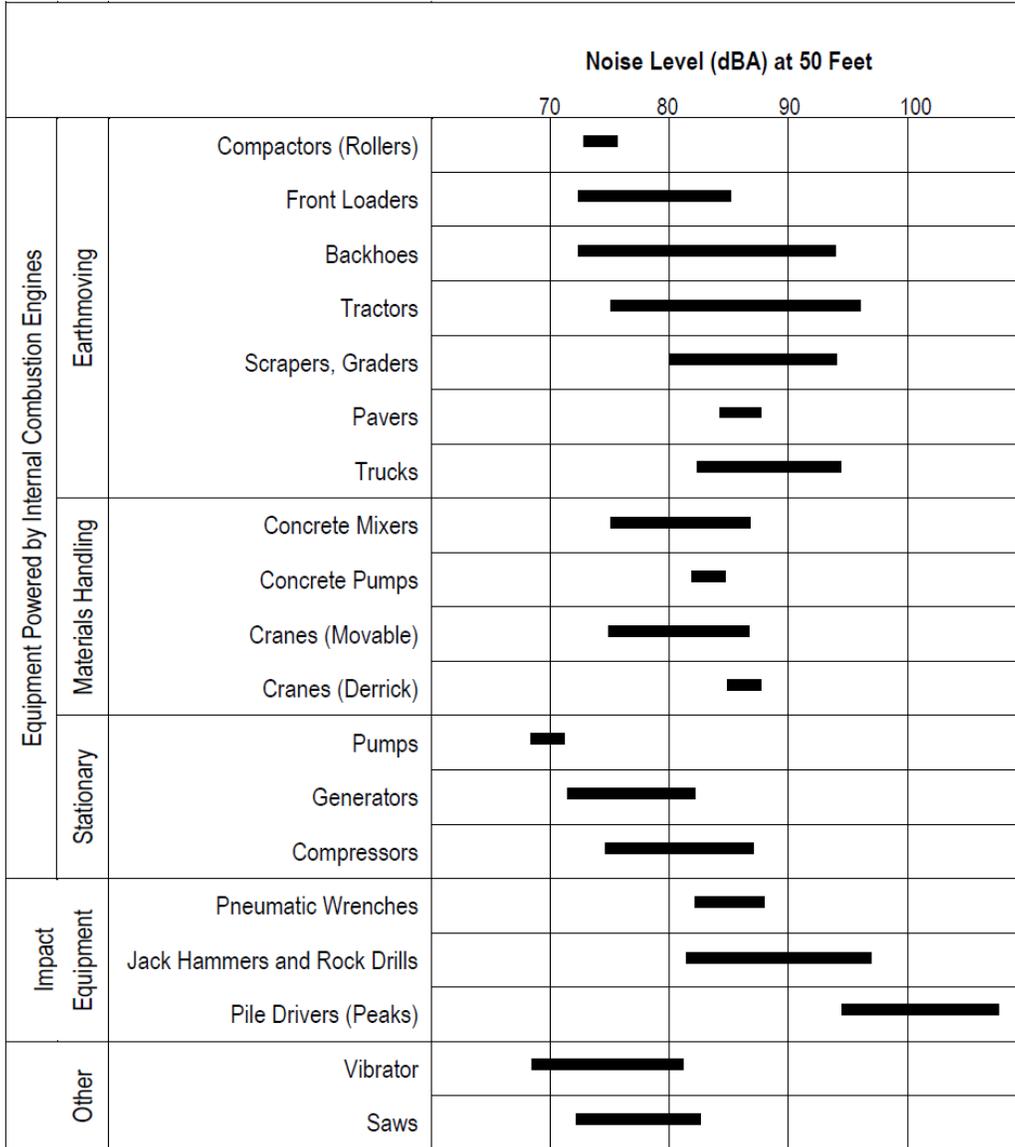
CONSTRUCTION ACTIVITY VIBRATION

Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of ground-borne vibration include discernable movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Within the “soft” sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

Vibration is most commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

65 VdB	-	threshold of human perception
72 VdB	-	annoyance due to frequent events
80 VdB	-	annoyance due to infrequent events
100 VdB	-	minor cosmetic damage

Figure 3
Typical Construction Equipment
Noise Generation Levels



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

To determine potential impacts of the project’s construction activities, estimates of vibration levels induced by the construction equipment at various distances are presented below:

Equipment	Approximate Vibration Levels (VdB)*			
	25 feet	50 feet	65 feet	100 feet
Large Bulldozer	87	81	79	75
Loaded Truck	86	80	78	74
Jackhammer	79	73	71	67
Small Bulldozer	58	52	50	46

* (FTA Transit Noise & Vibration Assessment, Chapter 12, Construction, 1995)

The on-site construction equipment that will create the maximum potential vibration is a large bulldozer. The stated vibration source level in the FTA Handbook for such equipment is 81 VdB at 50 feet from the source. With typical vibrational energy spreading loss, the vibration annoyance standard second is met at 56 feet. Effects of vibration perception such as rattling windows could only occur at the nearest residential structures, though vibration resulting from project construction would not exceed cosmetic damage thresholds.

Large bulldozers will not likely operate directly at the shared property line with the perimeter homes. A landscape buffer followed by a parking area is planned closest to the south of the site adjacent to the residential uses. Regardless, any fine grading at the property line should be performed with small bulldozers which are seen above to have 30 VdB less vibration potential. Therefore, to ensure adequate vibration annoyance protection the following mitigation measure is recommended:

- Only small bulldozers shall be permitted to operate within 56 feet of the nearest residential structures.

Construction activity vibration impacts are judged as less-than-significant.

OFF-SITE PROJECT-RELATED VEHICULAR NOISE IMPACTS

Long-term noise concerns from the residential and commercial uses at the project site can be derived from vehicular operations on project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the Leq noise level for a reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds, or noise barriers.

Table 2 summarizes the 24-hour CNEL level at 50 feet from the roadway centerline along area roadway segments. The noise analysis utilizes data from the project traffic analysis, prepared by the traffic consultant for this project. Two traffic years were evaluated; existing conditions (“with project” and “without project”), and year 2018, (“with project” and “without project”).

As shown in Table 2, project implementation in the existing and opening year does little to change the traffic noise environment. Because the area is mostly built out, addition of project traffic to area roadways does little to the traffic noise environment. The project area will experience limited traffic volume changes and the amount of traffic generated by the proposed project is diluted by significant background traffic volumes. The largest project related impact is +0.9 dB CNEL at 50 feet from the Valley Boulevard centerline and most segments show no discernable impact. The cumulative analysis, which compares “future with project” to “existing” conditions, shows a maximum impact of +1.0 dB CNEL at 50 feet from roadway centerline. These increases are much less than the +3 dB significance threshold. Project only related traffic noise increases and cumulative traffic noise increases are less-than-significant.

**Table 2
Traffic Noise Impact Analysis
(dBA CNEL at 50 feet from centerline)**

Segment		Existing No Project	Existing With Project	2018 No Project	2018 With Project
Valley Blvd/	Ramona-Johnson	68.8	68.9	69.3	69.3
	Meeker-Peck	69.1	69.2	69.5	69.6
	E of I-10	69.8	70.0	70.2	70.4
	E of Mountain View	69.0	69.1	69.5	69.5
Peck Road/	N of Valley	70.7	70.8	71.0	71.0
	S of Meeker	69.1	69.1	69.4	69.4
Mountain View Rd/	Lansdale -Valley	64.8	64.9	64.9	65.1
	Valley-Garvey	64.8	64.9	64.9	65.0
Garvey/	N of Valley	66.8	66.8	66.9	66.9
	Valley-Mountain View	68.0	68.0	68.4	68.4
La Madera/	S of Valley	55.7	56.6	55.8	56.7

**Project Impact
(dBA CNEL at 50 feet from centerline)**

		Project Only Impact	Cumulative Impact*
Valley Blvd/	Ramona-Johnson	0.1	0.5
	Meeker-Peck	0.1	0.5
	E of I-10	0.2	0.6
	E of Mountain View	0.1	0.5
Peck Road/	N of Valley	0.1	0.3
	S of Meeker	0.0	0.3
Mountain View Rd/	Lansdale -Valley	0.1	0.3
	Valley-Garvey	0.1	0.3
Garvey/	N of Valley	0.0	0.1
	Valley-Mountain View	0.0	0.4
La Madera/	S of Valley	0.9	1.0

*The difference between “2018 with project” and “existing” traffic noise levels

ON-SITE VEHICULAR NOISE IMPACTS

Although the City of El Monte guidelines allows exterior noise levels of up to 70 dB CNEL, a noise level of 65 dB is the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice. A noise exposure of 65 dB CNEL is often the exterior noise land use compatibility guideline for new residential dwellings in California.

Valley Boulevard abuts the project site on the northeast. The future with project traffic noise along Valley Boulevard is expected to be slightly more than 70 dB CNEL at 50 feet from centerline such that proximity is considered a siting constraint for residential use. Along the Valley Boulevard frontage the ground floor will be commercial use with the two upper levels comprised of residential use. The residential units are currently designed with balconies fronting Valley Boulevard. These balconies will have a 55 foot setback from the Valley Boulevard centerline. Noise levels for balcony use are expected to be slightly less than 70 dB CNEL at build out.

Recreational uses at the project site may be considered to be common space. These common areas are located either indoors or interior to the complex. Most jurisdictions do not require noise protection for individual recreational space if noise-protected common space is provided, which is the case with this project.

The indoor Fitness Center, outdoor West Central Courtyard and East Central Courtyard and BBQ areas are setback from Valley Boulevard. The Courtyards and BBQ areas are noise protected by on-site structures and setback distances. The Fitness Center is an indoor use. These areas are afforded acoustical protection such that noise levels are expected to be well within the 65 dBA CNEL limit.

However, if individual residential patios or balconies on units with a line-of-sight to Valley Boulevard are required to meet established noise compatibility guidelines, noise protection would be required. The project balconies could be equipped with a shield which would break the line-of-sight between the receiver and noise source while still permitting view. A combination solid base and upper transparent noise shield (e.g., plexi-glass) along the perimeter of the residential patios facing the roadway would reduce noise by at least 5 dBA. This would facilitate a noise level at the receiving use of 65 dB CNEL and would meet the City of El Montes noise compatibility guideline permissible after consideration of mitigation.

Therefore, one of the two mitigation measures is proposed:

- Consider private noise-protected outdoor usable space in a shared common location within the proposed project site, such as the Fitness Center or the two Central Courtyards and BBQ areas. as adequate to meet a 65 dB CNEL standard; or
- Equip residential patios or balconies with a line of sight to Valley Boulevard with transparent glass or plastic shields that reduce noise. Shields would need to be 5 feet tall and fill the entire roadway frontage. Such an enclosure would meet a 65 dB CNEL standard.

The interior residential noise standard is 45 dB CNEL. For typical wood-framed construction with stucco and gypsum board wall assemblies, the exterior to interior noise level reduction is as follows:

Partly open windows – 12 dB

Closed single-paned windows – 20 dB

Closed dual-paned windows – 30 dB

Use of dual-paned windows is required by the California Building Code (CBC) for energy conservation in new residential construction.

Interior standards will be met as long as residents have the option to close their windows. Where window closure is needed to shut out noise, supplemental ventilation is required by the CBC with some specified gradation of fresh air. Central air conditioning or a fresh air inlet on a whole house fan would meet this requirement.

Because commercial uses are not occupied on a 24-hour basis, the exterior noise exposure standard for less sensitive land uses is generally less stringent. Unless commercial projects include noise-sensitive uses such as outdoor dining, noise exposure is generally not considered a commercial facility siting constraint for typical project area noise. The recommended interior noise standard of 50 dB CNEL will be met with closed windows.

SITE OPERATIONAL NOISE

The project proposes a mixed use site with a small retail, restaurant and office use component on the ground level. Office noise is considered passive and is not expected to create a noise nuisance for the on or off site residential uses. The small proposed retail space is similarly not anticipated to negatively impact sensitive uses. Neither the retail or office component would entail activities that extend into the late night.

Noise conflict from restaurant uses can occur during clean-up operations late in the evening when trash is dumped, water is sprayed under pressure for removing waste and employees interact with raised voices. Commercial uses with a potential for noisy activities such food establishments typically require a conditional use permit (CUP). The CUP will contain measures specifically designed to minimize impacts, including noise. Mechanisms, such a permit conditions, are in place to ensure that the project site will maintain compatibility with respect to noise generation.

CONCLUSIONS

Project-related off-site traffic noise changes on existing streets are less than significant.

Traffic noise from Valley Boulevard may exceed City standards for outdoor recreational balcony/deck space fronting the roadway. Enclosure of unit balconies facing Valley Boulevard with

a 5-foot transparent glass or plastic shield will reduce noise by 5 dB CNEL and thereby achieve 65 dB CNEL. Alternatively recreational space may be considered to be common outdoor space (the central garden and recreational facility) sited in the interior of the complex. This area is noise protected by the perimeter structures such that noise levels are expected to be well within the 65 dB CNEL contour. Most jurisdictions do not require noise protection for individual recreational space if noise-protected common space is provided, which is the case with this project.

Habitable residential interior space will be adequately noise protected to achieve 45 dB with only the ability to close windows at perimeter units. Construction of the recommended 5-foot transparent glass or plastic shield enclosure along each balcony with a line-of-sight to Valley Boulevard would add an extra level of protection. Where window closure is needed for policy compliance, supplemental fresh air ventilation will be provided at rates specified in the California Building Code.

Interior noise levels at the proposed commercial uses will meet the recommended 50 dB CNEL noise level with closed windows and standard construction.

Short-term construction noise intrusion shall be mitigated by compliance with the City of El Monte Noise Ordinance. The allowed hours of construction are from 6 a.m. to 7 p.m. Monday through Friday and 8 a.m. to 7 p.m. on Saturdays and Sundays. Construction nuisance noise at the nearest sensitive use is nevertheless minimized by the following suggested conditions:

- All equipment shall be equipped with properly operating and maintained mufflers.
- Equipment and materials shall be staged in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors nearest the project site during all project construction.
- All construction-related activities shall be restricted to the construction hours outlined in the City's Noise Ordinance.

To ensure adequate vibration annoyance protection the following mitigation measure is recommended:

- Only small bulldozers shall be permitted to operate within 56 feet of the nearest project structures.