

Appendix G – Noise Assessment

Draft Environmental Impact Report (SCH#2026010287) June 2026

RVA

MEMORANDUM

URBAN CROSSROADS

DATE: April 4, 2025

TO: [Status]Ruth Villalobos & Associates Inc.

FROM: William Maddux

JOB NO: 15559-03

CHINO EUCLID BRIDGE NOISE ASSESSMENT

Urban Crossroads, Inc. is pleased to provide the following Noise Assessment for the Chino Euclid Bridge (Project) which is located along Euclid Avenue (State Route 83) between Pine Avenue and State Route 71 in the City of Chino, as shown in Exhibit A (Location Map).

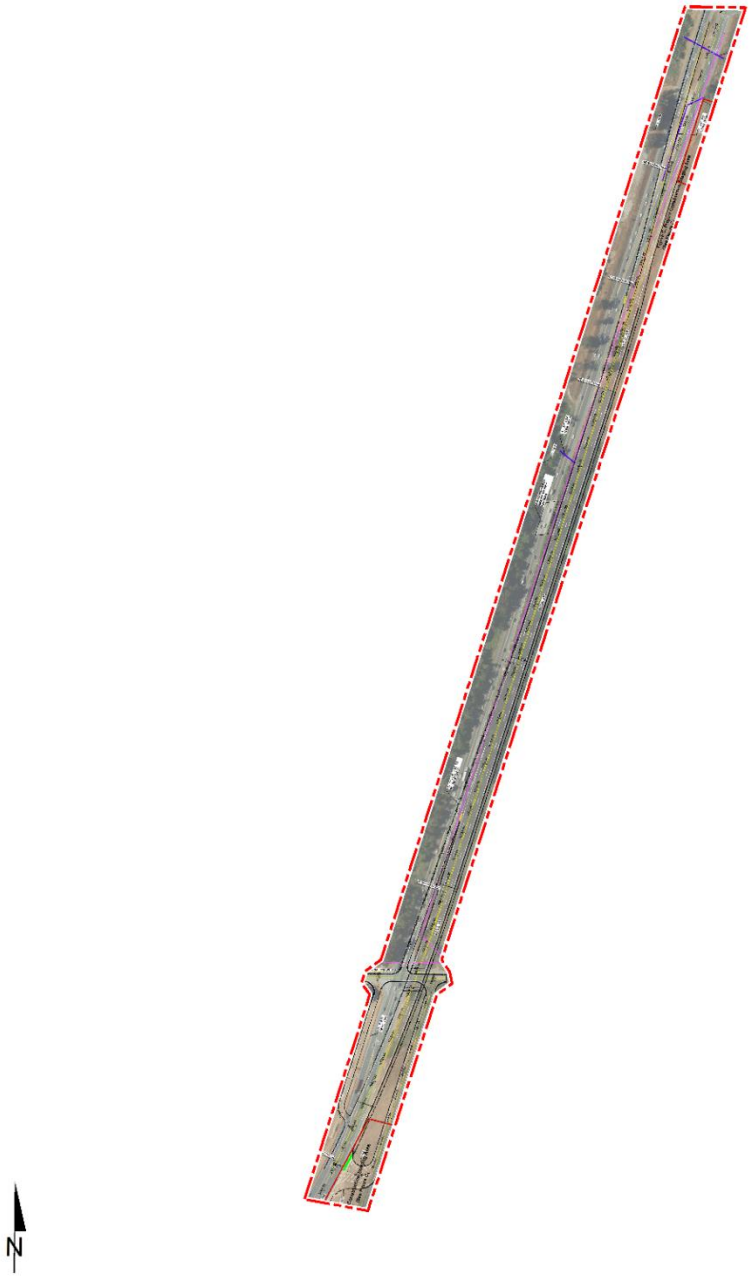
PROJECT OVERVIEW

It is our understanding that the Project is to consist of a new bridge span, shown in Exhibit B (Site Plan), and is expected to be approximately 2,400 feet long, The purpose of the Project is to elevate the current roadway to prevent flooding. The Project footprint also passes through endangered bird species habitat. The Project is anticipated to be constructed by the year 2028.

EXHIBIT A: LOCATION MAP



EXHIBIT B: SITE PLAN



CONSTRUCTION NOISE STANDARDS

Typically noise from construction activities are evaluated against standards established under a City's Municipal Code. To control noise impacts associated with the construction of the proposed Project, the City has established limits to the hours of operation. (1) The City of Chino Municipal Code, Section 9.40.060 indicates that construction, shall be limited to the hours of 7:00 a.m. to 8:00 p.m. weekdays. Construction activity is not permitted on Sundays or federal holidays. (2) However, neither the City of Chino General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*. Therefore, a numerical construction threshold for determining impacts to humans is based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for the analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a threshold for noise-sensitive residential land uses, a noise level of 85 dBA L_{eq} for commercial locations, and 90 dBA L_{eq} for industrial locations. (3)

WILDLIFE HABITAT

This noise analysis predicts the construction noise levels within the habitat for threatened and endangered species. However, this noise analysis does not determine the significance of the noise level impacts on threatened and endangered species. The RECON Environmental, Inc. *(RECON)* drafted a comprehensive management plan that utilizes a 60 dBA threshold for the Least Bell's Vireo. (4) Therefore, for the purposes of this analysis, the 60 dBA noise level contour is calculated to evaluate the potential noise level impact in the habitat areas.

EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at four locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit C Noise Measurement Locations(provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Monday October 21, 2024. Appendix B includes study area photos.

MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment in the surrounding habitat, hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual

hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour noise levels, such as CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meters and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (5)

NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned within the habitat along Euclid Avenue to assess the existing ambient hourly noise levels at potential noise sensitive habitat areas. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (6) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (7)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at every location, because each receiver measurement represents a group of buildings or an area that shares acoustical equivalence. (7) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers are different than measurement locations and represent a location of noise-sensitive areas, which are used to estimate future noise levels and evaluate noise impacts. Collecting reference ambient noise level measurements at the nearest sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

EXHIBIT C: NOISE MEASUREMENT LOCATIONS



NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (Leq). The equivalent sound level (L_{eq}) represents a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. Table 1 (24-Hour Ambient Noise Level Measurements) provides the (energy average) noise levels used to describe the daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) ambient conditions. These daytime and nighttime energy average noise levels represent the average hourly noise levels observed during these periods expressed as a single number.

TABLE 1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located at the western boundary of the project site north of the Prado Olympic Shooting Range	63.2	61.8
L2	Located at the western boundary of the project site next to the Prado Olympic Shooting Range	66.3	58.8
L3	Located at the eastern boundary of the project site at Chino Creek	62.0	59.8
L4	Located at the eastern boundary of the project site north of Chino Creek	60.7	59.9

[1] See Exhibit C for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix C. "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with Euclid Avenue. As shown in Table 1, the existing ambient noise levels are already equal to or greater than 60 dBA L_{eq} in the habitat adjacent to Euclid Avenue. Appendix C provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L1, L2, L5, L8, L25, L50, L90, L95, and L99 percentile noise levels observed during the daytime and nighttime periods.

SENSITIVE RECEIVER LOCATIONS

To assess the potential for short-term construction noise impacts, the following sensitive receiver locations, as shown in Exhibit D (Receiver Locations), were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas.

To describe the potential off-site Project noise levels, 4 receiver locations in the vicinity of the Project site were identified as representative of sensitive nesting grounds for nearby endangered

bird species. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise analysis will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the Project boundary to each receiver location.

R1: R1 is located at the Pacifica Senior Living Chino Hills, 6500 Butterfield Ranch Road. Since no outdoor use areas are facing the Project, R1 represents the building façade nearest and facing the Project site.

R2: R2 is located at a multiple family residential building at 17871 Shady View Drive. Since no outdoor use areas are facing the Project, R2 represents the building façade nearest and facing the Project site.

R3: R3 is located at the Prado Golf Course, Hole 6 on the green. R3 represents the nearest location within the golf course to the Project site where someone would stand.

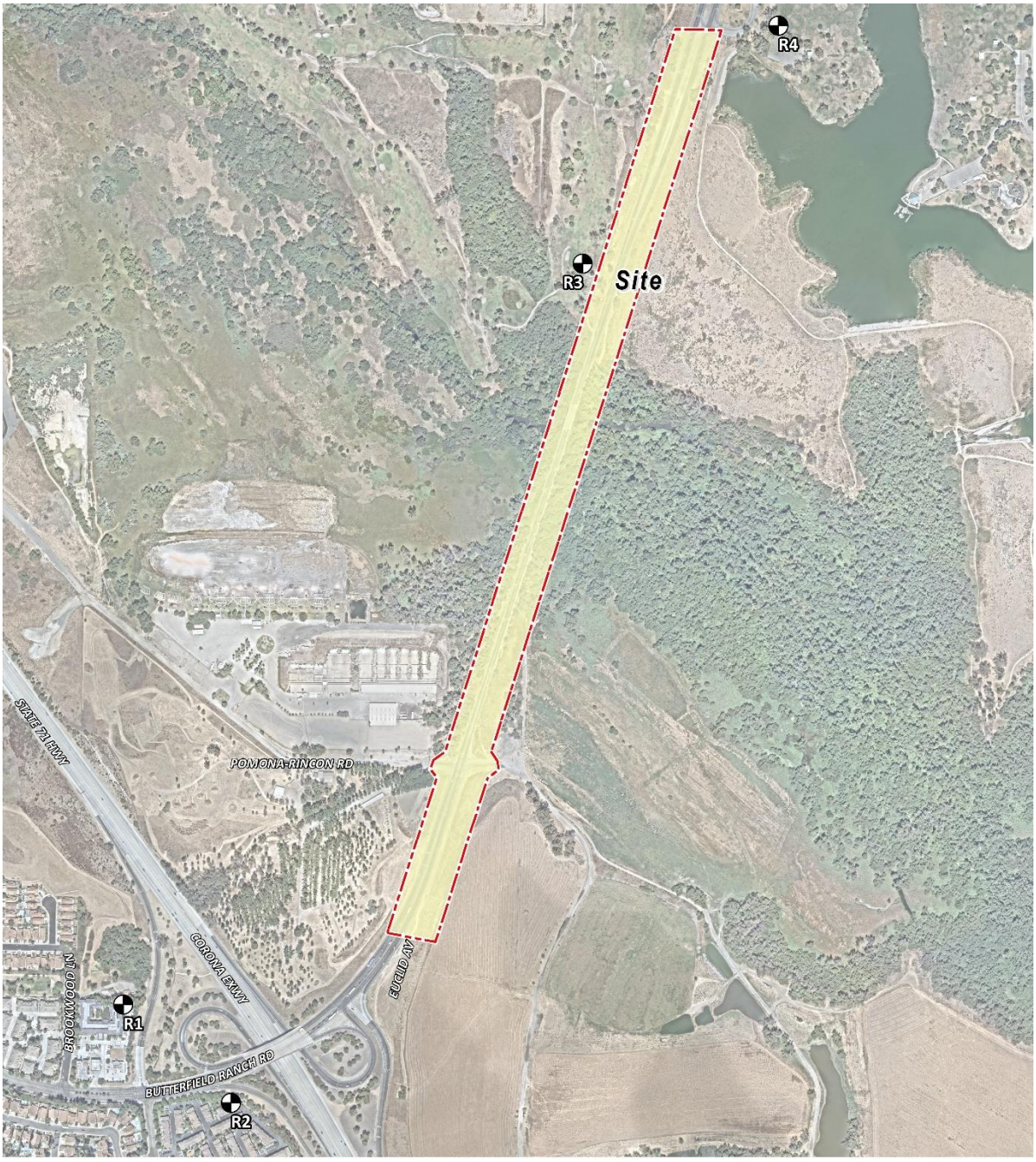
R4: R4 is located at the Prado Disc Golf Course, near the location of a picnic table, R4 represents bird nesting habitat west of the Project. R4 represents the nearest location within the disc golf course to the Project site where someone would stand or rest.

CADNAA NOISE PREDICTION MODEL

To fully describe the exterior construction noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels. Using the ISO 9613 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of the noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613 protocol (8), the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The construction noise level calculations provided in this noise analysis account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground absorption factor of 0.75 was used in the noise analysis to account for mixed ground representing a combination of hard and mostly soft surfaces, i.e., vegetation.

EXHIBIT D: RECEIVER LOCATIONS



CONSTRUCTION NOISE ASSESSMENT

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit D shows the construction activity boundaries in relation to the nearby sensitive receiver locations.

CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

- Land Grubbing
- Grading
- Foundation Construction
- Substructure Construction
- Superstructure Construction
- Approach Embankment Construction

CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (9) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. Table 2 (Construction Reference Noise Levels) presents the equipment modeled for each phase of construction.

EXHIBIT E: CONSTRUCTION NOISE SOURCE LOCATIONS

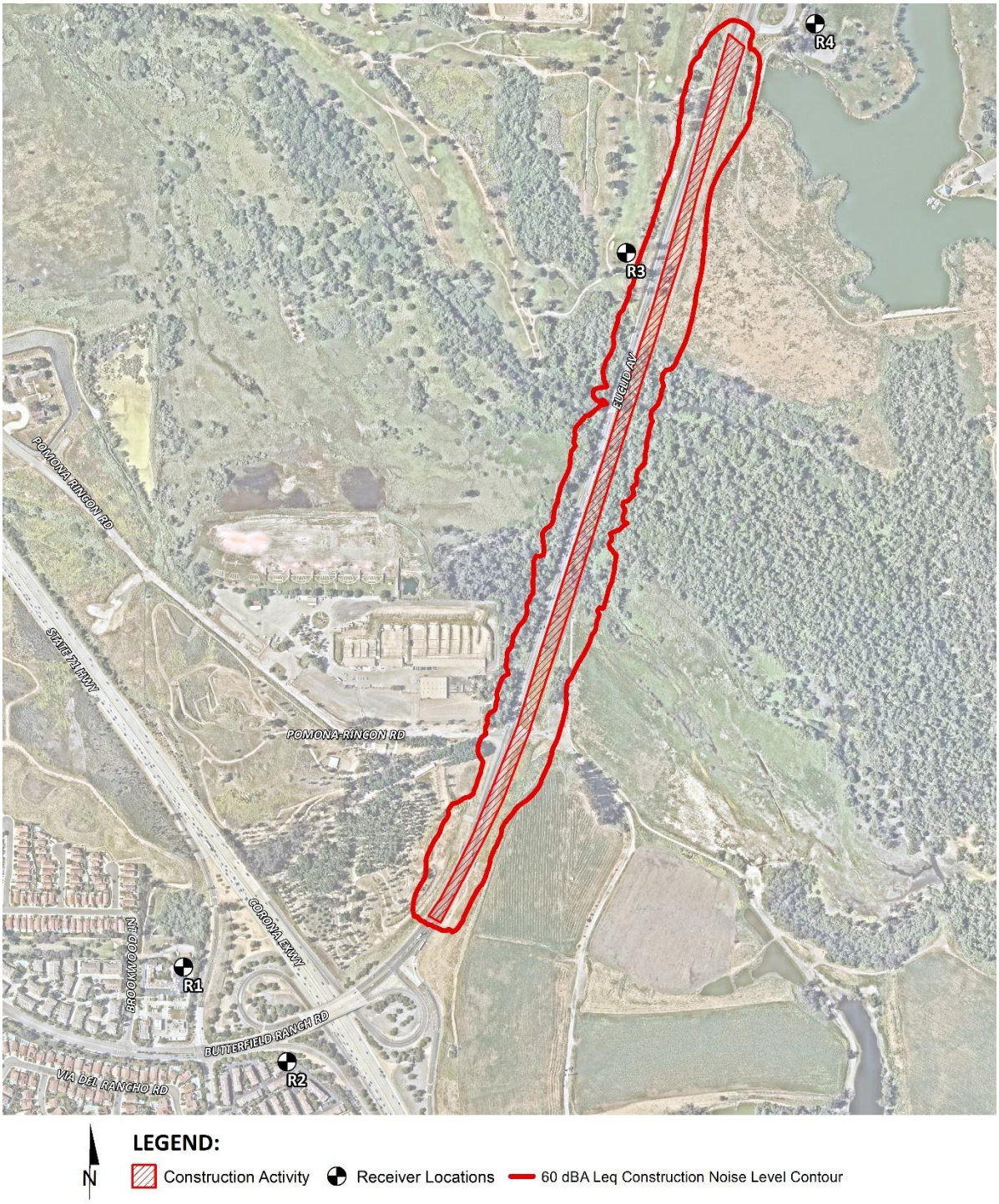


TABLE 2: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA L_{eq})[1]	Combined Noise Level (dBA L_{eq})[2]	Combined Sound Power Level (PWL)[3]
Land Grubbing	Dozer	78	81.0	112.6
	Front End Loader	75		
	Crane	73		
Grading	Dozer	78	83.0	114.6
	Grader	81		
	Dump Truck	72		
Foundation Construction	Drill Rig Truck	72	84.0	115.6
	Crane	73		
	Backhoe	74		
	Gradall	79		
	Man Lift	68		
	Compactor (ground)	76		
	Generator	78		
Substructure Construction	Crane	73	80.0	111.6
	Man Lift	68		
	Gradall	79		
Superstructure Construction	Crane	73	80.0	111.6
	Man Lift	68		
	Gradall	79		
Approach Embankment Construction	Front End Loader	75	84.0	115.6
	Grader	81		
	Concrete Mixer Truck	75		
	Concrete Pump Truck	74		
	Roller	73		

[1] FHWA Roadway Construction Noise Model (RCNM).
[2] Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.

CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 2 further presents the combined noise levels for the loudest construction equipment. As shown in Table 3 (Construction Equipment Noise level Summary), the

construction noise levels are expected to range from 36.1 to 54.4 dBA L_{eq} at the nearest existing receiver locations. Appendix D includes the detailed CadnaA construction noise model inputs.

TABLE 3: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Grading	Foundation Construction	Substructure Construction	Superstructure Construction	Approach Embankment Construction	Highest Levels[2]
R1	40.8	41.8	37.8	37.8	41.8	41.8
R2	39.1	40.1	36.1	36.1	40.1	40.1
R3	53.4	54.4	50.4	50.4	54.4	54.4
R4	51.3	52.3	48.3	48.3	52.3	52.3

[1] Construction noise source and receiver locations are shown in Exhibit E.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix D.

CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at the nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities, as shown in Table 4 (Construction Noise Level Compliance). Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 4: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	41.8	80	No
R2	40.1	80	No
R3	54.4	80	No
R4	52.3	80	No

[1] Construction noise source and receiver locations are shown in Exhibit E.
[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations, as shown in Table 3.
[3] FTA 2020.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

BIOLOGICAL AREA NOISE LEVELS

Based on the predicted noise levels in the adjacent habitat, construction activities should be avoided during the nesting/breeding season where possible. Should it be necessary to conduct grading or other construction activities during the bird breeding season, a biological mitigation plan and

preconstruction nesting survey of all areas should be prepared and conducted by a certified biologist. Please refer to the Biological Technical Report, MM Bio-9.

If the Biological Monitor has determined that there are sensitive bird nests within the 60 dBA L_{eq} noise level contour shown in Exhibit E (Construction Noise Source Locations), please refer to the Biological Technical Report, MM Bio-9.

REFERENCES

1. **City of Chino.** Municipal Code, Chapter 9.40. [Online]

2. —. Municipal Code, Chapter 9.40. [Online] https://library.municode.com/ca/chino/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.44TECODE_15.44.030COHO.

3. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123.* September 2018.

4. **RECON Environmnetal, Inc.** *Draft Comprehensive Species Management Plan.* 1989.

5. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*

6. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.

7. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.

8. **International Organization for Standardization.** *Acoustics — Attenuation of sound during propagation outdoors — Part 2.* s.l. : International Organization for Standardization, 2024. ISO 9613-2:2024.

9. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.

APPENDIX A

CITY OF CHINO MUNICIPAL CODE NOISE STANDARDS

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Chapter 9.40 - NOISE*

Sections:

9.40.010 - Definitions.

The following words, phrases and terms as used in this chapter shall have the meanings as indicated here:

"Agricultural property" means a parcel of real property which is undeveloped for any use other than agricultural purposes.

"Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

"A-weighted sound level" means the total sound level meter with a reference pressure of twenty micro-pascals using the A-weighted network (scale) at slow response. The unit of measurement shall be defined as dBA.

"Commercial property" means a parcel of real property which is developed and used as either in or part or in whole for commercial purposes.

"Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.

"Decibel (dB)" means a unit which denotes the ratio between two quantities which are proportional to power: the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.

"Director of community development" means the director of community development of the city of Chino or his/her duly authorized deputy.

"Dwelling unit" means a single unit providing complete independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

"Emergency machinery, vehicle, work or alarm" means any machinery, vehicle, work or alarm used, employed, performed or operated in an effort to protect, provide or restore safety conditions in the community or for the citizenry, or work by private or public utilities when restoring utility service.

"Fixed noise source" means a stationary device which creates sounds while fixed or motionless including but not limited to residential, agricultural, industrial and commercial machinery and equipment, pumps, fans, compressors, air conditioners and refrigeration equipment.

"Grading" means any excavating of filling of earth material or any combination thereof conducted at a site to prepare said site for construction or other improvements thereon.

"Hertz (Hz)" means the unit which describes the frequency of a function periodic in time which is the reciprocal of the period.

"Health care institution" means any hospital, convalescent home or other similar facility excluding residential.

"Impulsive noise" means a noise of short duration usually less than one second and of high intensity, with an abrupt onset and rapid decay.

"Industrial property" means a parcel of real property which is developed and used either in part or in whole for manufacturing purposes.

"Intruding noise level" means the total sound level, in decibels, created, caused, maintained or originating from an alleged offensive source at a specified location while the alleged offensive source is in operation.

"Licensed" means the issuance of a formal license or permit by the appropriate jurisdictional authority, or where no permits or licenses are issued, the sanctioning of the activity by the jurisdiction as noted in public record.

"Major roadway" means any street, avenue, boulevard or highway used for motor vehicle traffic which is owned or controlled by a public government entity.

"Mobile noise source" means any noise source other than a fixed noise source.

"Person" means a person, firm, association, co-partnership, joint venture, corporation or any entity, public or private in nature.

"Residential property" means a parcel of real property which is developed and used either in part or in whole for residential purposes, other than transient uses such as hotels and motels, and residential care facilities.

"Simple tone noise" means a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished. If measured, simple tone noise shall exist if the one-third octave band sound pressure levels in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two continuous one-third octave bands as follows: 5 dB for frequencies of 500 Hertz (Hz) and above or; by 15 dB for frequencies less than equal to 125 Hz.

"Sound level meter" means an instrument meeting American National Standard Institute's Standard S1.4-1971 or most recent revision thereof for Type 2 sound level meters or an instrument and the associated recording and analyzing equipment which will provide equivalent data.

"Sound pressure level" of a sound, in decibels, means twenty times the logarithm to the base 10 of the ratio of the pressure of the sound to a reference pressure shall be explicitly stated.

"Vibration" means any movement of the earth, ground or other similar surface created by a temporal and spacial oscillation device or equipment located upon, affixed in conjunction with that surface.

(Ord. 95-10 § 1 (part), 1995.)

9.40.020 - Decibel measurement criteria.

Any decibel measurement made pursuant to the provisions of this chapter shall be based on a reference sound pressure of twenty micro-pascals as measured with a sound level meter using the A-weighted network (scale) at slow response.

(Ord. 95-10 § 1 (part), 1995.)

9.40.030 - Designated noise zones.

The properties hereinafter described are assigned to the following noise zones:

Noise Zone I: All single-, double- and multiple-family residential properties.

Noise Zone II: All commercial properties.

Noise Zone III: All manufacturing or industrial properties.

(Ord. 95-10 § 1 (part), 1995.)

9.40.040 - Exterior noise standards.

The following noise standards, unless otherwise specifically indicated, shall apply to all residential property with a designated noise zone:

These criteria are given in terms of allowable noise levels for a given period of time at the residential property boundary. Higher noise levels are permitted during the day (seven a.m. to ten p.m.) than the night (ten p.m. to seven a.m.). The table below shows the acceptable levels at residential land uses during the daytime and nighttime.

city of Chino Exterior Noise Ordinance Criteria for Residential Properties (Zone 1)		
Maximum Time of Exposure	**Noise Metric**	**Noise Level Not to Exceed** 7 am—10 pm 10 pm—7 am

30 min/hr	L50	55 dBA	50 dBA
15 min/hr	L25	60 dBA	55 dBA
5 min/hr	L8.3	65 dBA	60 dBA
1 min/hr	L1.7	70 dBA	65 dBA
Any period of time	Lmax	75 dBA	70 dBA

Each of the noise limits specified here shall be reduced by five dBA for impulse or simple tone noises, or for noises consisting of speech or music; provided, however, that if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, to exceed:

A. The noise standard for a cumulative period of more than thirty minutes in any hour; or
B. The noise standard plus five dBA for a cumulative period of more than fifteen minutes in any hour; or
C. The noise standard plus ten dBA for a cumulative period of more than five minutes in any hour; or
D. The noise standard plus fifteen dBA for a cumulative period of more than one minute in any hour; or
E. The noise standard plus twenty dBA for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulativeperiod applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

If the measurement location is on boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

If the intruding noise source is continuous and cannot be reasonably discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the allowable noise level standards as specified

respective to the measurement location's designated land use and for the time of the day the noise level is measured.

A. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the director or his/her duly authorized deputy for the purpose of establishing the existing ambient noise level at the measurement location.

(Ord. 95-10 § 1 (part), 1995.)

9.40.050 - Interior noise standards.

The following noise standard, unless otherwise specifically indicated, shall apply to all residential property within all noise zones:

Each of the noise limits specified above shall be reduced by five dBA for impulse or simple tone noises or for noises consisting of speech or music provided, however, if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person at any location within the incorporated area of the city to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level when measured within any other residential dwelling unit in any noise zone to exceed:

A. The noise standard for cumulative period of more than five minutes in any hour; or
B. The noise standard plus 5 dBA for a cumulative period of more than one minute in any hour; or
C. The noise standard plus ten dBA for any period of time.

In the event the ambient noise level exceeds any of the first two noise limit categories above, the noise standard applicable to said category shall be increased to reflect the maximum ambient noise level.

If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined; the same procedures specified in Section 9.40.040(E), shall be deemed proper to enforce the provisions of this section.

(Ord. 95-10 § 1 (part), 1995.)

9.40.060 - Special provisions.

The following activities shall be exempted from the provisions of this chapter:

A.

Activities conducted on public parks, public playgrounds and public or private school grounds including school athletic and school entertainment events that are conducted under the sanction of the school or which a license or permit has been duly issued pursuant to any provision of the city code;

B. Occasional outdoor gatherings, public dances, show, sporting and entertainment events, provided said events are conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of said events. Such permits and licenses may restrict noise;

C. Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, work or warning alarm or bell, provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within thirty minutes in any hour of its being activated;

D. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided said activities do not take place outside the hours for construction as defined in Section 15.44.030 of this code, and provided the noise standard of sixty-five dBA plus the limits specified in Section 9.40.040(B) as measured on residential property and any vibration created does not endanger the public health, welfare and safety;

E. All mechanical devices, apparatus or equipment associated with agriculture operations provided:

1. Operations do not take place between eight p.m. and seven a.m. on weekdays, including Saturday, or at any time Sunday or a Federal holiday, or
2. Such operations and equipment are utilized for the protection of salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions, or
3. Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture,
4. Noise sources associated with the maintenance of real property, provided said activities take place between the hours of seven a.m. to eight p.m. on any day except Sunday, or between the hours of nine a.m. and eight p.m. on Sunday,
5. Any activity to the extent regulation thereof has been preempted by state or federal law.

NOTE: Preemption may include motor vehicle, aircraft in flight, and railroad noise regulations.

(Ord. 2004-23 § 59, 2004; Ord. 95-10 § 1 (part), 1995.)

9.40.070 - Schools, churches, libraries, health care institutions—Special provisions.

It shall be deemed unlawful for any person to create any noise which causes the noise level at any school, hospital or similar health care institution, church or library while the same is in use, to exceed the noise standards specified in Section 9.40.040 prescribed for the assigned noise zone level, unreasonably interferes with the use of such institutions, or which unreasonably disturbs or annoys patients in a hospital, convalescent home or other similar health care institutions, provided conspicuous signs are displayed in three separate locations within one-tenth-mile of the institution or facility indicating a quiet zone.

(Ord. 95-10 § 1 (part), 1995.)

9.40.080 - Air conditioning and refrigeration—Special provisions.

Until January 1, 1996, the noise standards enumerated in Section 9.40.040 and 9.40.050 shall be increased five dBA where the alleged intruding noise source is an air conditioning or refrigeration system or associated equipment which was installed prior to the effective date of the ordinance codified in this chapter.

(Ord. 95-10 § 1 (part), 1995.)

9.40.090 - Noise sources generated on publicly owned property.

Notwithstanding any other provision of this code and in addition thereto, it is unlawful for any person to permit or cause any noise, sound, music or program to be emitted from any radio, tape player, tape recorder, record player, television outdoors, or any other mode on or in any publicly owned property, park or place when such noise, sound, music or program is audible to a person of normal hearing sensitivity one hundred feet from said radio, tape player, tape recorder, record player or television.

A. As used herein, "a person of normal hearing sensitivity" means a person who has a hearing threshold level of between zero decibels and twenty-five decibels HL averaged over the frequencies 500, 1,000 and 2,000 Hertz.

B. Notwithstanding any other provision of this code, any person violating this section shall be guilty of an infraction and upon conviction thereof, is punishable by a fine not exceeding fifty dollars, for a first violation; a fine not exceeding one hundred dollars for a second violation of this section within one year; a fine not exceeding two hundred fifty dollars for each additional violation of this section within one year. A person who violates the provisions of this section shall be deemed to be guilty of a separate offense for each day, or portion thereof, during which the violation continues or is repeated.

C. Notwithstanding any other provision of this code, no citation or notice to appear shall be issued or criminal complaint shall be filed for a violation of this section unless the offending party is first given a verbal or written notification of violation by any peace officer, public

officer, park ranger or other person charged with enforcing this section and the offending party given an opportunity to correct said violation.

D. This section shall not apply to broadcasting from any aircraft, vehicle or stationary sound amplifying equipment or to the use of radios, tape players, tape recorders, record players or televisions in the course of an assembly or festival for which a license has been issued or a parade for which a permit has been issued pursuant to or any other activity, assembly or function for which a permit or license has been duly issued pursuant to any provision of the city code.

(Ord. 95-10 § 1 (part), 1995.)

9.40.100 - Noise level measurement.

The location selected for measuring exterior noise levels shall be made within the affected residential unit. The measurements shall be made at a point at least four feet from the wall, ceiling or floor nearest the noise source with windows in an open position depending on the normal seasonal ventilation requirements.

(Ord. 95-10 § 1 (part), 1995.)

9.40.110 - Vibration.

Notwithstanding other sections of this chapter, it is unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purpose of this chapter, the perception threshold shall be presumed to be more than 0.05 inches per second RMS vertical velocity.

(Ord. 95-10 § 1 (part), 1995.)

9.40.120 - Proposed developments.

Each department whose duty it is to review and approve new projects or changes to existing projects that result or may result in the creation of noise shall consult with the director prior to any such approval. If at any time the director of community development has reason to believe that a standard, regulation, action, proposed standard, regulation or action of any department respecting noise does not conform to the provisions as specified in this chapter, the director may request such department to consult with them on the advisability of revising such standard or regulation to obtain uniformity.

(Ord. 95-10 § 1 (part), 1995.)

9.40.130 - Variance procedure.

The variance procedure process shall remain as specified in the city's zoning code (Title 20).

(Ord. 95-10 § 1 (part), 1995.)

9.40.140 - Planning commission.

The planning commission shall evaluate all applications for variance from the requirements of this chapter and may grant said variances with respect to time for compliance, subject to such terms, conditions and requirements as it may deem reasonable to achieve maximum compliance with the provisions of this chapter. Said terms, conditions and requirements may include, but shall not be limited to, limitation on noise levels and operating hours. Each such variance shall set forth in detail the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations, the commission shall consider the following:

A. The magnitude of nuisance caused by the offensive noise;
B. The uses of property within the area of impingement by the noise;
C. The time factors related to study, design, financing and construction of remedial work;
D. The economic factors related to age and useful life of the equipment;
E. The general public interest, welfare and safety.

Any variance granted by the commission shall be by resolution and shall be transmitted to the director of community development for enforcement. Any violation of the terms of said variance shall be unlawful.

The planning commission may require additional acoustical studies based on the individual circumstances of each case. Such studies must be performed by a person qualified in acoustical engineering with the state of California.

Meetings of the planning commission shall be held at the call of the secretary and at such times and locations as the commission shall determine. All such meetings shall be open to the public.

(Ord. 95-10 § 1 (part), 1995.)

9.40.150 - Appeals.

The appeal procedure process shall remain as specified in the city's zoning code (Title 20).

(Ord. 95-10 § 1 (part), 1995.)

9.40.160 - Prima facie violation.

Any noise exceeding the noise level standard as specified in Section 9.40.040 and 9.40.050 or vibration exceeding the standard as specified in Section 9.40.110 of this chapter, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter.

(Ord. 95-10 § 1 (part), 1995.)

9.40.170 - Violations/misdemeanors.

Any persons violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in an amount not to exceed an amount as specified by city council resolution, or be imprisoned in the Jail for a period not to exceed six months or by both such fine and imprisonment. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such.

(Ord. 95-10 § 1 (part), 1995.)

9.40.180 - Violations/additional remedies— Injunctions.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this chapter which operation or maintenance causes or creates sound levels or vibration exceeding the allowable standards as specified in this chapter shall be deemed and is hereby declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

Any violation of this chapter is declared to be a public nuisance and may be abated in accordance with law. The expense of this chapter is declared to be public nuisance and may be by resolution of the city council declared to be a lien against the property on which such nuisance is maintained, and such lien shall be made a personal obligation of the property owner.

(Ord. 95-10 § 1 (part), 1995.)

9.40.190 - Manner of enforcement.

The director is directed to enforce the provisions of this chapter and is authorized and may cite at his/her discretion, any person without a warrant who has reasonable cause to believe that such person has committed a misdemeanor in his/her presence.

No person shall interfere with, oppose or resist any authorized person charged with the enforcement of this chapter while such person is engaged in the performance of his/her duty.

Violations of this chapter shall be prosecuted in the same manner as other misdemeanor violations pursuant to Chapter 1.12; provided, however, that in the event of an initial violation of the provisions of this chapter, a written notice shall be given the alleged violator which specifies the time by which the condition shall be corrected or an application for variance shall be received by the event the cause of the violation has been removed, the condition abated or fully corrected within the time period specified in the written notice.

In the event the alleged violated cannot be located in order to serve the notice of intention to prosecute, the notice as required herein shall be deemed to be given upon mailing such notice to registered or certified mail to the alleged violator at his last known address or at the place where the violation occurred in which event the specified time period for abating the violation or applying for a variance shall commence at the date of the day following the mailing of such notice. Subsequent violations of the same offense shall result in the immediate filing of a misdemeanor complaint.

(Ord. 95-10 § 1 (part), 1995.)

9.40.200 - Delay in implementation—Fixed noise sources.

None of the provisions of this chapter shall apply to a fixed sound source during the period commencing the effective date of this chapter and terminating one-hundred eighty days thereafter.

(Ord. 95-10 § 1 (part), 1995.)

APPENDIX B

STUDY AREA PHOTOS

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15559 - Chino Creek Bridge

15559_L1_A_East
33, 56' 18.440000",117, 39' 19.870000"



15559_L1_A_North
33, 56' 18.900000",117, 39' 19.670000"



15559_L1_A_South
33, 56' 18.340000",117, 39' 19.670000"



15559_L1_A_West
33, 56' 18.200000",117, 39' 19.670000"



15559 - Chino Creek Bridge

15559_L2_B_East
33, 56' 12.230000",117, 39' 21.870000"



15559_L2_B_North
33, 56' 12.130000",117, 39' 21.890000"



15559_L2_B_South
33, 56' 12.140000",117, 39' 21.760000"



15559_L2_B_West
33, 56' 12.070000",117, 39' 21.650000"



15559 - Chino Creek Bridge

15559_L3_C_East
33, 56' 25.560000",117, 39' 13.160000"



15559_L3_C_North
33, 56' 25.510000",117, 39' 13.130000"



15559_L3_C_South
33, 56' 25.540000",117, 39' 13.160000"



15559_L3_C_West
33, 56' 25.540000",117, 39' 13.160000"



15559 - Chino Creek Bridge

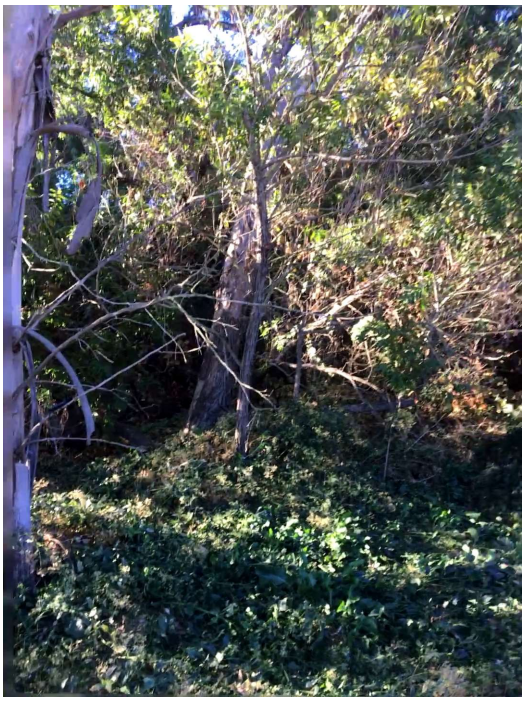
15559_L4_D_East
33, 56' 28.280000",117, 39' 12.470000"



15559_L4_D_North
33, 56' 28.280000",117, 39' 12.470000"



15559_L4_D_South
,



15559_L4_D_West
33, 56' 28.300000",117, 39' 12.420000"



APPENDIX C

NOISE MEASUREMENT WORKSHEETS

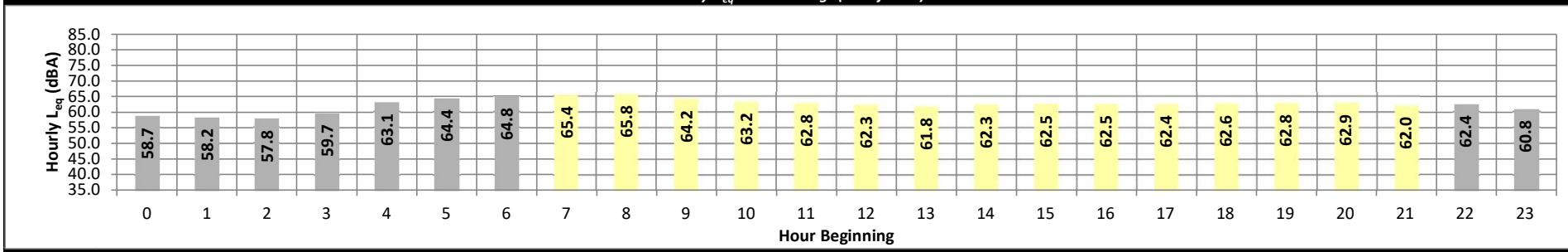
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24-Hour Noise Level Measurement Summary

Date: Monday, October 21, 2024 *Location:* L1 - At the western boundary of the project site north of the *Meter:* Piccolo II *JN:* 15559

Project: Chino Creek Bridge *Source:* gun range *Analyst:* N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*	*L_{eq}*	*Adj.*	*Adj. L_{eq}*
Night	0	58.7	65.9	48.6	65.6	65.4	64.2	63.3	59.9	56.0	50.5	49.6	48.8	58.7	10.0	68.7
	1	58.2	67.8	46.3	67.5	67.0	64.8	63.0	58.5	54.0	48.1	47.2	46.5	58.2	10.0	68.2
	2	57.8	66.9	46.5	66.6	66.3	64.6	62.9	58.0	52.9	48.1	47.4	46.7	57.8	10.0	67.8
	3	59.7	67.3	48.5	67.1	66.8	65.5	64.5	60.9	56.6	50.3	49.4	48.6	59.7	10.0	69.7
	4	63.1	68.3	55.3	68.2	68.0	67.1	66.5	64.4	62.2	57.2	56.1	55.4	63.1	10.0	73.1
	5	64.4	68.6	59.7	68.4	68.2	67.3	66.8	65.3	63.9	61.1	60.4	59.8	64.4	10.0	74.4
	6	64.8	71.0	60.5	70.3	69.7	67.9	67.2	65.6	64.2	61.7	61.1	60.6	64.8	10.0	74.8
Day	7	65.4	68.9	61.8	68.8	68.6	68.0	67.5	66.2	65.0	62.8	62.3	61.9	65.4	0.0	65.4
	8	65.8	69.7	60.9	69.5	69.3	68.5	68.1	66.8	65.5	62.4	61.7	61.0	65.8	0.0	65.8
	9	64.2	68.4	57.3	68.2	68.0	67.3	66.8	65.4	63.8	59.8	58.8	57.6	64.2	0.0	64.2
	10	63.2	67.7	56.2	67.6	67.4	66.6	66.1	64.4	62.8	58.4	57.3	56.4	63.2	0.0	63.2
	11	62.8	67.2	55.0	67.0	66.8	66.2	65.7	63.9	62.3	57.9	56.5	55.3	62.8	0.0	62.8
	12	62.3	66.7	55.2	66.5	66.3	65.6	65.1	63.5	61.9	57.5	56.5	55.4	62.3	0.0	62.3
	13	61.8	66.4	55.0	66.2	66.0	65.1	64.5	62.8	61.3	57.5	56.4	55.2	61.8	0.0	61.8
	14	62.3	66.3	57.0	66.2	66.0	65.3	64.9	63.4	62.0	58.7	57.9	57.2	62.3	0.0	62.3
	15	62.5	67.2	57.5	66.9	66.4	65.5	64.8	63.5	62.2	59.1	58.3	57.7	62.5	0.0	62.5
	16	62.5	66.2	58.3	65.9	65.7	65.1	64.6	63.5	62.1	59.8	59.0	58.4	62.5	0.0	62.5
	17	62.4	67.1	58.0	66.8	66.5	65.3	64.7	63.3	62.0	59.4	58.8	58.1	62.4	0.0	62.4
	18	62.6	66.8	58.5	66.6	66.4	65.5	64.9	63.5	62.3	59.6	59.1	58.6	62.6	0.0	62.6
	19	62.8	67.7	57.9	67.5	67.2	66.0	65.3	63.7	62.1	59.2	58.5	58.0	62.8	5.0	67.8
	20	62.9	67.8	56.1	67.6	67.4	66.5	65.7	64.1	62.4	58.1	57.3	56.3	62.9	5.0	67.9
	21	62.0	66.8	55.8	66.6	66.5	65.6	65.0	63.2	61.3	57.3	56.7	55.9	62.0	5.0	67.0
Night	22	62.4	68.0	54.6	67.8	67.5	66.5	65.9	63.7	61.5	56.9	55.6	54.7	62.4	10.0	72.4
	23	60.8	67.4	50.9	67.1	66.9	65.8	64.9	62.2	59.1	53.2	52.2	51.1	60.8	10.0	70.8

Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	61.8	66.2	55.0	65.9	65.7	65.1	64.5	62.8	61.3	57.3	56.4	55.2
	Max	65.8	69.7	61.8	69.5	69.3	68.5	68.1	66.8	65.5	62.8	62.3	61.9
Energy Average		63.2	Average:		67.2	67.0	66.1	65.6	64.1	62.6	59.2	58.3	57.5
Night	Min	57.8	65.9	46.3	65.6	65.4	64.2	62.9	58.0	52.9	48.1	47.2	46.5
	Max	64.8	71.0	60.5	70.3	69.7	67.9	67.2	65.6	64.2	61.7	61.1	60.6
Energy Average		61.8	Average:		67.6	67.3	66.0	65.0	62.0	58.9	54.1	53.2	52.5

24-Hour CNEL	*Leq (dBA) Daytime (7am-10pm)*	*Leq (dBA) Nighttime (10pm-7am)*
68.8	**63.2**	**61.8**

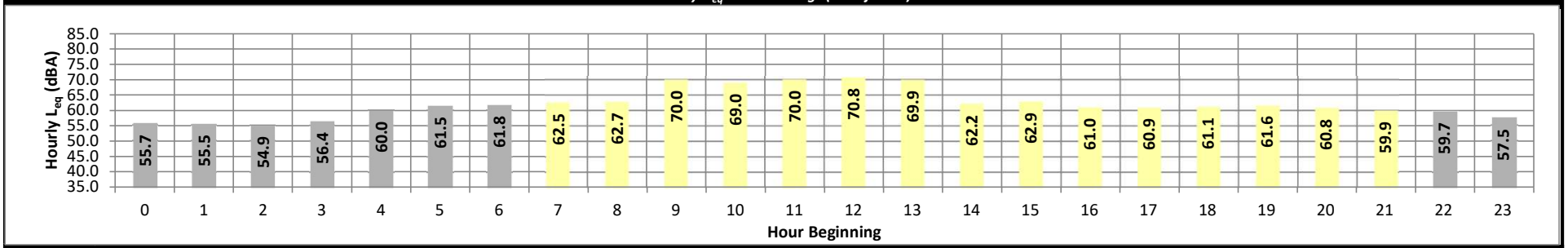
URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Date: Monday, October 21, 2024 *Location:* L2 - Located at the western boundary of the project site next *Meter:* Piccolo II *JN:* 12880

Project: Chino Creek Bridge *Source:* to the Prado Olympic Shooting Range *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*	*L_{eq}*	*Adj.*	*Adj. L_{eq}*
Night	0	55.7	63.3	47.0	63.1	62.6	61.1	60.0	56.9	53.1	48.2	47.6	47.1	55.7	10.0	65.7
	1	55.5	64.6	45.8	64.4	63.7	61.4	60.0	56.0	52.1	47.2	46.4	45.9	55.5	10.0	65.5
	2	54.9	64.2	44.5	63.9	63.3	61.3	60.1	55.1	50.8	46.2	45.4	44.7	54.9	10.0	64.9
	3	56.4	64.6	47.2	64.3	63.9	62.3	61.1	57.2	53.3	48.4	47.8	47.3	56.4	10.0	66.4
	4	60.0	66.0	52.8	65.7	65.3	64.1	63.3	61.1	58.9	54.5	53.7	52.9	60.0	10.0	70.0
	5	61.5	66.0	56.9	65.7	65.4	64.5	64.0	62.5	61.0	58.3	57.7	57.0	61.5	10.0	71.5
	6	61.8	66.4	57.4	66.1	65.9	64.8	64.1	62.6	61.2	58.8	58.2	57.6	61.8	10.0	71.8
Day	7	62.5	66.4	58.5	66.2	66.0	65.2	64.7	63.4	62.1	59.8	59.3	58.7	62.5	0.0	62.5
	8	62.7	67.1	57.3	66.9	66.6	65.7	65.2	63.7	62.4	59.2	58.3	57.5	62.7	0.0	62.7
	9	70.0	80.7	55.4	79.8	79.2	77.7	76.7	67.6	61.8	57.7	56.7	55.7	70.0	0.0	70.0
	10	69.0	79.6	53.8	78.6	78.0	76.7	75.8	65.1	60.8	56.8	55.6	54.1	69.0	0.0	69.0
	11	70.0	81.0	53.7	80.2	79.6	78.2	76.9	65.9	61.2	56.6	55.5	54.0	70.0	0.0	70.0
	12	70.8	81.3	53.5	80.4	79.9	78.5	77.3	69.6	62.1	56.7	55.4	54.0	70.8	0.0	70.8
	13	69.9	81.5	52.5	80.4	79.4	77.7	76.6	65.9	59.8	55.5	54.2	52.8	69.9	0.0	69.9
	14	62.2	69.7	54.9	69.0	68.4	67.1	66.2	62.8	60.4	56.9	56.1	55.1	62.2	0.0	62.2
	15	62.9	70.4	55.9	69.5	68.9	67.7	66.7	63.9	60.9	57.5	56.8	56.1	62.9	0.0	62.9
	16	61.0	66.8	57.1	66.2	65.3	63.7	63.2	61.7	60.5	58.1	57.7	57.2	61.0	0.0	61.0
	17	60.9	67.4	56.6	66.9	65.7	63.7	62.9	61.6	60.3	57.6	57.2	56.7	60.9	0.0	60.9
	18	61.1	65.0	57.4	64.7	64.5	63.7	63.2	62.0	60.8	58.5	58.0	57.5	61.1	0.0	61.1
	19	61.6	66.1	56.9	65.8	65.4	64.5	64.0	62.6	61.2	58.3	57.5	57.1	61.6	5.0	66.6
	20	60.8	65.6	54.9	65.3	64.9	63.9	63.4	61.9	60.4	56.6	55.8	55.0	60.8	5.0	65.8
	21	59.9	65.1	53.8	64.9	64.5	63.4	62.8	61.1	59.3	55.5	54.8	54.0	59.9	5.0	64.9
Night	22	59.7	65.4	51.6	65.2	64.8	63.7	63.1	61.0	58.8	53.6	52.6	51.7	59.7	10.0	69.7
	23	57.5	64.1	48.4	63.8	63.5	62.3	61.6	58.9	55.8	49.9	49.1	48.5	57.5	10.0	67.5

Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	59.9	65.0	52.5	64.7	64.5	63.4	62.8	61.1	59.3	55.5	54.2	52.8
	Max	70.8	81.5	58.5	80.4	79.9	78.5	77.3	69.6	62.4	59.8	59.3	58.7
Energy Average		66.3	Average:		71.0	70.4	69.2	68.4	63.9	60.9	57.4	56.6	55.7
Night	Min	54.9	63.3	44.5	63.1	62.6	61.1	60.0	55.1	50.8	46.2	45.4	44.7
	Max	61.8	66.4	57.4	66.1	65.9	64.8	64.1	62.6	61.2	58.8	58.2	57.6
Energy Average		58.8	Average:		64.7	64.3	62.8	61.9	59.0	56.1	51.7	50.9	50.3

24-Hour CNEL	*Leq (dBA) Daytime (7am-10pm)*	*Nighttime (10pm-7am)*
67.7	**66.3**	**58.8**

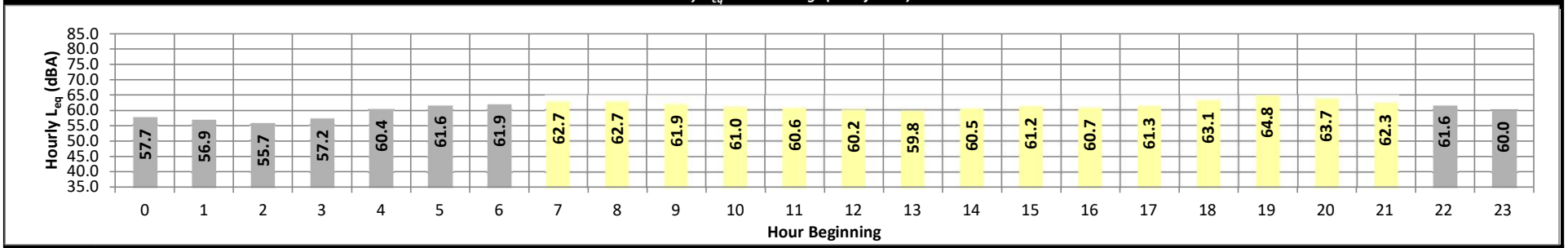
URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Date: Monday, October 21, 2024 *Location:* L3 - Located at the eastern boundary at Chino Creek *Meter:* Piccolo II *JN:* 15559

Project: Chino Creek Bridge *Source:* *Analyst:* N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*	*L_{eq}*	*Adj.*	*Adj. L_{eq}*
Night	0	57.7	62.5	53.9	62.3	62.1	61.4	60.9	58.5	56.6	54.6	54.3	54.0	57.7	10.0	67.7
	1	56.9	65.2	51.2	64.9	64.4	62.6	61.0	57.0	54.3	51.9	51.6	51.3	56.9	10.0	66.9
	2	55.7	63.4	49.0	63.2	62.8	61.5	60.4	56.1	53.0	49.8	49.5	49.1	55.7	10.0	65.7
	3	57.2	63.9	49.9	63.7	63.4	62.5	61.6	58.4	55.0	50.9	50.5	50.0	57.2	10.0	67.2
	4	60.4	66.1	54.0	65.8	65.4	64.5	63.7	61.5	59.5	55.5	54.6	54.1	60.4	10.0	70.4
	5	61.6	65.8	57.6	65.6	65.4	64.8	64.2	62.5	61.1	58.6	58.1	57.7	61.6	10.0	71.6
	6	61.9	66.8	58.1	66.5	66.2	65.2	64.3	62.6	61.4	59.1	58.6	58.2	61.9	10.0	71.9
Day	7	62.7	66.6	59.3	66.4	66.1	65.5	65.1	63.5	62.3	60.1	59.7	59.3	62.7	0.0	62.7
	8	62.7	66.5	58.0	66.3	66.1	65.6	65.1	63.7	62.3	59.6	58.9	58.2	62.7	0.0	62.7
	9	61.9	66.7	56.3	66.4	66.1	65.4	64.8	62.8	61.2	57.9	57.2	56.5	61.9	0.0	61.9
	10	61.0	65.8	54.9	65.5	65.3	64.4	63.8	62.1	60.4	56.9	56.0	55.1	61.0	0.0	61.0
	11	60.6	65.1	53.5	64.9	64.7	64.2	63.6	61.8	60.1	55.9	54.6	53.7	60.6	0.0	60.6
	12	60.2	64.9	53.6	64.7	64.4	63.8	63.1	61.2	59.6	55.6	54.7	53.8	60.2	0.0	60.2
	13	59.8	64.4	53.2	64.2	64.0	63.2	62.6	60.9	59.3	55.5	54.5	53.4	59.8	0.0	59.8
	14	60.5	65.1	55.6	64.6	64.2	63.5	63.0	61.4	60.0	57.2	56.5	55.8	60.5	0.0	60.5
	15	61.2	67.0	56.5	66.4	66.0	65.1	64.4	62.1	60.1	57.8	57.2	56.6	61.2	0.0	61.2
	16	60.7	65.6	56.9	65.0	64.6	63.7	63.2	61.3	60.2	57.9	57.4	57.0	60.7	0.0	60.7
	17	61.3	66.4	57.6	66.3	65.8	64.9	63.9	61.8	60.6	58.4	58.0	57.7	61.3	0.0	61.3
	18	63.1	66.0	61.2	65.8	65.5	64.9	64.5	63.6	62.9	61.7	61.5	61.3	63.1	0.0	63.1
	19	64.8	67.2	63.2	67.1	66.9	66.4	66.1	65.2	64.6	63.7	63.5	63.3	64.8	5.0	69.8
	20	63.7	66.7	61.7	66.6	66.4	65.8	65.3	64.2	63.4	62.2	61.9	61.7	63.7	5.0	68.7
	21	62.3	65.2	60.1	65.0	64.8	64.4	64.0	62.9	62.0	60.7	60.4	60.2	62.3	5.0	67.3
Night	22	61.6	66.5	58.2	66.3	66.1	65.3	64.1	62.2	60.9	59.0	58.6	58.3	61.6	10.0	71.6
	23	60.0	65.1	56.5	64.8	64.6	63.6	62.9	60.7	59.1	57.1	56.8	56.6	60.0	10.0	70.0

Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	59.8	64.4	53.2	64.2	64.0	63.2	62.6	60.9	59.3	55.5	54.5	53.4
	Max	64.8	67.2	63.2	67.1	66.9	66.4	66.1	65.2	64.6	63.7	63.5	63.3
Energy Average		62.0	Average:		65.7	65.4	64.7	64.2	62.6	61.3	58.7	58.1	57.6
Night	Min	55.7	62.5	49.0	62.3	62.1	61.4	60.4	56.1	53.0	49.8	49.5	49.1
	Max	61.9	66.8	58.2	66.5	66.2	65.3	64.3	62.6	61.4	59.1	58.6	58.3
Energy Average		59.8	Average:		64.8	64.5	63.5	62.6	59.9	57.9	55.2	54.7	54.4

24-Hour CNEL	*Leq (dBA) Daytime (7am-10pm)*	*Leq (dBA) Nighttime (10pm-7am)*
67.2	**62.0**	**59.8**

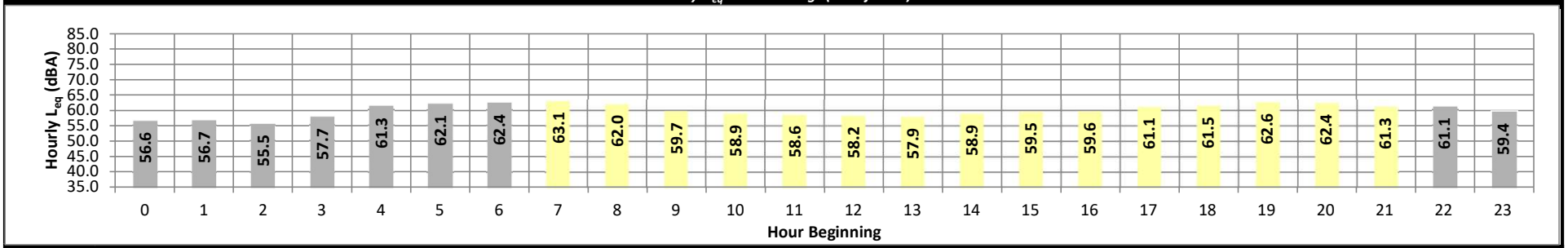
URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Date: Monday, October 21, 2024 *Location:* L4 - Located at the eastern boundary of the project site north *Meter:* Piccolo II *JN:* 15559

Project: Chino Creek Bridge *Source:* of Chino Creek *Analyst:* N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	56.6	63.5	47.4	63.2	62.9	61.6	60.8	57.7	54.6	49.3	48.4	47.7	56.6	10.0	66.6
	1	56.7	66.8	46.2	66.4	65.6	63.4	61.8	56.5	52.6	47.9	47.1	46.4	56.7	10.0	66.7
	2	55.5	64.5	45.0	64.2	63.6	61.9	60.6	55.7	51.7	46.6	45.8	45.2	55.5	10.0	65.5
	3	57.7	65.1	48.3	64.9	64.5	63.1	62.2	58.9	55.0	49.8	49.1	48.4	57.7	10.0	67.7
	4	61.3	66.8	53.3	66.6	66.3	65.4	64.6	62.7	60.4	55.4	54.3	53.5	61.3	10.0	71.3
	5	62.1	67.7	57.2	67.4	67.1	65.7	64.8	63.0	61.4	58.4	57.8	57.3	62.1	10.0	72.1
	6	62.4	69.2	57.6	68.9	68.3	66.3	64.8	62.9	61.5	58.8	58.3	57.7	62.4	10.0	72.4
Day	7	63.1	67.1	59.1	66.9	66.7	65.8	65.4	64.0	62.7	60.1	59.6	59.2	63.1	0.0	63.1
	8	62.0	67.0	56.4	66.7	66.3	65.2	64.6	63.1	61.5	58.1	57.4	56.5	62.0	0.0	62.0
	9	59.7	65.4	52.9	65.2	64.9	63.6	62.6	60.5	58.9	55.2	54.1	53.2	59.7	0.0	59.7
	10	58.9	64.1	51.9	63.9	63.6	62.5	61.9	60.1	58.2	54.1	53.1	52.1	58.9	0.0	58.9
	11	58.6	63.9	51.1	63.7	63.3	62.3	61.7	59.8	57.8	53.4	52.2	51.3	58.6	0.0	58.6
	12	58.2	63.6	51.1	63.3	63.0	61.8	61.2	59.4	57.6	53.4	52.2	51.3	58.2	0.0	58.2
	13	57.9	63.3	50.6	63.0	62.7	61.4	60.8	58.9	57.3	53.0	51.8	50.8	57.9	0.0	57.9
	14	58.9	64.3	53.6	63.9	63.5	62.4	61.7	59.8	58.3	55.3	54.5	53.7	58.9	0.0	58.9
	15	59.5	65.1	54.7	64.7	64.3	63.2	62.3	60.1	58.7	56.3	55.6	54.8	59.5	0.0	59.5
	16	59.6	65.0	54.9	64.7	64.3	63.2	62.1	60.2	59.0	56.5	55.8	55.1	59.6	0.0	59.6
	17	61.1	68.0	56.4	67.7	67.2	64.9	63.6	61.4	60.2	57.8	57.2	56.6	61.1	0.0	61.1
	18	61.5	65.9	57.5	65.6	65.3	64.4	63.7	62.3	61.0	58.7	58.2	57.7	61.5	0.0	61.5
	19	62.6	66.7	58.1	66.5	66.2	65.5	65.0	63.6	62.2	59.4	58.8	58.3	62.6	5.0	67.6
	20	62.4	67.7	56.7	67.5	67.2	65.8	64.9	63.4	61.8	58.5	57.5	56.9	62.4	5.0	67.4
	21	61.3	65.8	56.6	65.6	65.3	64.5	63.9	62.2	60.7	57.8	57.3	56.8	61.3	5.0	66.3
Night	22	61.1	68.0	54.5	67.5	67.0	65.2	64.1	62.0	60.1	56.2	55.3	54.6	61.1	10.0	71.1
	23	59.4	66.4	51.3	66.1	65.8	64.4	63.2	60.2	57.9	53.1	52.2	51.5	59.4	10.0	69.4

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	57.9	63.3	50.6	63.0	62.7	61.4	60.8	58.9	57.3	53.0	51.8	50.8
	Max	63.1	68.0	59.1	67.7	67.2	65.8	65.4	64.0	62.7	60.1	59.6	59.2
Energy Average		60.7	Average:		65.3	64.9	63.8	63.0	61.3	59.7	56.5	55.7	54.9
Night	Min	55.5	63.5	45.0	63.2	62.9	61.6	60.6	55.7	51.7	46.6	45.8	45.2
	Max	62.4	69.2	57.6	68.9	68.3	66.3	64.8	63.0	61.5	58.8	58.3	57.7
Energy Average		59.9	Average:		66.1	65.7	64.1	63.0	60.0	57.2	52.8	52.0	51.4

24-Hour CNEL	*Leq (dBA) Daytime (7am-10pm)*	*Leq (dBA) Nighttime (10pm-7am)*
66.8	**60.7**	**59.9**

URBAN CROSSROADS

APPENDIX D

CONSTRUCTION NOISE LEVEL CALCULATIONS

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15559 - Chino Creek Bridge

CadnaA Noise Prediction Model: 15559-02_Construction.cna
Date: 18.11.24
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (ft)	**6561.70**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (ft)	**3280.80**
Min. Length of Section (ft)	**3.30**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**508.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**328.08**
Search Radius Rcvr	**328.08**
Max. Distance Source - Rcvr	**3280.84 3280.84**
Min. Distance Rvcr - Reflector	**3.28 3.28**
Min. Distance Source - Reflector	**0.33**
Industrial (ISO 9613 (1996))	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (°F)	**50**
rel. Humidity (%)	**70**
Ground Absorption G	**0.75**
Wind Speed for Dir. (mph)	**6.7**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	41.8	-62.9	38.8	0.0	0.0	0.0		x	Total	5.00	r	6133276.02	2285425.69	513.01
R2		R2	40.1	-64.6	37.1	0.0	0.0	0.0		x	Total	5.00	r	6133867.57	2284886.29	513.05
R3		R3	54.4	-50.4	51.4	0.0	0.0	0.0		x	Total	5.00	r	6135801.37	2289495.99	532.56
R4		R4	52.3	-52.4	49.3	0.0	0.0	0.0		x	Total	5.00	r	6136877.48	2290802.49	548.61

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
CA1		CA1	120.4	15.6	15.6	74.4	-30.3	-30.3	PWL-Pt	115.6					8	r

Name	ID	Height			Coordinates			
		Begin		End	x	y	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
CA1	CA1	8.00	r		6134654.72	2285690.92	587.17	579.17
					6134740.44	2285815.70	578.81	570.81
					6134810.97	2285949.16	570.16	562.16
					6134919.48	2286166.18	556.42	548.42
					6135134.32	2286687.01	533.35	525.35
					6135177.72	2286796.60	529.93	521.93
					6135311.19	2287226.29	526.24	518.24
					6135504.33	2287824.16	523.80	515.80
					6135620.43	2288171.38	525.47	517.47
					6135794.04	2288710.66	524.07	516.07
					6135953.55	2289198.94	529.59	521.59
					6136049.03	2289527.72	534.24	526.24
					6136153.20	2289897.73	539.51	531.51
					6136240.01	2290239.53	544.24	536.24
					6136384.32	2290743.00	550.63	542.63
					6136473.30	2290671.38	550.74	542.74
					6136207.45	2289836.97	546.79	538.79
					6136127.16	2289516.87	548.24	540.24
					6136019.74	2289177.24	534.12	526.12
					6135969.82	2289011.23	528.81	520.81
					6135851.55	2288643.39	520.76	512.76
					6135672.51	2288080.24	527.22	519.22
					6135477.20	2287463.92	520.24	512.24
					6135254.76	2286796.60	526.20	518.20
					6135249.34	2286772.73	527.57	519.57
					6135216.78	2286690.26	529.81	521.81
					6135096.34	2286374.51	553.28	545.28
					6134988.92	2286149.90	559.29	551.29
					6134741.52	2285678.98	584.71	576.71

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates			
							Begin	x	y	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)											Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

RoadsGeo

Name	Height		Coordinates				Dist	LSlope
	Begin	End	x	y	z	Ground	(ft)	(%)
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)		