



Sunrise of Oceanside Project

Appendix H

Noise Impact Analysis, Sunrise of Oceanside Project

NOISE IMPACT ANALYSIS

SUNRISE OF OCEANSIDE PROJECT

CITY OF OCEANSIDE

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Project No. 20057

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
ONAC	Federal Office of Noise Abatement and Control
OSB	Oriented Strand Board
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
TTM	Tentative Tract Map
UMTA	Federal Urban Mass Transit Administration
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the noise impacts associated with the proposed Sunrise of Oceanside project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise impacts from the proposed project; and
- An analysis of long-term operations-related noise impacts from the proposed project.

1.2 Site Location and Study Area

The project site is located in the central portion of the City of Oceanside (City) at 4700 Mesa Drive. The approximately 14.24-acre project site is currently vacant and is bounded by vacant land to the north, College Boulevard and single-family residential to the east, Mesa Drive, Rancho Del Oro Park/YMCA, and single-family residential uses to the south, and single-family residential to the west. The project study area is shown in Figure 1.

Sensitive Receptors in Project Vicinity

The nearest sensitive receptors to the project site are single-family homes located adjacent to the east side of the project site, there is also a YMCA facility, with the nearest activity are located as near as 230 feet south of the project site. The nearest school is Empresa Elementary School, which is located as near as 900 feet south of the project site.

1.3 Proposed Project Description

The proposed project consists of the development of a 95-unit, 120 bed, 78,100 square foot senior assisted living and memory care facility, loading and drop off areas, and trash storages. Additionally, the proposed project includes 49 open parking spaces on the proposed new Parcel C, and the relocation of 68 parking stalls from the east side of the Lighthouse Church on the proposed Parcel B to the west side on proposed Lot D, with associated drive aisles and a turnaround and drop-off area. The proposed project involves the subdivision of 14.24 acre parcel from one to two parcels. The proposed site plan is shown in Figure 2.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City and State of California (State).

City of Oceanside Noise Regulations

The following lists the noise and vibration regulations from the Municipal Code that are applicable, but not limited to the proposed project.

- Section 38.12(a) Sound Level Limits
- Section 38.17(h) Construction Noise Limitations

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 2700-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially significant impact. Implementation of Mitigation Measure 1 would reduce the impact to less than significant levels.

Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact.

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

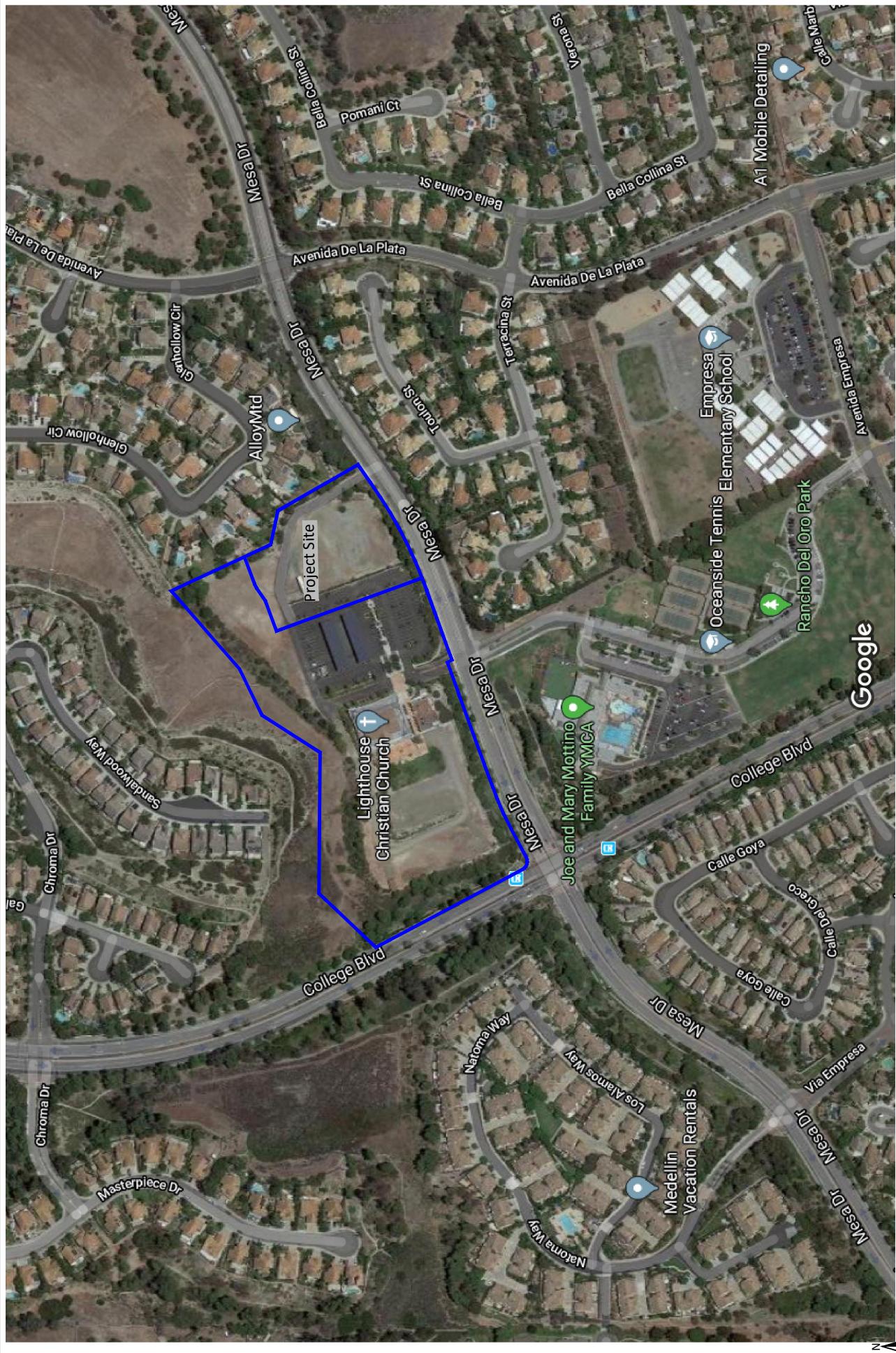
No impact.

1.5 Mitigation Measures for the Proposed Project

This analysis found that through adherence to the noise and vibration regulations detailed in Section 1.4 above and through implementation of the following mitigation all noise and vibration impacts would be reduced to less than significant levels.

Mitigation Measure 1:

The project applicant shall restrict all regular maintenance and cycling activities for the backup diesel generator from occurring between the hours of 10:00 p.m. and 7:00 a.m..



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SOURCE: Google Maps.

Imagery ©2020 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2020 200 ft

Figure 1
Project Location Map

Figure 2
Proposed Site Plan



SOURCE: HPI Architecture. June 15, 2020.

2.0 NOISE FUNDAMENTALS

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

2.1 Noise Descriptors

Noise Equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak traffic hour Leq is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (Ldn) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Oceanside relies on the Ldn noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound

from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 Vibration Descriptors

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is “VdB”, which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 Vibration Propagation

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform median, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground’s surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a “push-pull” fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or “side-to-side and perpendicular to the direction of propagation.”

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of Oceanside. Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the federal Urban Mass Transit Administration (UMTA), while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the proposed project is not under the jurisdiction of the FTA, the FTA is the only agency that has defined what constitutes a significant noise impact from implementing a project. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings are provided below in Table A.

Table A – FTA Project Effects on Cumulative Noise Exposure

Existing Noise Exposure (dBA Leq or Ldn)	Allowable Noise Impact Exposure dBA Leq or Ldn		
	Project Only	Combined	Noise Exposure Increase
45	51	52	+7
50	53	55	+5
55	55	58	+3
60	57	62	+2
65	60	66	+1
70	64	71	+1
75	65	75	0

Source: Federal Transit Administration, 2018.

The FTA also provides guidance on construction noise and recommends developing construction noise criteria on a project-specific basis that utilizes local noise ordinances if possible. However, local noise ordinances usually relates to nuisance and hours of allowed activity and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the noise impacts of a construction project. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land uses. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings for a detailed construction noise assessment are provided below in Table B.

Table B – FTA Construction Noise Criteria

Land Use	Day (dBA Leq(8-hour))	Night (dBA Leq(8-hour))	30-day Average (dBA Ldn)
Residential	80	70	75
Commercial	85	85	80*
Industrial	90	90	85*

Notes:

* 24-hour Leq not Ldn.

Source: Federal Transit Administration, 2018.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Noise Standards

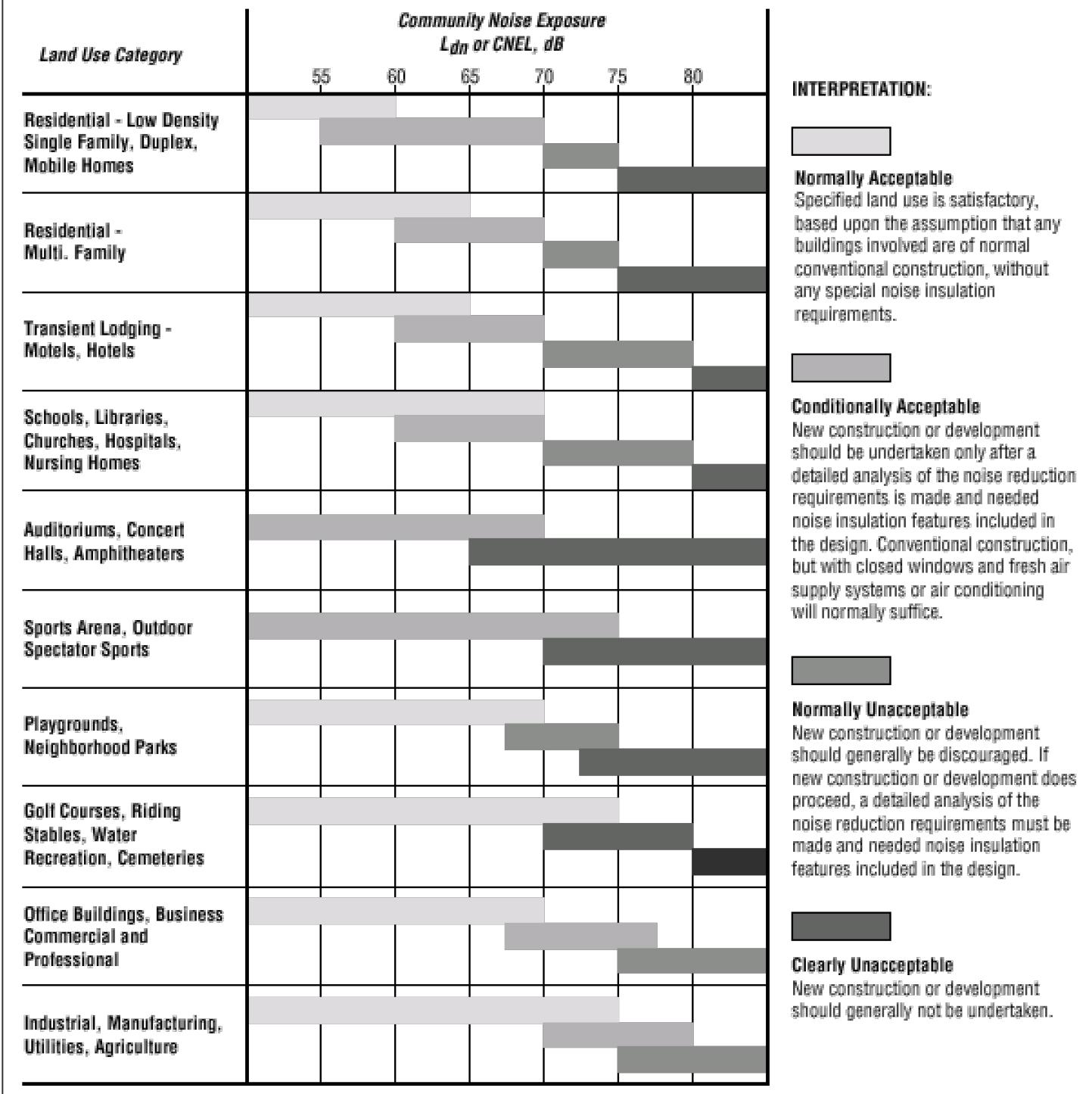
California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise and which is shown below in Figure 3.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

FIGURE 2



SOURCE: OPR Appendix D Noise Element Guidelines.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

Caltrans issued the *Transportation- and Construction-Induced Vibration Guidance Manual* in 2004. The manual provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

4.3 Local Regulations

The City of Oceanside General Plan and Municipal Code establishes the following applicable policies related to noise and vibration.

City of Oceanside General Plan

Construction Noise

1. It should be unlawful for any person within any residential zone or 500 feet therefrom to operate any pile driver, power shovel, pneumatic, power hoist, or other construction equipment between 8 PM and 7 AM generating an ambient noise level of 50 dBA at any property line, unless an emergency exists.

-
2. It should be unlawful for any person to operate any construction equipment at a level in excess of 85 dBA at 100 feet from the source.
 3. It should be unlawful for any person to engage in construction activities between 6 PM and 7 AM when such activities exceed the ambient noise level by 5 dBA. A special permit may be granted by the Director of Public Works if extenuating circumstances exist.

Recommendations

4. Truck traffic on residential streets should be prohibited for all vehicles over two tons in weight. This recommendation is based upon complaints from residents subjected to serve noise and disruptions caused by heavy trucks using residential streets not designed for that purpose. (Oceanside currently has no streets prohibited to trucks in excess of certain weight.)
5. Land uses in the City of Oceanside should be planned in order to insure that residential areas will not be impacted by noise. Approval of any project in the City where the health of future residents or occupants may be adversely affected by noise associated with the site should be taken to reduce or abate the noise effects or should be denied approval and recommended for an alternative site (example – a new rest home or hospital should not be constructed on areas subjected to noise levels 65 dBA or higher).

City of Oceanside Municipal Code

The City of Oceanside Municipal Code establishes the following applicable standards related to noise.

Chapter 38 Noise Control

Section 38.12. General sound level limits.

- (a) Except for exempted activities and sounds as provided in this chapter or exempted properties as referenced in Section 38.15, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property in the applicable base district zone on which the sound is produced exceeds the applicable limits set forth below:

Table C – City of Oceanside Sound Level Limits

Base District Zone	Sound Level Limits (decibels)	
	7:00 a.m. to 9:59 p.m.	10:00 p.m. to 6:59 a.m.
RE (Residential Estate)	50	45
RS (Single-Family)	50	45
RM (Medium Density)	50	45
RH (High Density)	55	50
RT (Residential Tourist)	55	50
C (Commercial)	65	60
I (Industrial)	70	65
D (Downtown)	65	55
A (Agricultural)	50	45
OS (Open Space)	50	45

Source: City of Oceanside Municipal Code Section 38.12.

-
- (b) Limits for planned developments. In addition to the sound level limits established above. There is hereby established sound limits for PD (planned development) base district zones.

For any residential land use within a PD zone, the sound level limit is that limit which would be otherwise applicable in the residential zone (RE, RS, RM, RH or RT) corresponding to density of the residential development in that PD zone.

For any nonresidential land use within a PD zone, the sound level limit is that limit corresponding to the C (commercial) or I (industrial) zone which would be applicable to that use if not subject to the PD zone. For the purposes of this section, a land use shall be that use shown on a duly approved planned development plan or specific plan.

- (c) Limits for joint boundaries. When property lines form the joint boundary of two (2) base district zones, the sound level limit shall be the arithmetic mean of the limit applicable to each of the two (2) zones.

Section 38.17. Specific noises prohibited.

Notwithstanding the rebuttable presumption referenced in Section 38.16, the following acts are declared to cause disturbing, excessive, or offensive noises in violation of this article although such enumeration shall not be deemed to be exclusive:

- (a) *Horns, signaling devices, etc.* The intentional sounding of any horn or other signaling device on any automobile, motorcycle, or other vehicle, except as a danger warning; the creation by means of any such signaling device of any unreasonably loud or harsh sound; and the sounding of any such device for any unnecessary and unreasonable period of time.
- (b) *Exhausts.* The noise emanating into the open air of the noise from the exhaust of any stationary-internal-combustion engine, motorboat, or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.
- (c) *Pile drivers, hammers, etc.* The operation between the hours of 10:00 p.m. and 7:00 a.m. of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam or electric hoist, parking lot cleaning equipment or other appliance, the use of which is attended by loud or unusual noise.

Section 38.21. Preempted activities.

The provisions of this chapter shall not apply to any activity to the extent regulation thereof has been preempted by state or federal law or which is a necessary or appropriate means of complying with health or safety requirements imposed by state or federal law.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken in the vicinity of the project site. The field survey noted that noise within the proposed project area is generally characterized by vehicle traffic on Mesa Drive and College Boulevard. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using three Larson Davis Model LXT1 Type 1 sound level meters programmed in “slow” mode to record the sound pressure level at 1-second intervals for 24 hours in “A” weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded with both sound level meters. The sound level meters and microphones were mounted on trees and fences along the property lines of the project site, were placed between four and six feet above the ground and were equipped with windscreens during all measurements. The noise meters were calibrated before and after the monitoring using a Larson Davis Cal200 calibrator. All noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

Noise Measurement Location

The noise monitoring locations were selected in order to obtain noise levels on the project site and at the nearby sensitive receptors from Mesa Drive. Descriptions of the noise monitoring sites are provided below in Table D. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 11:07 a.m. on Monday, July 13, 2020 and 11:21 a.m. on Tuesday, July 14, 2020. When the noise measurements were started the sky was clear (no clouds), the temperature was 80 degrees Fahrenheit, the humidity was 61 percent, barometric pressure was 29.53 inches of mercury, and the wind was blowing around 5 miles per hour. Overnight, the sky became partly cloudy and the temperature dropped to 64 degrees Fahrenheit. At the conclusion of the noise measurements, the sky was partly cloudy, the temperature was 81 degrees Fahrenheit, the humidity was 62 percent, barometric pressure was 29.58 inches of mercury, and the wind was blowing around 7 miles per hour.

5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table D. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table D also shows the L_{eq} , L_{max} , and CNEL, based on the entire measurement time. The noise monitoring data printouts are included in Appendix B.

Table D – Existing (Ambient) Noise Level Measurements

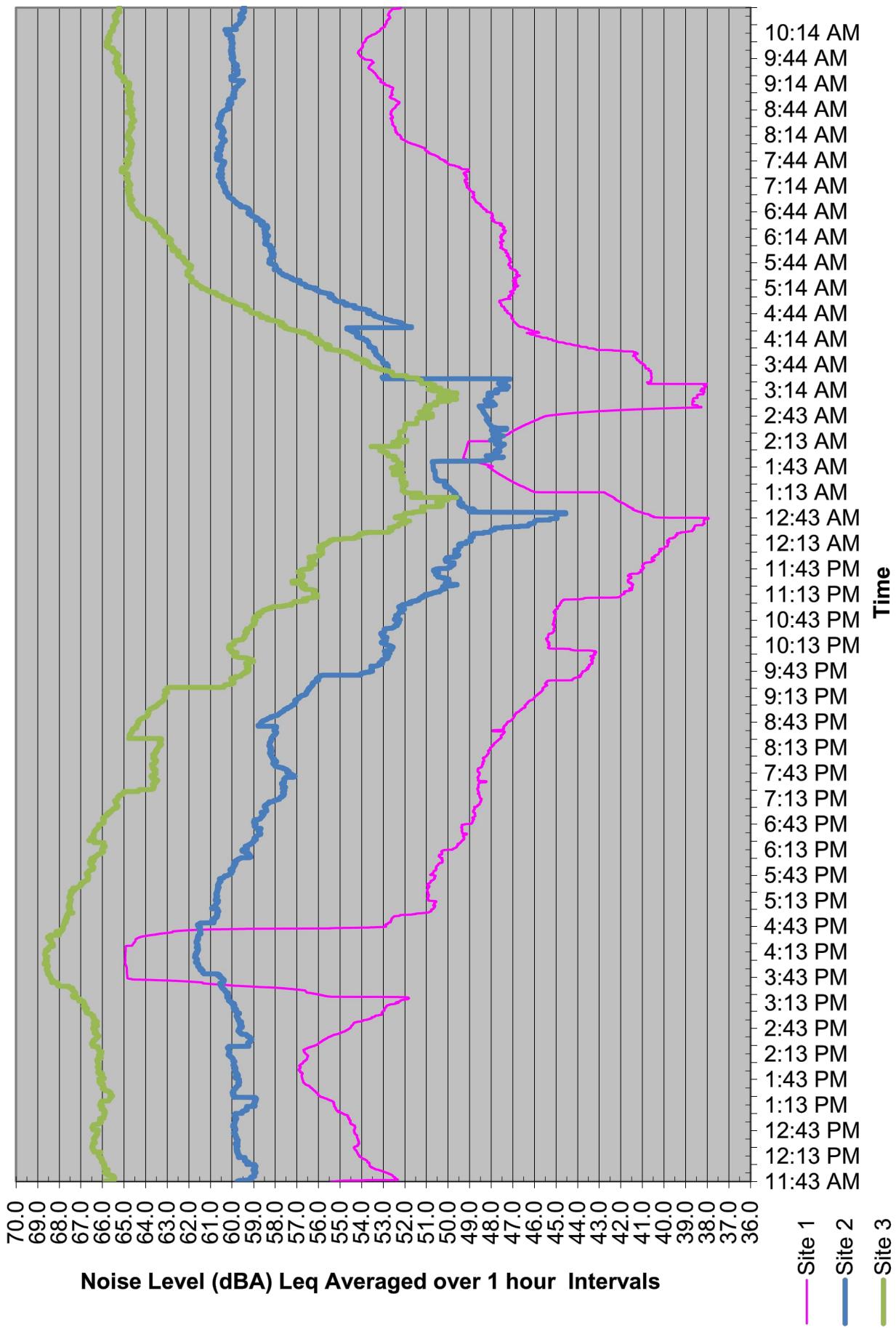
Site No.	Site Description	Average (dBA L _{eq})		1-hr Average (dBA L _{eq} /Time)		Average (dBA Ldn)
		Daytime ¹	Nighttime ²	Minimum	Maximum	
1	Located on the project site east property line on the backyard fence for the home at 4880 Glenhollow Circle.	56.8	44.2	37.9 12:42 a.m.	64.9 3:42 p.m.	55.7
2	Located on a tree near the southeast corner of the project site, approximately 110 feet north of the centerline for Mesa Drive.	60.7	52.8	44.5 12:41 a.m.	61.7 3:54 p.m.	61.9
3	Located south of the project site on a tree, approximately 75 feet south of the centerline for Mesa Drive and 65 feet east of the centerline for Rancho Del Oro Park.	66.9	57.1	49.6 1:15 a.m.	68.7 4:06 p.m.	67.0

Notes:

¹ Daytime defined as 7:00 a.m. to 9:59 p.m. (Section 38.12 of the Municipal Code)

² Nighttime define as 10:00 p.m. to 6:59 a.m. (Section 38.12 of the Municipal Code)

Source: Noise measurements taken between Monday, July 13 and Tuesday, July 14, 2020.



SOURCE: Three Larson Davis Model LXT1 Type 1 Sound Level Meters.

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Figure 4
Field Noise Measurements Graph

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The proposed project consists of the development of a 95-unit, 120 bed, 78,100 square foot senior assisted living and memory care facility, loading and drop off areas, and trash storages. Additionally, the proposed project includes 49 open parking spaces on the proposed new Parcel C, and the relocation of 68 parking stalls from the east side of the Lighthouse Church on the proposed Parcel B to the west side on proposed Lot D, with associated drive aisles and a turnaround and drop-off area.

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table E below provides a list of the construction equipment anticipated to be used for each phase of construction as detailed in *Air Quality, Energy and Greenhouse Gas Emissions Impact Analysis Sunrise of Oceanside Project* (Air Quality Analysis), prepared by Vista Environmental, July 29, 2020.

Table E – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor ¹ (percent)	Spec 721.560 Lmax at 50 feet ² (dBA, slow ³)	Actual Measured Lmax at 50 feet ⁴ (dBA, slow ³)
Demolition				
Concrete/Industrial Saws	1	40	85	83
Excavators	3	40	85	81
Rubber Tired Dozers	2	40	85	82
Grading				
Excavator	1	40	85	81
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Tractor, Loader or Backhoe	3	40	84	N/A
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	2	40	85	83
Generator	1	50	82	81
Tractor, Loader or Backhoe	3	40	84	N/A
Welder	1	40	73	74
Paving				
Paver	2	50	85	77
Paving Equipment	2	50	85	77
Roller	2	20	85	80
Architectural Coating				
Air Compressor	1	40	80	78

Notes:

¹ Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

² Spec 721.560 is the equipment noise level utilized by the RCNM program.

³ The “slow” response averages sound levels over 1-second increments. A “fast” response averages sound levels over 0.125-second increments.

⁴ Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

Source: Federal Highway Administration, 2006 and CalEEMod default equipment mix.

Table E also shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed in Table E and through use of the RCNM. For each phase of construction, the nearest piece of equipment was placed at the shortest distance of possible locations for the proposed activity to the nearest sensitive receptor and each subsequent piece of equipment was placed an additional 50 feet away.

6.2 Operations-Related Noise

FHWA Model Methodology

The proposed project would result in increases in traffic noise to the nearby roadways as well as introduce new sensitive receptors to the project site. The project impacts to the offsite roadways were analyzed through use of the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108 (FHWA Model). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REME). Adjustments are then made to the reference energy mean emission level to account for: the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT) and the percentage of ADT which flows during the day, evening and night, the travel speed, the vehicle mix on the roadway, which is a percentage of the volume of automobiles, medium trucks and heavy trucks, the roadway grade, the angle of view of the observer exposed to the roadway and site conditions ("hard" or "soft" relates to the absorption of the ground, pavement or landscaping). The following section provides a discussion of the software and modeling input parameters used in this analysis and a discussion of the resultant existing noise model.

FHWA Model Traffic Noise Prediction Model Inputs

The roadway parameters used for this study are presented in Table F. The roadway classifications are based on the City's General Plan Circulation Element. The roadway speeds are based on the posted speed limits. The distance to the nearest sensitive receptor was determined by measuring the distance from the roadway centerline to the nearest residence. Since the study area is located in a suburban environment and landscaping exists along the sides of all analyzed roadways, soft site conditions were modeled.

Table F – FHWA Model Roadway Parameters

Roadway	Segment	General Plan Classification	Vehicle Speed (MPH)	Distance to Nearest Receptor ¹ (feet)
College Boulevard	North of Mesa Drive	Major Arterial (4 Lanes)	50	100
College Boulevard	South of Mesa Drive	Major Arterial (4 Lanes)	50	90
Mesa Drive	West of College Boulevard	Secondary Collector	45	85
Mesa Drive	East of College Boulevard	Secondary Collector	45	85

Notes:

¹ Distance measured from nearest residential structure to centerline of roadway.

Source: Linscott Law & Greenspan, 2020; and City of Oceanside, 2012.

The average daily traffic (ADT) volumes were obtained from the *Traffic Impact Study Sunrise of Oceanside* (Traffic Impact Study), prepared by Linscott Law and Greenspan, July 21, 2020. The Traffic Impact Study provides the ADT volumes for both without project and with project conditions for the existing year and existing plus cumulative projects scenarios. The ADT volumes used in this analysis are shown in Table G.

Table G – FHWA Model Average Daily Traffic Volumes

Roadway	Segment	Average Daily Traffic Volumes			
		Existing	Existing + Project	Existing + Cumulative	Existing + Cumulative + Project
College Boulevard	North of Mesa Drive	29,102	29,201	30,192	30,291
College Boulevard	South of Mesa Drive	27,782	27,881	29,142	29,241
Mesa Drive	West of College Boulevard	11,041	11,066	11,041	11,066
Mesa Drive	East of College Boulevard	10,784	11,006	10,784	11,006

Source: Linscott Law & Greenspan, 2020.

The vehicle mixes used in the FHWA-RD-77-108 Model is shown below in Table H. For Mesa Drive the Secondary Collector vehicle mix was utilized and for College Boulevard, the Major Arterial vehicle mix was utilized. Both vehicle mixes are based on typical vehicle mixes observed in Southern California for similar arterial roadways.

Table H – Roadway Vehicle Mixes

Vehicle Type	Traffic Flow Distributions			
	Day (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	Overall
Secondary Collector				
Automobiles	73.60%	13.60%	10.22%	97.42%
Medium Trucks	0.90%	0.90%	0.04%	1.84%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%
Major Arterial				
Automobiles	69.50%	12.90%	9.60%	92.00%
Medium Trucks	1.44%	0.06%	1.50%	3.00%
Heavy Trucks	2.40%	0.10%	2.50%	5.00%

Source: Vista Environmental.

FHWA Model Source Assumptions

To assess the roadway noise generation in a uniform manner, all vehicles are analyzed at the single lane equivalent acoustic center of the roadway being analyzed. In order to determine the height above the road grade where the noise is being emitted from, each type of vehicle has been analyzed independently with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the

exhaust pipe, tires and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

6.3 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table I gives approximate vibration levels for particular construction activities. The data in Table I provides a reasonable estimate for a wide range of soil conditions.

Table I – Vibration Source Levels for Construction Equipment

Equipment		Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v)at 25 feet
Pile driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drill		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, 2018.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table I and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table E.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include demolition and grading of approximately 5.5 acres of the 14.24-acre project site, building construction of the Assisted Living Center, paving of onsite the proposed 49 space parking lot and relocated 68 space parking area and driveways, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors are single-family homes located as near as 70 feet to the east of the area that will be disturbed on the project site. There are also single-family homes located on the south side of Mesa Drive that are as near as 100 feet from the area that will be disturbed on the project site.

The City's General Plan requires that construction activities that occur within 500 feet of residential uses and creates a noise level of 50 dBA or higher to be restricted from occurring between 8 PM and 7 AM. The City's General Plan also restricts the operation of any construction equipment that produces a noise level of 85 dBA at 100 feet. Finally, the City's General Plan also restricts any construction activities that increases the ambient noise level by 5 dBA or more from occurring between 6 PM and 7 AM.

Section 38.17(b) of the City's Municipal Code restricts the operation of any internal combustion engines without a muffler or other device that prevents loud explosive noises from occurring. Section 38.17(c) of the City's Municipal Code restricts the operation of construction equipment between 10 PM and 7 AM. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities during the allowable hours of construction of between 7 AM and 6 PM and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby residents.

In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the FTA construction noise criteria thresholds detailed above in Section 4.1 have been utilized, which shows that a significant construction noise impact would occur if construction noise exceeds 80 dBA during the daytime at any of the nearby homes and school.

Construction noise impacts to the nearby sensitive receptors have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1 of this report including Table E – Construction Equipment Noise Emissions and Usage Factors. The results are shown below in Table J and the RCNM printouts are provided in Appendix C.

Table J – Construction Noise Levels at the Nearest Homes and School

Construction Phase	Construction Noise Level (dBA Leq) at:	
	Nearest Homes to East ¹	Nearest Homes to South ²
Demolition	77	73
Grading	75	70
Building Construction	73	69
Paving	71	66
Painting	66	61
FTA Construction Noise Threshold³	80	80
Exceed Thresholds?	No	No

¹ The nearest homes to the east are located as near as 70 feet from the area to be disturbed on the project site. 3 dB of attenuation was added to the RCNM model in order to account for the 2-foot wall that is located on top of an 8 foot berm on the east side of the project site.

² The nearest homes to the south are located as near as 100 feet from the area to be disturbed on the project site. 5 dB of attenuation was added to the RCNM model in order to account for the 6-foot wall that is located along the south side of Mesa Drive

³ FTA Construction Noise Threshold obtained from Table B above.

Source: RCNM, Federal Highway Administration, 2018

Table J shows that the greatest noise impacts would occur during the demolition phase of construction, with a noise level as high as 77 dBA Leq at the nearest homes to the east and as high as 73 dBA at the nearest homes to the south, which are both within the FTA daytime construction noise standards of 80 dBA. Therefore, the proposed project would not create a substantial temporary increase in ambient noise levels from construction of the proposed project. Impacts would be less than significant.

Operational-Related Noise

The proposed project would consist of the development of a 95-unit, 120 bed, senior assisted living and memory care facility. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways and from onsite activities that have been analyzed separately below.

Roadway Vehicular Noise Impacts to Nearby Residents

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic that would occur with development of the proposed project.

Since, neither the General Plan nor the CEQA Guidelines define what constitutes a “substantial permanent increase to ambient noise levels”, this impact analysis has utilized guidance from the Federal Transit Administration for a moderate impact that has been detailed above in Table A that shows that the project contribution to the noise environment can range between 0 and 7 dB, which is dependent on the existing noise levels.

The potential offsite traffic noise impacts created by the on-going operations of the proposed project have been analyzed through utilization of the FHWA model and parameters described above in Section 6.2 and the FHWA model traffic noise calculation spreadsheets are provided in Appendix D. The proposed project’s potential offsite traffic noise impacts have been analyzed for the existing year and existing plus cumulative projects conditions that are discussed separately below.

Existing Conditions

The proposed project’s potential offsite traffic noise impacts have been calculated through a comparison of the Existing scenario to the Existing With Project scenario. The results of this comparison are shown in Table K.

Table K – Existing Project Traffic Noise Contributions

Roadway	Segment	dBA Ldn at Nearest Receptor ¹			
		Existing	Existing Plus Project	Project Contribution	Increase Threshold ²
College Boulevard	North of Mesa Drive	66.5	66.5	0.0	+1 dBA
College Boulevard	South of Mesa Drive	67.0	67.0	0.0	+1 dBA
Mesa Drive	West of College Boulevard	62.3	62.3	0.0	+2 dBA
Mesa Drive	East of College Boulevard	62.2	62.2	0.1	+2 dBA

Notes:

¹ Distance to nearest residential use shown in Table F, does not take into account existing noise barriers.

² Increase Threshold obtained from the FTA’s allowable noise impact exposures detailed above in Table A.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table K shows that the proposed project’s permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA’s allowable increase thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the existing conditions. Impacts would be less than significant.

Existing Plus Cumulative Projects Conditions

The proposed project’s potential offsite traffic noise impacts have been calculated through a comparison of the Existing plus cumulative projects scenario to the Existing plus cumulative projects with project scenario. The results of this comparison are shown in Table L.

Table L – Existing Plus Cumulative Projects Traffic Noise Contributions

Roadway	Segment	dBA Ldn at Nearest Receptor ¹			
		Existing Plus Cumulative	Existing Plus Cumulative With Project	Project Contribution	Increase Threshold ²
College Boulevard	North of Mesa Drive	66.6	66.6	0.0	+1 dBA
College Boulevard	South of Mesa Drive	67.2	67.2	0.0	+1 dBA
Mesa Drive	West of College Boulevard	62.3	62.3	0.0	+2 dBA
Mesa Drive	East of College Boulevard	62.2	62.2	0.1	+2 dBA

Notes:

¹ Distance to nearest residential use shown in Table F, does not take into account existing noise barriers.

² Increase Threshold obtained from the FTA's allowable noise impact exposures detailed above in Table A.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table L shows that the proposed project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA's allowable increase thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the existing plus cumulative projects conditions. Impacts would be less than significant.

Onsite Noise Sources

The operation of the proposed project may create an increase in onsite noise levels from the operation of the senior assisted living and memory care facility that would include noise from the rooftop mechanical equipment, parking lot, delivery trucks, and backup generator.

Section 38.12(a) of the City's Municipal Code limits the noise created from onsite sources to 50 dBA between 7:00 a.m. and 9:59 p.m. and 45 dBA between 10:00 p.m. and 6:59 p.m. at the property lines of the nearby residential uses. In order to determine the noise impacts from the operation of rooftop mechanical equipment, parking lot, delivery trucks, and backup generator, reference noise measurements were taken of each noise source and are shown in Table M. The noise levels from each source were calculated through use of a soft site geometric spreading of noise from a point source with a drop-off rate of 7.5 dB for each doubling of the distance between the source and nearest offsite receiver as well as the sound reduction provided by existing and proposed walls. The reference noise measurements and associated calculations are provided in Appendix E.

Table M – Operational Noise Levels at the Nearest Home to Each Noise Source

Noise Source	Reference Noise Measurement		Calculated Noise Levels		City Noise Standards ² (Day/Night)	Exceed Standard? (Day/Night)
	Distance Receptor to Source (feet)	Reference Noise Level (dBA Leq)	Distance to Homes (feet)	Noise Level ¹ (dBA Leq)		
Rooftop Mechanical Equipment	10	66.6	55	35	50/45	No/No
Parking Lot	10	52.1	150	5	50/45	No/No
Delivery Trucks	30	54.8	150	20	50/45	No/No
Backup Generator	23	88.9	200	46	50/45	No/Yes

Notes:

¹ The noise levels were calculated through use of a soft site geometric spreading of noise from a point source with a drop-off rate of 7.5 dB for each doubling of the distance between the source and receiver plus noise attenuation provided by sound walls (see Appendix E).

² City Noise Standards from Section 38.12(a) of the City's Municipal Code .

Table M shows that the rooftop mechanical equipment, parking lot activities, and delivery truck noise sources would all be within both the City's daytime and nighttime noise standards at the nearby homes. However, the proposed backup generator would be within the daytime noise standard and would exceed the nighttime noise standard at the nearby homes. This would be considered a significant impact.

Mitigation Measure 1 is provide that restricts all regular maintenance and cycling activities for the backup generator from occurring between the hours of 10 p.m. and 7 a.m.. Through implementation of Mitigation Measure 1, noise created from the proposed backup generator would result in a less than significant impact.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Mitigation Measure 1:

The project applicant shall restrict all regular maintenance and cycling activities for the backup diesel generator from occurring between the hours of 10:00 p.m. and 7:00 a.m..

Level of Significance After Mitigation

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include demolition and grading of approximately 5.5 acres of the 14.24-acre project site, building construction of the Assisted Living Center, paving of onsite the proposed 49 space parking lot and relocated 68 space parking area and driveways, and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors are single-family homes located as near as 70 feet to the east of the area that will be disturbed on the project site.

Since neither the City's General Plan nor the Municipal Code provide a quantifiable vibration threshold, Caltrans guidance that is detailed above in Section 4.2 has been utilized, which defines the threshold of perception from transient sources at 0.25 inch per second PPV.

The primary source of vibration during construction would be from the operation of a bulldozer. From Table I above a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. Based on typical propagation rates, the vibration level at the nearest offsite receptor (70 feet away) would be 0.03 inch per second PPV. The vibration level at the nearest offsite receptor would be within the 0.25 inch per second PPV threshold detailed above. Therefore, a less than significant vibration impact is anticipated from construction of the proposed project.

Operations-Related Vibration Impacts

The proposed project would consist of the development of a 95-unit, 120 bed, senior assisted living and memory care facility. The on-going operation of the proposed project would not include the operation of any known vibration sources other than typical vehicle operations that normally occur in residential neighborhoods. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project.

Level of Significance

Less than significant impact.

7.4 Aircraft Noise

The proposed project would not expose people residing or working in the project area to excessive noise levels from aircraft. The nearest airport is Oceanside Municipal Airport that is located as near as 3.2 miles west of the project site. The project site is located outside of the 60 dBA CNEL noise contours of Oceanside Municipal Airport. No impact would occur from aircraft noise.

Level of Significance

No impact.

8.0 REFERENCES

California Department of Transportation, *2016 Annual Average Daily Truck Traffic on the California State Highway System*, 2018.

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation- and Construction-Induced Vibration Guidance Manual*, September 2013.

City of Oceanside, *Oceanside General Plan Noise Element*, 2002.

City of Oceanside, *Oceanside General Plan Circulation Element*, September 2012.

City of Oceanside, *Oceanside, California Code of Ordinances Chapter 38 Noise Control*.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

Linscott Law & Greenspan, *Transportation Impact Study Sunrise of Oceanside*, July 21, 2020.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide*, January, 2006.

Vista Environmental, *Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis Sunrise of Oceanside Project*, July 29, 2020.

APPENDIX A

Field Noise Measurements Photo Index



Noise Measurement Site 1 - looking north



Noise Measurement Site 1 - looking northeast



Noise Measurement Site 1 - looking east



Noise Measurement Site 1 - looking southeast



Noise Measurement Site 1 - looking south



Noise Measurement Site 1 - looking southwest



Noise Measurement Site 1 - looking west



Noise Measurement Site 1 - looking northwest



Noise Measurement Site 2 - looking north



Noise Measurement Site 2 - looking northeast



Noise Measurement Site 2 - looking east



Noise Measurement Site 2 - looking southeast



Noise Measurement Site 2 - looking south



Noise Measurement Site 2 - looking southwest



Noise Measurement Site 2 - looking west



Noise Measurement Site 2 - looking northwest



Noise Measurement Site 3 - looking north



Noise Measurement Site 3 - looking northeast



Noise Measurement Site 1 - looking east



Noise Measurement Site 3 - looking southeast



Noise Measurement Site 3 - looking south



Noise Measurement Site 3 - looking southwest



Noise Measurement Site 3 - looking west



Noise Measurement Site 3 - looking northwest

APPENDIX B

Field Noise Measurements Printouts

Site 1 - On East Property Line Fence

July 13, 2020 11:13:29 AM
 Sampling Time = 1 s Freq Weighting=A
 Record Num = 86402
 Leq = 54.0
 Min = 32.3
 Max = 80.3

Site 1 - On East Property Line Fence

Leq Daytime = 56.8
 Leq Nightime = 44.2
 CNEL(24hr)= 55.8
 Ldn(24hr)= 55.7

Site 2 - Near Southeast Corner of Project Site

July 13, 2020 11:07:00 AM
 Sampling Time = 1 s Freq Weighting=A
 Record Num = 86402
 Leq = 58.3
 Min = 29.6
 Max = 84.0

Site 2 - Near Southeast Corner of Project Site

Leq Daytime = 60.7
 Leq Nightime = 44.5
 CNEL(24hr)= 62.2
 Ldn(24hr)= 61.9

Site 3 - S of Project on SE Corner of Mesa & R Del Oro Park

July 13, 2020 11:21:16 AM
 Sampling Time = 1 s Freq Weighting=A
 Record Num = 86402
 Leq = 64.3
 Min = 31.9
 Max = 89.7

Site 3 - S of Project on SE Corner of Mesa & R Del Oro Park

Leq Daytime = 66.9
 Leq Nightime = 57.1
 CNEL(24hr)= 67.5
 Ldn(24hr)= 67.0

Site 1 - On East Property Line Fence

SPL Time Leq (1 hour Avg.)

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
50.4	11:16:19	50.4	50.4
51.7	11:16:20	51.7	51.7
51.0	11:16:21	51.0	51.0
51.9	11:16:22	51.9	51.9
52.6	11:16:23	52.6	52.6
52.5	11:16:24	52.5	52.5
53.5	11:16:25	53.5	53.5
53.5	11:16:26	53.5	53.5
52.9	11:16:27	52.9	52.9
52.5	11:16:28	52.5	52.5
52.1	11:16:29	52.1	52.1
52.1	11:16:30	52.1	52.1
51.1	11:16:31	51.1	51.1
50.4	11:16:32	50.4	50.4
49.8	11:16:33	49.8	49.8
48.7	11:16:34	48.7	48.7
48.5	11:16:35	48.5	48.5
48.7	11:16:36	48.7	48.7
48.7	11:16:37	48.7	48.7
47.1	11:16:38	47.1	47.1
45.9	11:16:39	45.9	45.9
45.2	11:16:40	45.2	45.2
44.9	11:16:41	44.9	44.9
44.9	11:16:42	44.9	44.9
44.8	11:16:43	44.8	44.8
45.6	11:16:44	45.6	45.6
45.5	11:16:45	45.5	45.5
47.1	11:16:46	47.1	47.1
48.9	11:16:47	48.9	48.9
48.0	11:16:48	48.0	48.0
47.1	11:16:49	47.1	47.1
46.5	11:16:50	46.5	46.5
46.1	11:16:51	46.1	46.1
46.1	11:16:52	46.1	46.1
46.3	11:16:53	46.3	46.3
46.5	11:16:54	46.5	46.5
45.5	11:16:55	45.5	45.5
46.0	11:16:56	46.0	46.0
46.4	11:16:57	46.4	46.4
47.5	11:16:58	47.5	47.5
50.5	11:16:59	50.4	50.4
50.6	11:17:00	50.6	50.6
49.8	11:17:01	49.8	49.8
49.5	11:17:02	49.5	49.5
48.6	11:17:03	48.6	48.6
49.8	11:17:04	49.8	49.8
54.6	11:17:05	54.6	54.6
50.8	11:17:07	50.8	50.8
48.1	11:17:08	48.1	48.1
48.1	11:17:09	48.1	48.1
47.8	11:17:10	47.8	47.8
49.1	11:17:11	49.1	49.1
50.3	11:17:12	50.3	50.3
49.8	11:17:13	49.8	49.8
49.9	11:17:14	49.9	49.9
53.0	11:17:15	53.0	53.0
52.2	11:17:16	52.2	52.2
51.5	11:17:17	51.5	51.5
51.6	11:17:18	51.6	51.6
51.2	11:17:19	51.2	51.2
51.0	11:17:20	51.0	51.0
50.7	11:17:21	50.7	50.7
50.3	11:17:22	50.3	50.3
49.8	11:17:23	49.8	49.8
49.0	11:17:24	49.0	49.0
48.3	11:17:25	48.3	48.3
47.5	11:17:26	47.5	47.5
46.8	11:17:27	46.8	46.8
46.7	11:17:28	46.7	46.7
46.3	11:17:29	46.3	46.3
45.5	11:17:30	45.5	45.5
45.3	11:17:31	45.3	45.3
45.6	11:17:32	45.6	45.6
45.4	11:17:33	45.4	45.4
45.3	11:17:34	45.3	45.3
46.5	11:17:35	46.5	46.5
49.0	11:17:36	49.0	49.0
48.3	11:17:37	48.3	48.3
51.8	11:17:38	51.8	51.8
53.6	11:17:39	53.6	53.6
53.8	11:17:40	53.8	53.8
53.2	11:17:41	53.2	53.2
52.9	11:17:42	52.9	52.9
52.5	11:17:43	52.5	52.5
53.0	11:17:44	53.0	53.0
53.0	11:17:45	53.0	53.0
52.3	11:17:46	52.3	52.3
50.8	11:17:47	50.8	50.8
49.2	11:17:48	49.2	49.2
48.0	11:17:49	48.0	48.0
46.8	11:17:50	46.8	46.8
45.8	11:17:51	45.8	45.8
45.5	11:17:52	45.5	45.5
44.8	11:17:53	44.8	44.8
44.3	11:17:54	44.3	44.3
44.2	11:17:55	44.2	44.2
44.3	11:17:56	44.3	44.3
45.5	11:17:57	45.5	45.5
49.0	11:17:58	49.0	49.0
48.4	11:17:59	48.4	48.4
48.1	11:18:00	48.1	48.1
44.4	11:18:02	44.4	44.4
44.7	11:18:03	44.7	44.7
44.8	11:18:04	44.8	44.8
44.3	11:18:05	44.3	44.3
46.4	11:18:06	46.4	46.4
48.4	11:18:07	48.4	48.4
48.4	11:18:08	48.4	48.4
48.6	11:18:09	48.6	48.6
48.6	11:18:10	48.6	48.6
49.3	11:18:11	49.3	49.3
50.0	11:18:12	50.0	50.0
51.9	11:18:13	51.9	51.9
53.0	11:18:14	53.0	53.0
53.0	11:18:15	53.0	53.0
55.2	11:18:16	55.2	55.2
56.1	11:18:17	56.1	56.1
54.7	11:18:18	54.7	54.7
53.4	11:18:19	53.4	53.4
53.3	11:18:20	53.3	53.3
54.3	11:18:21	54.3	54.3
54.7	11:18:22	54.7	54.7
55.2	11:18:23	55.2	55.2
55.9	11:18:24	55.9	55.9
53.5	11:18:25	53.5	53.5
51.4	11:18:26	51.4	51.4
50.3	11:18:27	50.3	50.3
49.7	11:18:28	49.7	49.7
49.4	11:18:29	49.4	49.4
49.4	11:18:30	49.4	49.4
49.4	11:18:31	49.4	49.4
50.2	11:18:32	50.2	50.2
50.8	11:18:33	50.8	50.8
50.2	11:18:34	50.2	50.2
49.6	11:18:35	49.6	49.6
48.5	11:18:36	48.5	48.5
48.4	11:18:37	48.4	48.4
48.2	11:18:38	48.2	48.2
49.4	11:18:39	49.4	49.4
51.0	11:18:40	51.0	51.0
51.6	11:18:41	51.6	51.6
51.0	11:18:42	51.0	51.0
51.6	11:18:43	51.6	51.6
52.8	11:18:44	52.8	52.8
52.5	11:18:45	52.5	52.5
51.9	11:18:46	51.9	51.9
51.7	11:18:47	51.7	51.7
51.8	11:18:48	51.8	51.8
52.5	11:18:49	52.5	52.5
53.0	11:18:50	53.0	53.0
52.7	11:18:51	52.7	52.7
51.8	11:18:52	51.8	51.8
51.3	11:18:53	51.3	51.3
50.5	11:18:54	50.5	50.5
50.4	11:18:55	50.4	50.4
51.0	11:18:56	51.0	51.0
50.3	11:18:57	50.3	50.3
50.0	11:18:58	50.0	50.0
50.7	11:18:59	50.7	50.7
50.2	11:19:00	50.2	50.2
49.8	11:19:01	49.8	49.8
50.0	11:19:02	50.0	50.0
50.4	11:19:03	50.4	50.4
50.3	11:19:04	50.3	50.3
50.0	11:19:05	50.0	50.0
49.1	11:19:06	49.1	49.1
48.6	11:19:07	48.6	48.6
48.4	11:19:08	48.4	48.4
47.6	11:19:09	47.6	47.6
47.1	11:19:10	47.1	47.1
47.0	11:19:11	47.0	47.0
46.7	11:19:12	46.7	46.7
46.8	11:19:13	46.8	46.8
48.3	11:19:14	48.3	48.3
49.3	11:19:15	49.3	49.3
49.4	11:19:16	49.4	49.4
49.4	11:19:17	49.4	49.4
49.1	11:19:18	49.1	49.1
49.1	11:19:19	49.1	49.1
48.7	11:19:20	48.7	48.7

Site 2 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
51.6	11:16:50	51.6	51.6
50.3	11:09:51	50.3	50.3
50.9	11:09:52	50.9	50.9
51.9	11:09:53	51.9	51.9
52.6	11:09:54	52.6	52.6
53.5	11:09:55	53.5	53.5
53.5	11:09:56	53.5	53.5
52.9	11:09:57	52.9	52.9
52.9	11:09:58	52.9	52.9
52.2	11:09:59	52.2	52.2
51.1	11:10:00	51.1	51.1
51.1	11:10:01	51.1	51.1
51.1	11:10:02	51.1	51.1
51.1	11:10:03	51.1	51.1
51.1	11:10:04	51.1	51.1
51.1	11:10:05	51.1	51.1
51.1	11:10:06	51.1	51.1
51.1	11:10:07	51.1	51.1
51.1	11:10:08	51.1	51.1
51.1	11:10:09	51.1	51.1
51.1	11:10:10	51.1	51.1
51.1	11:10:11	51.1	51.1
51.1	11:10:12	51.1	51.1
51.1	11:10:13	51.1	51.1
51.1	11:10:14	51.1	51.1
51.1	11:10:15	51.1	51.1
51.1	11:10:16	51.1	51.1
51.1	11:10:17	51.1	51.1
51.1	11:10:18	51.1	51.1
51.1	11:10:19	51.1	51.1
51.1	11:10:20	51.1	51.1
51.1	11:10:21	51.1	51.1
51.1	11:10:22	51.1	51.1
51.1	11:10:23	51.1	51.1
51.1	11:10:24	51.1	51.1
51.1	11:10:25	51.1	51.1
51.1	11:10:26	51.1	51.1
51.1	11:10:27	51.1	51.1
51.1	11:10:28	51.1	51.1
51.1	11:10:29	51.1	51.1
51.1	11:10:30	51.1	51.1
51.1	11:10:31	51.1	51.1
51.1	11:10:32	51.1	51.1
51.1	11:10:33	51.1	51.1
51.1	11:10:34	51.1	51.1
51.1	11:10:35	51.1	51.1
51.1	11:10:36	51.1	51.1
51.1	11:10:37	51.1	51.1
51.1	11:10:38	51.1	51.1
51.1	11:10:39	51.1	51.1
51.1	11:10:40	51.1	51.1
51.1	11:10:41	51.1	51.1
51.1	11:10:42	51.1	51.1
51.1	11:10:43	51.1	51.1
51.1	11:10:44	51.1	51.1
51.1	11:10:45	51.1	51.1
51.1	11:10:46	51.1	51.1
51.1	11:10:47	51.1	51.1
51.1	11:10:48	51.1	51.1
51.1	11:10:49	51.1	51.1
51.1	11:10:50	51.1	51.1
51.1	11:10:51	51.1	51.1
51.1	11:1		

Site 1 - On East Property Line Fence

SPL Time Leq (1 hour Avg.)

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
46.2	11:19:21	46.3	46.2	46.3
47.9	11:19:22	47.9	47.9	58.3
47.5	11:19:23	47.5	47.5	56.2
47.5	11:19:24	47.5	47.5	56.1
47.4	11:19:25	47.4	47.4	59.2
47.4	11:19:26	47.4	47.4	54.7
47.1	11:19:27	47.1	47.1	65.6
49.3	11:19:28	49.3	49.3	67.4
47.5	11:19:29	48.5	48.5	65.4
47.4	11:19:30	47.4	47.4	62.4
46.9	11:19:31	46.9	46.9	59.2
46.3	11:19:32	46.3	46.3	55.8
46.1	11:19:33	46.1	46.1	52.7
46.2	11:19:34	46.7	46.7	49.8
46.8	11:19:35	46.9	46.9	50.6
46.8	11:19:36	46.8	46.8	48.7
46.8	11:19:37	46.8	46.8	50.4
46.7	11:19:38	46.7	46.7	50.8
46.3	11:19:39	46.3	46.3	52.9
46.1	11:19:40	46.1	46.1	52.6
45.7	11:19:41	45.7	45.7	50.4
45.1	11:19:42	45.1	45.1	49.1
44.2	11:19:43	44.2	44.2	48.1
44.3	11:19:44	44.9	44.9	47.9
45.1	11:19:45	45.1	45.1	46.6
45.3	11:19:46	45.3	45.3	46.8
45.3	11:19:47	45.3	45.3	48.4
45.3	11:19:48	45.3	45.3	52.0
45.8	11:19:49	45.8	45.8	53.4
45.4	11:19:50	45.4	45.4	54.7
45.5	11:19:51	45.5	45.5	54.6
45.5	11:19:52	45.5	45.5	53.3
45.7	11:19:53	45.7	45.7	51.8
46.0	11:19:54	46.0	46.0	50.7
46.0	11:19:55	46.0	46.0	49.4
46.1	11:19:56	46.1	46.1	50.1
46.7	11:19:57	46.7	46.7	52.0
46.4	11:19:58	46.4	46.4	51.0
46.3	11:19:59	46.3	46.3	50.4
46.2	11:20:00	46.2	46.2	51.2
45.5	11:20:01	45.5	45.5	53.0
45.5	11:20:02	45.5	45.5	57.2
45.5	11:20:03	45.5	45.5	62.6
45.3	11:20:04	45.3	45.3	64.6
45.1	11:20:05	45.1	45.1	64.6
45.5	11:20:06	45.5	45.5	63.8
45.5	11:20:07	45.5	45.5	63.7
46.2	11:20:07	46.2	46.2	65.0
50.9	11:20:08	50.9	50.9	62.8
53.6	11:20:09	53.6	53.6	60.8
52.5	11:20:10	52.5	52.5	53.2
51.6	11:20:11	51.6	51.6	57.6
50.9	11:20:12	50.9	50.9	56.6
50.9	11:20:13	50.9	50.9	55.1
51.5	11:20:14	51.5	51.5	54.8
51.2	11:20:15	51.2	51.2	55.3
50.7	11:20:16	50.7	50.7	56.1
50.4	11:20:17	50.4	50.4	56.1
50.2	11:20:18	50.2	50.2	56.2
49.5	11:20:19	49.5	49.5	55.6
48.8	11:20:20	48.8	48.8	56.5
47.9	11:20:21	47.9	47.9	53.3
47.0	11:20:22	47.0	47.0	53.6
47.1	11:20:23	47.1	47.1	54.2
47.3	11:20:24	47.3	47.3	54.3
47.6	11:20:25	47.6	47.6	55.0
47.6	11:20:26	47.6	47.6	55.5
47.7	11:20:27	47.7	47.7	56.5
48.3	11:20:28	48.3	48.3	63.0
48.0	11:20:29	48.0	48.0	63.5
48.1	11:20:30	48.1	48.1	63.9
49.4	11:20:31	49.4	49.4	64.4
49.5	11:20:32	49.5	49.5	65.9
48.7	11:20:33	48.7	48.7	68.4
47.8	11:20:34	47.8	47.8	69.0
48.2	11:20:35	48.2	48.2	66.6
48.3	11:20:36	48.3	48.3	65.1
48.7	11:20:37	48.7	48.7	63.8
47.9	11:20:38	47.9	47.9	60.8
47.9	11:20:39	47.9	47.9	57.8
47.7	11:20:40	47.7	47.7	56.4
47.4	11:20:41	47.4	47.4	55.3
47.3	11:20:42	47.3	47.3	52.0
48.0	11:20:43	48.0	48.0	50.0
49.8	11:20:44	49.8	49.8	48.4
49.5	11:20:45	49.5	49.5	47.5
49.5	11:20:46	49.5	49.5	47.4
48.6	11:20:47	48.6	48.6	46.9
47.9	11:20:48	47.9	47.9	45.9
47.7	11:20:49	47.7	47.7	45.2
47.0	11:20:50	47.0	47.0	45.0
47.7	11:20:51	47.7	47.7	45.1
47.5	11:20:52	47.5	47.5	46.0
47.3	11:20:53	47.3	47.3	46.3
47.3	11:20:54	47.3	47.3	46.2
46.9	11:20:55	46.9	46.9	57.9
46.7	11:20:56	46.7	46.7	60.1
48.9	11:20:57	48.9	48.9	63.5
50.7	11:20:58	50.7	50.7	63.5
47.9	11:20:59	47.9	47.9	63.6
46.8	11:20:60	46.8	46.8	63.6
45.9	11:20:61	45.9	45.9	63.6
45.2	11:20:62	45.2	45.2	62.0
45.4	11:20:63	45.4	45.4	62.6
45.4	11:20:64	45.4	45.4	63.6
45.6	11:20:65	45.6	45.6	62.3
45.7	11:20:66	45.7	45.7	59.6
45.8	11:20:67	45.8	45.8	56.5
45.5	11:20:68	45.5	45.5	53.6
45.5	11:20:69	45.5	45.5	53.6
45.5	11:20:70	45.5	45.5	53.6
45.9	11:20:71	45.9	45.9	53.6
45.1	11:20:72	45.1	45.1	54.0
45.2	11:20:73	45.2	45.2	54.2
45.3	11:20:74	45.3	45.3	54.2
45.4	11:20:75	45.4	45.4	54.2
45.6	11:20:76	45.6	45.6	54.2
45.7	11:20:77	45.7	45.7	54.2
45.8	11:20:78	45.8	45.8	54.2
45.9	11:20:79	45.9	45.9	54.2
45.5	11:20:80	45.5	45.5	54.2
45.5	11:20:81	45.5	45.5	54.2
45.5	11:20:82	45.5	45.5	54.2
45.5	11:20:83	45.5	45.5	54.2
45.5	11:20:84	45.5	45.5	54.2
45.5	11:20:85	45.5	45.5	54.2
45.5	11:20:86	45.5	45.5	54.2
45.5	11:20:87	45.5	45.5	54.2
45.5	11:20:88	45.5	45.5	54.2
45.5	11:20:89	45.5	45.5	54.2
45.5	11:20:90	45.5	45.5	54.2
45.5	11:20:91	45.5	45.5	54.2
45.5	11:20:92	45.5	45.5	54.2
45.5	11:20:93	45.5	45.5	54.2
45.5	11:20:94	45.5	45.5	54.2
45.5	11:20:95	45.5	45.5	54.2
45.5	11:20:96	45.5	45.5	54.2
45.5	11:20:97	45.5	45.5	54.2
45.5	11:20:98	45.5	45.5	54.2
45.5	11:20:99	45.5	45.5	54.2
45.5	11:20:100	45.5	45.5	54.2
45.5	11:20:101	45.5	45.5	54.2
45.5	11:20:102	45.5	45.5	54.2
45.5	11:20:103	45.5	45.5	54.2
45.5	11:20:104	45.5	45.5	54.2
45.5	11:20:105	45.5	45.5	54.2
45.5	11:20:106	45.5	45.5	54.2
45.5	11:20:107	45.5	45.5	54.2
45.5	11:20:108	45.5	45.5	54.2
45.5	11:20:109	45.5	45.5	54.2
45.5	11:20:110	45.5	45.5	54.2
45.5	11:20:111	45.5	45.5	54.2
45.5	11:20:112	45.5	45.5	54.2
45.5	11:20:113	45.5	45.5	54.2
45.5	11:20:114	45.5	45.5	54.2
45.5	11:20:115	45.5	45.5	54.2
45.5	11:20:116	45.5	45.5	54.2
45.5	11:20:117	45.5	45.5	54.2
45.5	11:20:118	45.5	45.5	54.2
45.5	11:20:119	45.5	45.5	54.2
45.5	11:20:120	45.5	45.5	54.2
45.5	11:20:121	45.5	45.5	54.2
45.5	11:20:122	45.5	45.5	54.2
45.5	11:20:123	45.5	45.5	54.2
45.5	11:20:124	45.5	45.5	54.2
45.5	11:20:125	45.5	45.5	54.2
45.5	11:20:126	45.5	45.5	54.2
45.5	11:20:127	45.5	45.5	54.2
45.5	11:20:128	45.5	45.5	54.2
45.5	11:20:129	45.5	45.5	54.2
45.5	11:20:130	45.5	45.5	54.2
45.5	11:20:131	45.5	45.5	54.2
45.5	11:20:132	45.5	45.5	54.2
45.5	11:20:133	45.5	45.5	54.2
45.5	11:20:134	45.5	45.5	54.2
45.5	11:20:135	45.5	45.5	54.2
45.5	11:20:136	45.5	45.5	54.2
45.5	11:20:137	45.5	45.5	54.2
45.5	11:20:138	45.5	45.5	54.2
45.5	11:20:139	45.5	45.5	54.2
45.5	11:20:140	45.5	45.5	54.2
45.5	11:20:141	45.5	45.5	54.2
45.5	11:20:142	45.5	45.5	54.2
45.5	11:20:143	45.5	45.5	54.2
45.5	11:20:144	45.5	45.5	54.2
45.5	11:20:145	45.5	45.5	54.2
45.5	11:20:146	45.5	45.5	54.2
45.5	11:20:147	45.5	45.5	54.2
45.5	11:20:148	45.5	45.5	54.2
45.5	11:20:149	45.5	45.5	54.2
45.5	11:20:150	45.5	45.5	54.2
45.5	11:20:151	45.5	45.5	54.2
45.5	11:20:152	45.5	45.5	54.2
45.5	11:20:153	45.5	45.5	54.2
45.5	11:20:154	45.5	45.5	54.2
45.5	11:20:155	45.5	45.5	54.2
45.5	11:20:156	45.5	45.5	54.2
45.5	11:20:157	45.5	45.5	54.2
45.5	11:20:158	45.5	45.5	54.2
45.5	11:20:159	45.5	45.5	54.2
45.5	11:20:160	45.5	45.5	54.2
45.5	11:20:161	45.5	45.5	54.2
45.5	11:20:162	45.5	45.5	54.2
45.5	11:20:163	45.5	45.5	54.2
45.5	11:20:164	45.5	45.5	54.2
45.5	11:20:165	45.5	45.5	54.2
45.5	11:20:16			

Site 1 - On East Property Line Fence

SPL	Time	Leq (1 hour Avg.)	Ldn CNL
50.8	11:22:30	50.8	51.6
50.7	11:22:31	50.7	50.5
49.9	11:22:32	49.9	49.9
49.8	11:22:33	49.8	49.8
49.8	11:22:34	49.8	49.8
48.3	11:22:35	48.3	48.3
46.6	11:22:36	46.6	46.6
46.5	11:22:37	46.5	46.5
45.5	11:22:38	45.5	45.5
45.9	11:22:39	45.9	45.9
47.9	11:22:40	47.9	47.9
47.1	11:22:41	47.1	47.1
48.0	11:22:42	48.0	48.0
48.6	11:22:43	48.6	48.6
48.2	11:22:44	48.2	48.2
47.9	11:22:45	47.9	47.9
47.3	11:22:46	47.3	47.3
47.4	11:22:47	47.4	47.4
46.6	11:22:48	46.6	46.6
48.2	11:22:49	48.2	48.2
48.0	11:22:50	48.0	48.0
45.5	11:22:51	45.5	45.5
45.4	11:22:52	45.4	45.4
45.5	11:22:53	45.5	45.5
45.5	11:22:54	45.5	45.5
46.0	11:22:55	46.0	46.0
48.4	11:22:56	48.4	48.4
48.2	11:22:57	48.2	48.2
46.4	11:22:58	46.4	46.4
48.2	11:22:59	48.2	48.2
48.0	11:23:00	48.0	48.0
46.7	11:23:01	46.7	46.7
47.1	11:23:02	47.1	47.1
43.3	11:23:03	43.3	43.3
43.3	11:23:04	43.3	43.3
42.4	11:23:05	42.4	42.4
47.7	11:23:06	47.7	47.7
47.4	11:23:07	47.4	47.4
47.7	11:23:08	47.7	47.7
47.4	11:23:09	47.4	47.4
47.4	11:23:10	47.4	47.4
48.3	11:23:11	48.3	48.3
45.7	11:23:12	45.7	45.7
46.3	11:23:13	46.3	46.3
46.3	11:23:14	46.3	46.3
48.1	11:23:15	48.1	48.1
47.4	11:23:16	47.4	47.4
47.4	11:23:17	47.4	47.4
47.4	11:23:18	47.4	47.4
54.4	11:23:19	54.4	54.4
53.3	11:23:20	53.3	53.3
51.8	11:23:20	51.8	51.8
50.2	11:23:21	50.2	50.2
50.2	11:23:22	50.2	50.2
49.5	11:23:23	49.5	49.5
48.1	11:23:24	48.1	48.1
47.4	11:23:25	47.4	47.4
48.2	11:23:26	48.2	48.2
47.7	11:23:27	47.7	47.7
48.0	11:23:28	48.0	48.0
47.4	11:23:29	47.4	47.4
47.4	11:23:30	47.4	47.4
47.4	11:23:31	47.4	47.4
47.2	11:23:32	47.2	47.2
46.4	11:23:33	46.4	46.4
45.5	11:23:34	45.5	45.5
45.5	11:23:35	45.5	45.5
44.9	11:23:36	44.9	44.9
44.9	11:23:37	44.9	44.9
45.5	11:23:38	45.5	45.5
45.5	11:23:39	45.5	45.5
45.3	11:23:40	45.3	45.3
46.2	11:23:41	46.2	46.2
47.4	11:23:42	47.4	47.4
46.2	11:23:43	46.2	46.2
47.2	11:23:44	47.2	47.2
47.4	11:23:45	47.4	47.4
47.7	11:23:46	47.7	47.7
48.0	11:23:47	48.0	48.0
48.1	11:23:48	48.1	48.1
49.5	11:23:49	49.5	49.5
50.0	11:23:50	50.0	50.0
49.2	11:23:51	49.2	49.2
49.6	11:23:52	49.6	49.6
50.1	11:23:53	50.1	50.1
50.1	11:23:54	50.1	50.1
49.3	11:23:55	49.3	49.3
48.3	11:23:56	48.3	48.3
48.3	11:23:57	48.3	48.3
48.4	11:23:58	48.4	48.4
48.4	11:23:59	48.4	48.4
48.6	11:24:00	48.6	48.6
48.6	11:24:01	48.6	48.6
48.1	11:24:02	48.1	48.1
48.9	11:24:03	48.9	48.9
48.1	11:24:04	48.1	48.1
48.4	11:24:05	48.4	48.4
48.4	11:24:06	48.4	48.4
48.6	11:24:07	48.6	48.6
46.5	11:24:08	46.5	46.5
46.5	11:24:09	46.5	46.5
46.3	11:24:09'	46.3	46.3
46.2	11:24:10	46.2	46.2
46.1	11:24:11	46.1	46.1
46.4	11:24:12	46.4	46.4
46.4	11:24:13	46.4	46.4
47.1	11:24:14	47.1	47.1
47.1	11:24:15	47.1	47.1
48.3	11:24:16	48.3	48.3
48.3	11:24:17	48.3	48.3
48.9	11:24:18	48.9	48.9
49.2	11:24:19	49.2	49.2
48.9	11:24:20	48.9	48.9
50.6	11:24:21	50.6	50.6
52.0	11:24:22	52.0	52.0
49.8	11:24:23	49.8	49.8
49.8	11:24:24	49.8	49.8
49.4	11:24:25	49.4	49.4
49.4	11:24:26	49.4	49.4
49.6	11:24:27	49.6	49.6
50.5	11:24:28	50.5	50.5
49.4	11:24:29	49.4	49.4
49.4	11:24:30	49.4	49.4
49.4	11:24:31	49.4	49.4
52.4	11:24:32	52.4	52.4
52.4	11:24:33	52.4	52.4
53.1	11:24:44	53.1	53.1
52.2	11:24:45	52.2	52.2
51.8	11:24:46	51.8	51.8
51.4	11:24:47	51.4	51.4
49.8	11:24:48	49.8	49.8
49.4	11:24:49	49.4	49.4
49.4	11:24:50	49.4	49.4
49.4	11:24:51	49.4	49.4
49.4	11:24:52	49.4	49.4
49.4	11:24:53	49.4	49.4
49.4	11:24:54	49.4	49.4
49.4	11:24:55	49.4	49.4
49.4	11:24:56	49.4	49.4
49.4	11:24:57	49.4	49.4
49.4	11:24:58	49.4	49.4
49.4	11:24:59	49.4	49.4
49.4	11:24:59'	49.4	49.4
50.9	11:25:00	50.9	50.9
50.3	11:25:01	50.3	50.3
49.4	11:25:02	49.4	49.4
49.6	11:25:03	49.6	49.6
49.4	11:25:04	49.4	49.4
49.4	11:25:05	49.4	49.4
50.8	11:25:06	50.8	50.8
50.4	11:25:07	50.4	50.4
50.4	11:25:08	50.4	50.4
50.4	11:25:09	50.4	50.4
50.4	11:25:10	50.4	50.4
50.4	11:25:11	50.4	50.4
50.4	11:25:12	50.4	50.4
50.4	11:25:13	50.4	50.4
50.4	11:25:14	50.4	50.4
50.4	11:25:15	50.4	50.4
51.9	11:25:16	51.9	51.9
51.9	11:25:17	51.9	51.9
51.9	11:25:18	51.9	51.9
52.2	11:25:19	52.2	52.2
51.8	11:25:20	51.8	51.8
51.8	11:25:21	51.8	51.8
51.9	11:25:22	51.9	51.9
51.5	11:25:23	51.5	51.5
50.4	11:25:24	50.4	50.4
49.5	11:25:25	49.5	49.5
48.8	11:25:26	48.8	48.8
48.7	11:25:27	48.7	48.7
48.4	11:25:28	48.4	48.4
48.7	11:25:29	48.7	48.7
48.1	11:25:30	48.1	48.1
48.1	11:25:31	48.1	48.1
49.3	11:25:32	49.3	49.3
49.3	11:25:33	49.3	49.3
48.7	11:25:33	48.7	48.7
48.7	11:25:34	48.7	48.7
51.8	11:25:35	51.8	51.8
51.6	11:25:36	51.6	51.6
50.5	11:25:37	50.5	50.5
50.5	11:25:38	50.5	50.5
50.0	11:25:39	50.0	50.0
50.0	11:25:41	50.0	50.0
50.3	11:25:42	50.3	50.3
50.3	11:25:43	50.3	50.3
50.3	11:25:44	50.3	50.3
50.3	11:25:45	50.3	50.3
50.0	11:25:46	50.0	50.0
49.8	11:25:47	49.8	49.8
49.7	11:25:48	49.7	49.7
47.9	11:25:49	47.9	47.9
47.9	11:25:50	47.9	47.9
47.8	11:25:51	47.8	47.8
47.8	11:25:52	47.8	47.8
47.8	11:25:53	47.8	47.8
47.8	11:25:54	47.8	47.8
47.8	11:25:55	47.8	47.8
47.8	11:25:56	47.8	47.8
47.8	11:25:57	47.8	47.8
47.8	11:25:58	47.8	47.8
47.8	11:25:59	47.8	47.8
47.8	11:25:59'	47.8	47.8
47.8	11:26:00	47.8	47.8

Site 2 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn (1 hour Avg.)
80.3	11:18:00	60.3	60.3
80.3	11:18:03	60.3	60.3
58.4	11:16:04	58.4	58.4
58.4	11:16:07	58.4	58.4
54.3	11:18:08	54.3	54.3
51.6	11:16:07	51.6	51.6
49.3	11:16:09	49.3	49.3
48.4	11:16:10	47.5	47.5
48.4	11:16:12	46.4	46.4
48.4	11:16:13	46.4	46.4
50.0	11:16:14	48.2	48.2
50.0	11:16:17	50.0	50.0
54.0	11:16:18	51.0	51.0
54.0	11:16:19	54.0	54.0
57.5	11:16:17	57.5	57.5
50.1	11:16:19	50.1	50.1
63.6	11:16:19	63.6	63.6
61.0	11:16:20	61.0	61.0
59.3	11:16:21	59.3	59.3
56.6	11:16:22	56.6	56.6
53.7	11:16:23	53.7	53.7
51.3	11:16:24	51.3	51.3
52.7	11:16:25	52.7	52.7
49.8	11:16:27	49.8	49.8
48.5	11:16:30	48.5	48.5
48.5	11:16:39	48.5	48.5
48.4	11:16:40	48.4	48.4
51.0	11:16:41	51.0	51.0
55.0	11:16:42	55.0	55.0
28.7	11:16:43	28.7	28.7
51.8	11:16:44	51.8	51.8
61.3	11:16:45	61.3	61.3
53.5	11:16:46	53.5	53.5
65.8	11:16:47	65.8	65.8
64.6	11:16:48	64.6	64.6
61.4	11:16:49	61.4	61.4
30.4	11:16:50	30.4	30.4
54.9	11:16:51	54.9	54.9
51.7	11:16:52	51.7	51.7
48.3	11:16:53	48.3	48.3
48.7	11:16:54	48.7	48.7
49.2	11:16:55	49.2	49.2
44.5	11:16:56	44.5	44.5
43.8	11:16:57	43.8	43.8
43.0	11:16:58	43.0	43.0
42.4	11:16:59	42.4	42.4
43.2	11:17:00	43.2	43.2
43.5	11:17:01	43.2	43.2
43.5	11:17:02	43.5	43.5
43.5	11:17:03	43.5	43.5
44.8	11:17:04	44.8	44.8
47.4	11:17:05	47.4	47.4
51.1	11:17:06	51.1	51.1
55.9	11:17:07	55.9	55.9
61.1	11:17:08	61.4	61.4
29.2	11:17:09	29.2	29.2
58.6	11:17:10	58.6	58.6
69.1	11:17:11	69.1	69.1
66.7	11:17:12	66.7	66.7
63.5	11:17:13	63.5	63.5
60.3	11:17:14	60.3	60.3
57.9	11:17:15	57.9	57.9
57.9	11:17:16	57.9	57.9
58.8	11:17:17	58.9	58.9
61.3	11:17:18	61.3	61.3
60.1	11:17:19	60.1	60.1
57.4	11:17:20	57.4	57.4
54.4	11:17:21	54.4	54.4
51.5	11:17:22	51.5	51.5
48.7	11:17:23	48.7	48.7
46.1	11:17:24	46.1	46.1
44.1	11:17:25	44.1	44.1
42.9	11:17:26	42.9	42.9
42.4	11:17:27	42.4	42.4
42.0	11:17:28	42.0	42.0
41.4	11:17:29	41.4	41.4
41.3	11:17:30	41.3	41.3
41.3	11:17:31	41.3	41.3
41.2	11:17:32	41.2	41.2
41.2	11:17:33	41.2	41.2
41.2	11:17:34	41.2	41.2
41.2	11:17:35	41.2	41.2
41.6	11:17:36	41.6	41.6
41.6	11:17:37	41.6	41.6
41.6	11:17:38	41.6	41.6
41.6	11:17:39	41.6	41.6
41.1	11:17:40	41.1	41.1
40.5	11:17:41	40.5	40.5
48.8	11:17:42	48.8	48.8
51.8	11:17:43	51.8	51.8
55.8	11:17:44	55.8	55.8
52.4	11:17:45	52.4	52.4
53.5	11:17:46	53.5	53.5
62.3	11:17:47	62.3	62.3
29.8	11:17:48	29.8	29.8
56.8	11:17:49	56.8	56.8
54.6	11:17:50	54.6	54.6
54.7	11:17:51	54.7	54.7
54.7	11:17:52	54.7	54.7
56.5	11:17:53	56.5	56.5
60.1	11:17:54	60.1	60.1
53.4	11:17:55	53.4	53.4
57.5	11:17:56	53.4	53.4
59.1	11:17:57	57.5	57.5
58.2	11:17:58	58.2	58.2
59.3	11:17:59	59.3	59.3
61.4	11:17:59	61.4	61.4
52.5	11:18:01	52.5	52.5
52.5	11:18:02	52.5	52.5
52.5	11:18:03	52.5	52.5
58.4	11:18:04	58.4	58.4
59.4	11:18:05	59.4	59.4
60.4	11:18:06	60.4	60.4
59.1	11:18:08	59.1	59.1
58.2	11:18:09	58.2	58.2
58.3	11:18:10	58.3	58.3
61.4	11:18:11	61.4	61.4
64.0	11:18:12	64.0	64.0
64.2	11:18:13	64.2	64.2
63.8	11:18:14	63.8	63.8
63.8	11:18:15	63.8	63.8
65.9	11:18:16	65.9	65.9
65.9	11:18:17	65.9	65.9
62.0	11:18:18	62.0	62.0
60.2	11:18:19	60.2	60.2
54.4	11:18:20	54.4	54.4
54.6	11:18:21	54.6	54.6
52.1	11:18:22	52.1	52.1
30.1	11:18:23	30.1	30.1
49.9	11:18:24	49.9	49.9
52.0	11:18:25	52.0	52.0
52.0	11:18:26	52.0	52.0
47.9	11:18:37	47.9	47.9
46.5	11:18:38	46.5	46.5
44.4	11:18:39	44.4	44.4
44.3	11:18:41	44.3	44.3
44.3	11:18:42	44.3	44.3
49.2	11:18:43	49.2	49.2
52.1	11:18:44	52.1	52.1
52.1	11:18:45	52.1	52.1
52.1	11:18:46	52.1	52.1
62.9	11:18:47	62.9	62.9
61.2	11:18:48	61.2	61.2
58.5	11:18:49	58.5	58.5
52.5	11:18:50	52.5	52.5
49.4	11:18:51	49.4	49.4
48.4	11:18:53	48.4	48.4
45.1	11:18:54	45.1	45.1
44.1	11:18:55	44.1	44.1
48.4	11:18:56	48.4	48.4
48.6	11:18:57	48.6	48.6
51.1	11:18:58	51.1	51.1
56.2	11:18:59	56.2	56.2
60.0	11:19:00	60.0	60.0
58.0	11:19:02	58.0	58.0
58.4	11:19:03	58.4	58.4
52.1	11:19:04	52.1	52.1
49.4	11:19:05	49.4	49.4
48.4	11:19:06	48.4	48.4
47.2	11:19:07	47.2	47.2
45.8	11:19:08	45.8	45.8
45.8	11:19:09	45.8	45.8
45.2	11:19:09	45.2	45.2
44.9	11:19:10	44.9	44.9
44.9	11:19:11	44.9	44.9
43.7	11:19:12	43.7	43.7
43.1	11:19:13	43.1	43.1
42.5	11:19:14	42.5	42.5
42.4	11:19:15	42.4	42.4
42.3	11:19:16	42.3	42.3
42.1	11:19:17	42.1	42.1
41.9	11:19:18	41.9	41.9
41.7	11:19:19	41.7	41.7
41.7	11:19:20	41.7	41.7
41.6	11:19:21	41.6	41.6
41.6	11:19:22	41.6	41.6

Site 3 - S of Project on SE Corner of Mesa & R Del Oro Park

NEL	SPL	Time	Leq (1 hour Avg.)		Ldn CNEL
			Leq	Max	
60.3	s/3	11:30:17	54.3	57.3	54.3
			54.3	57.3	
60.3	s/30	11:30:18	54.3	57.3	54.3
			54.3	57.3	
60.3	s/30	11:30:19	54.3	57.3	54.3
			54.3	57.3	
58.4	52.0	11:30:20	52.0	52.0	52.0
			52.0	52.0	
58.4	s/30	11:30:21	54.3	57.3	54.3
			54.3	57.3	
58.4	s/30	11:30:22	49.2	49.2	49.2
			49.2	49.2	
51.6	48.3	11:30:23	48.3	48.3	48.3
			48.3	48.3	
47.5	47.8	11:30:24	47.8	47.8	47.8
			47.8	47.8	
47.5	47.5	11:30:25	47.5	47.5	47.5
			47.5	47.5	
46.4	4/1	11:30:26	4/1	4/1	4/1
			4/1	4/1	
45.9	4/1	11:30:27	47.4	47.4	47.4
			47.4	47.4	
45.9	4/1	11:30:28	47.4	47.4	47.4
			47.4	47.4	
45.9	4/1	11:30:29	47.4	47.4	47.4
			47.4	47.4	
50.0	47.1	11:30:30	47.1	47.1	47.1
			47.1	47.1	
51.0	47.8	11:30:31	47.8	47.8	47.8
			47.8	47.8	
54.0	47.9	11:30:32	47.9	47.9	47.9
			47.9	47.9	
57.5	48.7	11:30:33	48.7	48.7	48.7
			48.7	48.7	
58.4	48.7	11:30:34	48.7	48.7	48.7
			48.7	48.7	
63.6	50.1	11:30:35	50.1	50.1	50.1
			50.1	50.1	
61.3	51.8	11:30:36	51.8	51.8	51.8
			51.8	51.8	
56.6	57.2	11:30:37	57.2	57.2	57.2
			57.2	57.2	
53.3	61.1	11:30:39	61.1	61.1	61.1
			61.1	61.1	
51.3	62.9	11:30:40	62.9	62.9	62.9
			62.9	62.9	
49.3	63.9	11:30:41	63.9	63.9	63.9
			63.9	63.9	
49.3	63.9	11:30:42	63.9	63.9	63.9
			63.9	63.9	
51.1	65.4	11:30:43	65.4	65.4	65.4
			65.4	65.4	
50.3	66.4	11:30:44	66.4	66.4	66.4
			66.4	66.4	
58.6	66.0	11:30:45	66.0	66.0	66.0
			66.0	66.0	
61.9	s/2	11:30:46	s/2	s/2	s/2
			s/2	s/2	
66.2	60.2	11:30:48	60.2	60.2	60.2
			60.2	60.2	
64.0	s/6	11:30:49	s/6	s/6	s/6
			s/6	s/6	
59.3	60.5	11:30:50	59.3	59.3	59.3
			59.3	59.3	
58.2	s/1	11:30:51	s/1	s/1	s/1
			s/1	s/1	
55.1	s/10	11:30:52	s/10	s/10	s/10
			s/10	s/10	
52.2	s/10	11:30:53	s/10	s/10	s/10
			s/10	s/10	
49.8	s/10	11:30:54	s/10	s/10	s/10
			s/10	s/10	
48.5	s/10	11:30:55	s/10	s/10	s/10
			s/10	s/10	
55.1	s/10	11:30:56	s/10	s/10	s/10
			s/10	s/10	
51.0	s/10	11:30:57	s/10	s/10	s/10
			s/10	s/10	
55.0	s/10	11:30:58	s/10	s/10	s/10
			s/10	s/10	
58.4	s/10	11:30:59	s/10	s/10	s/10
			s/10	s/10	
61.9	s/10	11:31:00	s/10	s/10	s/10
			s/10	s/10	
51.9	s/10	11:31:01	s/10	s/10	s/10
			s/10	s/10	
53.5	s/2	11:31:02	s/2	s/2	s/2
			s/2	s/2	
58.7	s/2	11:31:03	s/2	s/2	s/2
			s/2	s/2	
54.8	s/2	11:31:04	s/2	s/2	s/2
			s/2	s/2	
61.4	55.2	11:31:05	55.2	55.2	55.2
			55.2	55.2	
56.3	s/1	11:31:06	s/1	s/1	s/1
			s/1	s/1	
54.9	s/10	11:31:07	s/10	s/10	s/10
			s/10	s/10	
51.7	54.1	11:31:08	54.1	54.1	54.1
			54.1	54.1	
54.3	s/10	11:31:09	s/10	s/10	s/10
			s/10	s/10	
46.7	55.1	11:31:10	55.1	55.1	55.1
			55.1	55.1	
45.0	s/11	11:31:11	s/11	s/11	s/11
			s/11	s/11	
44.3	s/11	11:31:12	s/11	s/11	s/11
			s/11	s/11	
43.0	s/11	11:31:13	s/11	s/11	s/11
			s/11	s/11	
42.4	58.0	11:31:15	58.0	58.0	58.0
			58.0	58.0	
42.4	s/10	11:31:16	s/10	s/10	s/10
			s/10	s/10	
43.2	s/11	11:31:17	s/11	s/11	s/11
			s/11	s/11	
43.5	65.2	11:31:18	65.2	65.2	65.2
			65.2	65.2	
43.5	s/11	11:31:19	s/11	s/11	s/11
			s/11	s/11	
44.8	65.5	11:31:20	65.5	65.5	65.5
			65.5	65.5	
44.4	s/3	11:31:21	s/3	s/4	s/4
			s/4	s/4	
41.3	s/2	11:31:22	s/2	s/2	s/2
			s/2	s/2	
55.9	70.6	11:31:23	70.6	70.6	70.6
			70.6	70.6	
61.4	s/1	11:31:24	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:25	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:26	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:27	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:28	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:29	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:30	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:31	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:32	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:33	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:34	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:35	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:36	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:37	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:38	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:39	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:40	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:41	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:42	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:43	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:44	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:45	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:46	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:47	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:48	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:49	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:50	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:51	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:52	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:53	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:54	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:55	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:56	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:57	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:58	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:31:59	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:00	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:01	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:02	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:03	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:04	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:05	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:06	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:07	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:08	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:09	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:10	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:11	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:12	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:13	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:14	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:15	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:16	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:17	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:18	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:19	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:20	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:21	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:22	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:23	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:24	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:25	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:26	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:27	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:28	s/1	s/1	s/1
			s/1	s/1	
58.4	s/1	11:32:29	s/1	s/1	s

Site 1 - On East Property Line Fence

SPL **Time** **Leq (1 hour Avg.)**

Ldn CNEL **SPL** **Time**
48.0 48.0 43.0 11:19:27

(1 hour Avg.)

Site 3 - S of Project on SE Corner of Mesa & R Del Oro Park

Site 1 - On East Property Line Fence

SPL Time Leq (1 hour Avg.)

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
49.8	11:28:00	49.9	43.8
49.8	11:28:51	49.8	43.2
49.8	11:28:52	49.8	43.2
49.5	11:28:53	49.5	43.5
49.2	11:28:54	49.2	43.2
48.7	11:28:55	48.7	43.7
49.1	11:28:56	49.1	43.1
48.1	11:28:57	48.1	43.1
47.4	11:28:58	47.4	43.1
46.4	11:29:00	46.4	43.4
46.1	11:29:01	46.1	43.1
45.9	11:29:02	45.9	43.9
45.8	11:29:03	45.8	43.1
45.7	11:29:04	45.7	43.8
45.4	11:29:05	45.1	43.1
44.9	11:29:06	44.9	43.9
45.1	11:29:07	45.1	51.7
45.8	11:29:08	45.8	45.8
46.0	11:29:09	46.0	46.0
46.0	11:29:10	46.0	54.4
46.1	11:29:11	46.1	46.1
46.8	11:29:12	46.8	53.6
50.0	11:29:13	50.0	53.2
53.1	11:29:14	53.1	50.7
52.7	11:29:15	52.7	50.9
52.8	11:29:16	52.8	53.6
53.1	11:29:17	53.1	53.1
53.1	11:29:18	53.1	64.5
52.8	11:29:19	52.8	67.8
52.5	11:29:20	52.5	65.7
51.9	11:29:21	51.9	62.7
51.3	11:29:22	51.3	59.2
50.3	11:29:23	50.3	55.6
49.3	11:29:24	49.3	49.3
49.1	11:29:25	49.1	49.7
49.1	11:29:26	49.1	49.4
49.7	11:29:27	49.7	48.0
50.0	11:29:28	50.0	50.7
49.3	11:29:29	49.3	44.7
48.3	11:29:30	48.3	43.3
47.4	11:29:31	47.4	42.6
46.9	11:29:32	46.9	41.9
46.8	11:29:33	46.8	42.2
47.6	11:29:34	47.6	44.8
47.7	11:29:35	47.7	42.5
48.3	11:29:36	48.3	46.5
49.2	11:29:37	49.2	44.3
49.6	11:29:38	49.6	42.6
50.0	11:29:39	50.0	41.9
49.8	11:29:40	49.8	41.6
49.1	11:29:41	49.1	41.4
49.3	11:29:42	49.3	40.0
49.6	11:29:43	49.6	42.1
49.5	11:29:44	49.5	42.8
49.5	11:29:45	49.5	43.0
50.4	11:29:46	50.4	43.2
52.0	11:29:47	52.0	45.1
55.1	11:29:48	55.1	46.0
55.3	11:29:49	55.3	46.0
54.6	11:29:50	54.6	46.6
54.5	11:29:51	54.5	48.2
53.9	11:29:52	53.9	49.7
54.7	11:29:53	54.7	52.6
54.9	11:29:54	54.9	54.9
55.6	11:29:55	55.6	55.6
57.7	11:29:56	57.7	57.7
58.3	11:29:57	58.3	61.9
57.8	11:29:58	57.8	58.7
57.5	11:29:59	57.5	57.5
57.2	11:30:00	57.2	58.4
56.7	11:30:01	56.7	59.8
57.4	11:30:02	57.4	62.3
57.1	11:30:03	57.1	62.5
56.7	11:30:04	56.7	60.4
57.8	11:30:05	57.8	67.2
57.2	11:30:06	57.2	53.9
58.5	11:30:07	58.5	58.5
58.7	11:30:08	58.7	48.0
58.2	11:30:09	58.2	46.5
58.2	11:30:10	58.2	47.4
59.2	11:30:11	59.2	52.9
60.0	11:30:12	60.0	47.7
59.6	11:30:13	59.6	46.5
58.2	11:30:14	58.2	45.8
57.1	11:30:15	57.1	44.7
56.4	11:30:16	56.4	44.1
55.5	11:30:17	55.5	44.8
54.9	11:30:18	54.9	47.0
54.1	11:30:19	54.1	50.9
53.6	11:30:20	53.6	53.6
53.6	11:30:21	53.6	53.6
53.1	11:30:22	53.1	61.8
53.3	11:30:23	53.3	64.7
53.8	11:30:24	53.8	64.9
54.5	11:30:25	54.5	62.4
54.5	11:30:26	54.5	59.7
54.1	11:30:27	54.0	57.7
54.1	11:30:28	54.1	53.8
54.1	11:30:29	54.1	51.0
53.6	11:30:30	53.6	48.5
53.8	11:30:31	53.8	47.7
54.7	11:30:32	54.7	48.2
55.6	11:30:33	55.6	49.0
55.2	11:30:34	55.2	49.4
55.0	11:30:35	55.0	51.6
54.4	11:30:36	54.4	54.4
53.0	11:30:37	53.0	51.3
51.8	11:30:38	51.8	51.8
51.2	11:30:39	51.2	48.7
50.8	11:30:40	50.8	48.5
51.4	11:30:41	51.4	49.4
51.8	11:30:42	51.8	53.1
51.4	11:30:43	51.4	57.2
51.6	11:30:44	51.6	64.1
52.0	11:30:45	52.0	62.0
52.0	11:30:46	52.0	64.6
51.7	11:30:47	51.7	61.5
51.3	11:30:48	51.3	59.7
51.0	11:30:49	51.0	56.3
50.6	11:30:50	50.6	56.6
50.3	11:30:51	50.3	57.2
50.6	11:30:52	50.6	59.8
50.6	11:30:53	50.6	61.7
50.0	11:30:54	50.0	62.1
49.9	11:30:55	49.9	60.6
49.5	11:30:56	49.5	59.0
48.1	11:30:57	48.1	58.6
47.6	11:30:58	47.6	61.3
47.4	11:30:59	47.4	62.7
47.1	11:31:00	47.1	61.7
47.3	11:31:01	47.3	63.8
48.4	11:31:02	48.4	62.4
48.7	11:31:03	48.7	60.1
49.5	11:31:04	49.5	60.5
49.7	11:31:05	49.7	48.7
49.9	11:31:06	49.9	49.9
49.7	11:31:07	49.7	49.7
49.2	11:31:08	49.2	49.2
49.1	11:31:09	49.1	68.0
49.0	11:31:10	49.0	70.1
48.4	11:31:11	48.4	70.1
50.6	11:31:12	50.6	67.2
50.7	11:31:13	50.7	64.2
50.2	11:31:14	50.2	60.9
49.7	11:31:15	49.7	57.7
49.1	11:31:16	49.1	49.1
48.7	11:31:17	48.7	48.7
49.1	11:31:18	49.1	49.1
49.0	11:31:19	49.0	50.0
48.9	11:31:20	48.9	48.9
49.1	11:31:21	49.1	49.1
49.5	11:31:22	49.5	49.5
49.6	11:31:23	49.6	49.1
49.1	11:31:24	49.1	49.1
48.1	11:31:25	48.1	48.6
48.6	11:31:26	48.6	48.3
48.1	11:31:27	48.1	48.0
47.9	11:31:28	47.9	47.8
47.7	11:31:29	47.7	47.7
47.8	11:31:30	47.8	46.6
47.9	11:31:31	47.9	46.8

Site 2 - Near Southeast Corner of Project Site

SPL

Time

Leq (1 hour Avg.)

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
43.8	11:22:21	43.8	43.8
45.2	11:22:22	45.2	45.2
46.9	11:22:23	46.9	47.4
47.4	11:22:24	47.4	65.9
46.2	11:22:25	46.2	68.6
44.0	11:22:26	44.0	69.2
42.9	11:22:27	42.9	69.6
42.4	11:22:28	42.4	69.7
43.7	11:22:29	43.7	65.5
44.1	11:22:30	44.1	62.5
44.9	11:22:31	44.9	59.6
43.3	11:22:32	43.3	58.1
43.1	11:22:33	43.1	60.3
43.8	11:22:34	43.8	63.5
46.0	11:22:35	46.0	65.3
45.4	11:22:36	45.4	65.4
45.9	11:22:37	45.9	65.5
50.7	11:22:38	50.7	50.5
50.9	11:22:39	50.9	50.5
52.1	11:22:40	52.1	50.5
49.7	11:22:41	49.7	44.8
49.4	11:22:42	49.4	44.8
48.0	11:22:43	48.0	45.0
46.5	11:22:44	46.5	45.0
45.0	11:22:45	45.0	45.0
44.6	11:22:46	44.6	45.0
44.3	11:22:47	44.3	45.0
44.9	11:22:48	44.9	45.0
44.7	11:22:49	44.7	45.0
44.5	11:22:50	44.5	45.0
44.3	11:22:51	44.3	45.0
44.1	11:22:52	44.1	45.0
44.0	11:22:53	44.0	45.0
43.9	11:22:54	43.9	45.0
43.8	11:22:55	43.8	45.0
43.7	11:22:56	43.7	45.0
43.6	11:22:57	43.6	45.0
43.5	11:22:58	43.5	45.0
43.4	11:22:59	43.4	45.0
43.3	11:22:60	43.3	45.0
43.2	11:22:61	43.2	45.0
43.1	11:22:62	43.1	45.0
43.0	11:22:63	43.0	45.0
42.9	11:22:64	42.9	45.0
42.8	11:22:65	42.8	45.0
42.7	11:22:66	42.7	45.0
42.6	11:22:67	42.6	45.0
42.5	11:22:68	42.5	45.0
42.4	11:22:69	42.4	45.0
42.3	11:22:70	42.3	45.0
42.2	11:22:71	42.2	45.0
42.1	11:22:72	42.1	45.0
42.0	11:22:73	42.0	45.0
41.9	11:22:74	41.9	45.0
41.8	11:22:75	41.8	45.0
41.7	11:22:76	41.7	45.0
41.6	11:22:77	41.6	45.0
41.5	11:22:78	41.5	45.0
41.4	11:22:79	41.4	45.0
41.3	11:22:80	41.3	45.0
41.2	11:22:81	41.2	45.0
41.1	11:22:82	41.1	45.0
41.0	11:22:83	41.0	45.0
40.9	11:22:84	40.9	45.0
40.8	11:22:85	40.8	45.0
40.7	11:22:86	40.7	45.0
40.6	11:22:87	40.6	45.0
40.5	11:22:88	40.5	45.0
40.4	11:22:89	40.4	45.0
40.3	11:22:90	40.3	45.0
40.2	11:22:91	40.2	45.0
40.1	11:22:92	40.1	45.0
40.0	11:22:93	40.0	45.0
39.9	11:22:94	39.9	45.0
39.8	11:22:95	39.8	45.0
39.7	11:22:96	39.7	45.0
39.6	11:22:97	39.6	45.0
39.5	11:22:98	39.5	45.0
39.4	11:22:99	39.4	45.0

Site 1 - On East Property Line Fence

SPL	Time	Leq (1 hour Avg.)
48.2	11:31:32	48.2
48.8	11:31:33	48.8
48.8	11:31:34	48.8
49.8	11:31:35	49.8
50.4	11:31:36	50.4
50.2	11:31:37	50.2
49.5	11:31:38	49.5
49.0	11:31:39	49.0
49.5	11:31:40	49.5
49.8	11:31:41	49.8
49.3	11:31:42	49.3
49.2	11:31:43	49.2
49.7	11:31:44	49.7
49.8	11:31:45	49.8
49.3	11:31:46	49.3
49.6	11:31:47	49.6
49.8	11:31:48	49.8
50.3	11:31:49	50.3
50.5	11:31:50	50.5
50.7	11:31:51	50.7
50.7	11:31:52	50.7
50.9	11:31:53	50.9
50.7	11:31:54	50.7
50.7	11:31:55	50.7
49.7	11:31:56	49.7
48.8	11:31:57	48.8
48.5	11:31:58	48.5
48.4	11:31:59	48.4
48.8	11:32:00	48.8
48.0	11:32:01	48.0
49.7	11:32:02	49.7
47.8	11:32:03	47.8
48.1	11:32:04	48.1
48.3	11:32:05	48.3
48.6	11:32:06	48.6
48.9	11:32:07	48.9
49.4	11:32:08	49.4
49.4	11:32:09	49.4
50.5	11:32:10	50.5
52.8	11:32:11	52.8
54.2	11:32:12	54.2
53.8	11:32:13	53.8
53.6	11:32:14	53.6
52.7	11:32:15	52.7
52.0	11:32:16	52.0
51.9	11:32:17	51.9
52.1	11:32:18	52.1
51.9	11:32:19	51.9
52.4	11:32:20	52.4
51.7	11:32:21	51.7
52.0	11:32:22	52.0
51.4	11:32:23	51.4
51.9	11:32:24	51.9
51.8	11:32:25	51.8
51.1	11:32:26	51.1
50.7	11:32:27	50.7
50.6	11:32:28	50.6
51.6	11:32:29	51.6
53.3	11:32:30	53.3
51.8	11:32:31	51.8
50.4	11:32:32	50.4
49.8	11:32:33	49.8
49.3	11:32:34	49.3
49.0	11:32:35	49.0
49.4	11:32:36	49.4
49.1	11:32:37	49.1
48.9	11:32:38	48.9
48.1	11:32:39	48.1
49.3	11:32:40	49.3
49.5	11:32:41	49.5
49.0	11:32:42	49.0
48.6	11:32:43	48.6
49.2	11:32:44	49.2
48.7	11:32:45	48.7
48.1	11:32:46	48.1
48.1	11:32:47	48.1
48.8	11:32:48	48.8
50.4	11:32:49	50.4
50.0	11:32:50	50.0
51.3	11:32:51	51.3
51.1	11:32:52	51.1
51.1	11:32:53	51.1
50.8	11:32:54	50.8
49.7	11:32:55	49.7
49.2	11:32:56	49.2
48.3	11:32:57	48.3
47.6	11:32:58	47.6
46.6	11:32:59	46.6
46.4	11:30:00	46.4
47.3	11:33:01	47.3
51.1	11:33:02	51.1
50.8	11:33:03	50.8
50.5	11:33:04	50.5
50.2	11:33:05	50.2
50.4	11:33:06	50.4
50.5	11:33:07	50.5
50.0	11:33:08	50.0
49.0	11:33:09	49.0
47.9	11:33:10	47.9
47.0	11:33:11	47.0
46.2	11:33:12	46.2
46.9	11:33:13	46.9
45.5	11:33:14	45.5
44.7	11:33:15	44.7
44.5	11:33:16	44.5
44.6	11:33:17	44.6
44.4	11:33:18	44.4
44.5	11:33:19	44.5
45.0	11:33:20	45.0
45.0	11:33:21	45.0
45.6	11:33:22	45.6
46.5	11:33:23	46.5
47.7	11:33:24	47.7
47.5	11:33:25	47.5
47.5	11:33:26	47.5
47.5	11:33:27	47.5
47.9	11:33:28	47.9
49.1	11:33:29	49.1
49.6	11:33:30	49.6
49.5	11:33:31	49.5
49.7	11:33:32	49.7
49.1	11:33:33	49.1
49.0	11:33:34	49.0
49.4	11:33:35	49.4
49.4	11:33:36	49.4
49.1	11:33:37	49.1
48.5	11:33:38	48.5
47.5	11:33:39	47.5
47.5	11:33:40	47.5
47.5	11:33:41	47.5
47.5	11:33:42	47.5
47.5	11:33:43	47.5
47.5	11:33:44	47.5
47.5	11:33:45	47.5
47.5	11:33:46	47.5
47.5	11:33:47	47.5
47.5	11:33:48	47.5
47.5	11:33:49	47.5
47.3	11:33:50	47.3
49.8	11:33:51	49.8
50.6	11:33:52	50.6
49.4	11:33:53	49.4
48.8	11:33:54	48.8
48.1	11:33:55	48.1
47.5	11:33:56	47.5
47.9	11:33:57	47.9
47.6	11:33:58	47.6
47.4	11:33:59	47.4
47.1	11:34:00	47.1
47.2	11:34:01	47.2
47.5	11:34:02	47.5
48.0	11:34:03	48.0
48.9	11:34:04	48.9
49.9	11:34:05	49.9
50.4	11:34:06	50.4
50.1	11:34:07	50.1
49.7	11:34:08	49.7
50.6	11:34:09	50.6
51.2	11:34:10	51.2
51.2	11:34:11	51.2
51.5	11:34:12	51.5
51.4	11:34:13	51.4

Site 2 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)
47.9	11:25:03	47.9
49.8	11:25:04	49.8
51.7	11:25:05	51.7
53.1	11:25:06	53.1
55.1	11:25:07	55.1
54.6	11:25:08	54.6
52.7	11:25:09	52.7
51.3	11:25:10	51.3
49.9	11:25:11	49.9
48.0	11:25:12	48.0
48.8	11:25:13	48.8
49.2	11:25:14	49.2
48.6	11:25:15	48.6
47.7	11:25:16	47.7
46.5	11:25:17	46.5
45.5	11:25:18	45.5
44.8	11:25:19	44.8
43.0	11:25:20	43.0
41.2	11:25:21	41.2
39.4	11:25:22	39.4
37.6	11:25:23	37.6
35.8	11:25:24	35.8
34.0	11:25:25	34.0
32.2	11:25:26	32.2
30.4	11:25:27	30.4
28.6	11:25:28	28.6
26.8	11:25:29	26.8
25.0	11:25:30	25.0
23.2	11:25:31	23.2
21.4	11:25:32	21.4
19.6	11:25:33	19.6
17.8	11:25:34	17.8
16.0	11:25:35	16.0
14.2	11:25:36	14.2
12.4	11:25:37	12.4
10.6	11:25:38	10.6
8.8	11:25:39	8.8
7.0	11:25:40	7.0
5.2	11:25:41	5.2
3.4	11:25:42	3.4
1.6	11:25:43	1.6
0.8	11:25:44	0.8

Site 3 - S of Project on SE Corner of Mesa & R Del Oro Park

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
49.5	11:19:19	49.5	49.5
50.2	11:19:20	50.2	54.2
51.1	11:19:21	51.1	61.0
52.1	11:19:22	52.1	64.0
53.1	11:19:23	53.1	64.1
54.1	11:19:24	54.1	64.1
55.1	11:19:25	55.1	65.1
56.1	11:19:26	56.1	65.9
57.1	11:19:27	57.1	65.9
58.1	11:19:28	58.1	65.9
59.1	11:19:29	59.1	65.9
59.5	11:19:30	59.5	65.0
59.5	11:19:31	59.5	64.9
59.5	11:19:32	59.5	63.3
59.5	11:19:33	59.5	63.3
59.5	11:19:34	59.5	63.3
59.5	11:19:35	59.5	63.3
59.5	11:19:36	59.5	63.3
59.5	11:19:37	59.5	63.3
59.5	11:19:38	59.5	63.3
59.5	11:19:39	59.5	63.3
59.5	11:19:40	59.5	63.3
59.5	11:19:41	59.5	63.3
59.5	11:19:42	59.5	63.3
59.5	11:19:43	59.5	63.3
59.5	11:19:44	59.5	63.3
59.5	11:19:45	59.5	63.3
59.5	11:19:46	59.5	63.3
59.5	11:19:47	59.5	63.3
59.5	11:19:48	59.5	63.3
59.5	11:19:49	59.5	63.3
59.5	11:19:50	59.5	63.3
59.5	11:19:51	59.5	63.3
59.5	11:19:52	59.5	63.3
59.5	11:19:53	59.5	63.3
59.5	11:19:54	59.5	63.3
59.5	11:19:55	59.5	63.3
59.5	11:19:56	59.5	63.3
59.5	11:19:57	59.5	63.3
59.5	11:19:58	59.5	63.3
59.5	11:19:59	59.5	63.3
59.5	11:19:60	59.5	63.3
59.5	11:19:61	59.5	63.3
59.5	11:19:62	59.5	63.3
59.5	11:19:63	59.5	63.3
59.5	11:19:64	59.5	63.3
59.5	11:19:65	59.5	63.3
59.5	11:19:66	59.5	63.3
59.5	11:19:67	59.5	63.3
59.5	11:19:68	59.5	63.3
59.5	11:19:69	59.5	63.3
59.5	11:19:70	59.5	63.3
59.5	11:19:71	59.5	63.3
59.5	11:19:72	59.5	63.3
59.5	11:19:73	59.5	63.3
59.5	11:19:74	59.5	63.3
59.5	11:19:75	59.5	63.3
59.5	11:19:76	59.5	63.3
59.5	11:19:77	59.5	63.3
59.5	11:19:78	59.5	63.3
59.5	11:19:79	59.5	63.3
59.5	11:19:80	59.5	63.3
59.5	11:19:81	59.5	63.3
59.5	11:19:82	59.5	63.3
59.5	11:19:83	59.5	63.3
59.5	11:19:84	59.5	63.3
59.5	11:19:85	59.5	63.3
59.5	11:19:86	59.5	63.3
59.5	11:19:87	59.5	63.3
59.5	11:19:88	59.5	63.3
59.5	11:19:89	59.5	63.3
59.5	11:19:90	59.5	63.3
59.5	11:19:91	59.5	63.3
59.5	11:19:92	59.5	63.3

Site 1 - On East Property Line Fence

SPL	Time	Leq (1 hour Avg.)
50.1	11:34:14	50.1
49.4	11:34:15	49.4
49.8	11:34:16	49.8
50.0	11:34:17	50.0
50.9	11:34:18	50.9
52.1	11:34:19	52.1
51.1	11:34:20	51.1
50.2	11:34:21	50.2
49.3	11:34:22	49.3
49.5	11:34:23	49.5
49.4	11:34:24	49.4
50.3	11:34:25	50.3
50.0	11:34:26	50.0
48.9	11:34:27	48.9
48.5	11:34:28	48.5
49.6	11:34:29	49.6
51.2	11:34:30	51.2
53.8	11:34:31	53.8
55.4	11:34:32	55.4
53.4	11:34:33	53.4
50.6	11:34:34	50.6
48.0	11:34:35	48.0
46.3	11:34:36	46.3
45.3	11:34:37	45.3
45.7	11:34:38	45.7
46.3	11:34:39	46.3
46.9	11:34:40	46.9
47.1	11:34:41	47.1
46.4	11:34:42	46.4
46.5	11:34:43	46.5
46.8	11:34:44	46.8
46.3	11:34:45	46.3
46.1	11:34:46	46.1
46.2	11:34:47	46.2
46.7	11:34:48	46.7
46.9	11:34:49	46.9
47.4	11:34:50	47.4
48.0	11:34:51	48.0
46.3	11:34:52	46.3
49.5	11:34:53	49.5
49.8	11:34:54	49.8
50.1	11:34:55	50.1
50.1	11:34:56	50.1
51.3	11:34:58	51.3
52.3	11:34:59	52.3
50.7	11:35:00	50.7
49.4	11:35:01	49.4
49.7	11:35:02	49.7
49.9	11:35:03	49.9
49.8	11:35:04	49.8
49.5	11:35:05	49.5
50.0	11:35:06	50.0
50.2	11:35:07	50.2
50.0	11:35:08	50.0
52.5	11:35:09	52.5
54.1	11:35:10	54.1
54.4	11:35:11	54.4
53.3	11:35:12	53.3
52.4	11:35:13	52.4
52.5	11:35:14	52.5
53.7	11:35:15	53.7
53.2	11:35:16	53.2
52.5	11:35:17	52.5
51.6	11:35:18	51.6
51.4	11:35:19	51.4
51.4	11:35:20	51.4
51.5	11:35:21	51.5
50.8	11:35:22	50.8
49.2	11:35:23	49.2
48.1	11:35:24	48.1
47.8	11:35:25	47.8
47.4	11:35:26	47.4
47.5	11:35:27	47.5
49.4	11:35:28	49.4
48.7	11:35:29	48.7
48.4	11:35:30	48.4
48.5	11:35:31	48.5
49.7	11:35:32	49.7
49.7	11:35:33	49.7
51.4	11:35:34	51.4
50.5	11:35:35	50.5
50.3	11:35:36	50.3
49.5	11:35:37	49.5
49.5	11:35:38	49.5
50.1	11:35:39	50.1
50.0	11:35:40	50.0
49.7	11:35:41	49.7
49.4	11:35:42	49.4
49.3	11:35:43	49.3
50.2	11:35:44	50.2
51.2	11:35:45	51.2
51.6	11:35:46	51.6
52.1	11:35:47	52.1
53.0	11:35:48	53.0
54.8	11:35:49	54.8
53.5	11:35:50	53.5
52.0	11:35:51	52.0
51.6	11:35:52	51.6
51.7	11:35:53	51.7
53.0	11:35:54	53.0
53.2	11:35:55	53.2
52.8	11:35:56	52.8
53.3	11:35:57	53.3
51.8	11:35:58	51.8
51.0	11:36:00	51.0
50.7	11:36:01	50.7
50.1	11:36:02	50.1
48.6	11:36:03	48.6
47.9	11:36:04	47.9
47.7	11:36:05	47.7
47.1	11:36:06	47.1
47.6	11:36:07	47.6
47.3	11:36:08	47.3
46.7	11:36:09	46.7
46.4	11:36:10	46.4
45.8	11:36:11	45.8
45.3	11:36:12	45.3
45.2	11:36:13	45.2
45.6	11:36:14	45.6
45.8	11:36:15	45.8
46.2	11:36:16	46.2
47.1	11:36:17	47.1
47.9	11:36:18	47.9
50.3	11:36:19	50.3
52.5	11:36:20	52.5
54.1	11:36:21	54.1
54.5	11:36:22	54.5
54.9	11:36:23	54.9
54.8	11:36:24	54.8
54.1	11:36:25	54.1
53.6	11:36:26	53.6
50.7	11:36:27	50.7
50.9	11:36:28	50.9
53.9	11:36:29	53.9
53.3	11:36:30	53.3
53.7	11:36:31	53.7
53.8	11:36:31	53.8
52.3	11:36:32	52.3
50.9	11:36:33	50.9
50.2	11:36:34	50.2
50.5	11:36:35	50.5
50.7	11:36:36	50.7
50.9	11:36:37	50.9
50.8	11:36:38	50.8
50.9	11:36:39	50.9
51.8	11:36:40	51.8
52.0	11:36:41	52.0
51.6	11:36:42	51.6
51.1	11:36:43	51.1
50.6	11:36:44	50.6
50.2	11:36:45	50.2
50.2	11:36:46	50.2
52.5	11:36:47	52.5
53.2	11:36:48	53.2
52.7	11:36:49	52.7
51.8	11:36:50	51.8
51.0	11:36:51	51.0
51.2	11:36:52	51.2
50.7	11:36:53	50.7
49.4	11:36:54	49.4
48.7	11:36:55	48.7

Site 2 - Near Southeast Corner of Project Site

Ldn CNEL

SPL	Time	Leq (1 hour Avg.)
50.1	11:36:56	52.9
49.4	11:36:57	51.9
49.8	11:36:58	50.8
50.0	11:36:59	50.6
50.2	11:36:59	50.6
50.7	11:37:00	50.7
51.1	11:37:01	51.1
52.1	11:37:01	52.1
51.1	11:37:02	51.1
50.2	11:37:03	50.2
49.8	11:37:04	49.8
49.5	11:37:05	49.5
49.4	11:37:06	49.4
50.3	11:37:07	50.3
50.9	11:37:08	50.9
52.1	11:37:09	52.1
51.1	11:37:10	51.1
50.2	11:37:11	50.2
49.8	11:37:12	49.8
49.5	11:37:13	49.5
49.4	11:37:14	49.4
50.3	11:37:15	50.3
50.9	11:37:16	50.9
52.1	11:37:17	52.1
51.1	11:37:18	51.1
50.2	11:37:19	50.2
49.8	11:37:20	49.8
49.5	11:37:21	49.5
49.4	11:37:22	49.4
50.3	11:37:23	50.3
50.9	11:37:24	50.9
52.1	11:37:25	52.1
51.1	11:37:26	51.1
50.2	11:37:27	50.2
49.8	11:37:28	49.8
49.5	11:37:29	49.5
49.4	11:37:30	49.4
50.3	11:37:31	50.3
50.9	11:37:32	50.9
52.1	11:37:33	52.1
51.1	11:37:34	51.1
50.2	11:37:35	50.2
49.8	11:37:36	49.8
49.5	11:37:37	49.5
49.4	11:37:38	49.4
50.3	11:37:39	50.3
50.9	11:37:40	50.9
52.1	11:37:41	52.1
51.1	11:37:42	51.1
50.2	11:37:43	50.2
49.8	11:37:44	49.8
49.5	11:37:45	49.5
49.4	11:37:46	49.4
50.3	11:37:47	50.3
50.9	11:37:48	50.9
52.1	11:37:49	52.1
51.1	11:37:50	51.1
50.2	11:37:51	50.2
49.8	11:37:52	49.8
49.5	11:37:53	49.5
49.4	11:37:54	49.4
50.3	11:37:55	50.3
50.9	11:37:56	50.9
52.1	11:37:57	52.1
51.1	11:37:58	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50.2	11:37:59	50.2
49.8	11:37:59	49.8
49.5	11:37:59	49.5
49.4	11:37:59	49.4
50.3	11:37:59	50.3
50.9	11:37:59	50.9
52.1	11:37:59	52.1
51.1	11:37:59	51.1
50		

Site 1 - On East Property Line Fence

SPL Time Leq (1 hour Avg.)

SPL	Time	Leq (1 hour Avg.)
48.1	11:36:56	47.9
53.4	11:36:57	53.4
62.9	11:36:58	62.9
51.1	11:36:59	51.1
50.0	11:37:00	50.0
49.9	11:37:01	49.9
50.4	11:37:02	50.4
49.6	11:37:03	49.6
48.8	11:37:04	48.8
47.8	11:37:05	47.8
47.2	11:37:06	47.2
47.8	11:37:07	47.6
47.1	11:37:08	47.1
46.8	11:37:09	46.8
47.4	11:37:10	47.4
47.7	11:37:11	47.7
48.2	11:37:12	48.2
48.3	11:37:13	48.3
49.7	11:37:14	49.7
51.6	11:37:15	51.6
52.9	11:37:16	52.9
54.2	11:37:17	54.2
53.1	11:37:18	53.1
52.2	11:37:19	52.2
51.3	11:37:20	51.3
50.9	11:37:21	50.9
49.1	11:37:22	49.1
48.1	11:37:23	48.1
48.3	11:37:24	48.3
49.3	11:37:25	49.3
48.6	11:37:26	48.6
48.8	11:37:27	48.8
49.1	11:37:28	49.1
48.7	11:37:29	48.7
49.0	11:37:30	49.0
49.6	11:37:31	49.6
49.8	11:37:32	49.8
50.1	11:37:33	50.1
48.3	11:37:34	48.3
48.1	11:37:35	48.1
47.2	11:37:36	47.2
46.6	11:37:37	46.6
47.0	11:37:38	47.0
47.3	11:37:39	47.3
46.7	11:37:40	46.7
46.3	11:37:41	46.3
46.9	11:37:42	46.9
46.8	11:37:43	46.8
48.4	11:37:44	48.4
50.6	11:37:45	50.6
49.1	11:37:46	49.1
48.8	11:37:47	48.8
49.6	11:37:48	49.6
51.0	11:37:49	51.0
53.3	11:37:50	53.3
51.6	11:37:51	51.6
50.7	11:37:52	50.7
50.2	11:37:53	50.2
50.0	11:37:54	50.0
51.4	11:37:55	51.4
51.4	11:37:56	51.4
49.7	11:37:57	49.7
49.0	11:37:58	49.0
52.8	11:37:59	52.8
53.3	11:38:00	53.3
51.3	11:38:01	51.3
50.4	11:38:02	50.4
50.3	11:38:03	50.3
50.1	11:38:04	50.1
48.9	11:38:05	48.9
48.2	11:38:06	48.2
47.9	11:38:07	47.9
71.8	11:38:08	47.8
49.0	11:38:09	49.0
48.1	11:38:10	48.1
49.3	11:38:11	49.3
48.3	11:38:12	48.3
49.7	11:38:13	49.7
49.7	11:38:14	49.7
48.8	11:38:15	48.8
48.9	11:38:16	48.9
50.1	11:38:17	50.1
50.6	11:38:18	50.6
50.0	11:38:19	50.0
50.8	11:38:20	50.8
51.0	11:38:21	51.0
50.6	11:38:22	50.6
51.0	11:38:23	51.0
50.9	11:38:24	50.9
51.0	11:38:25	51.0
49.3	11:38:26	49.3
50.0	11:38:27	50.0
50.8	11:38:28	50.8
51.1	11:38:29	51.1
53.4	11:38:30	53.4
52.3	11:38:31	52.3
50.3	11:38:32	50.3
49.3	11:38:33	49.3
50.0	11:38:34	50.0
50.8	11:38:35	50.8
50.4	11:38:36	50.4
49.6	11:38:37	49.6
48.3	11:38:38	48.3
47.6	11:38:39	47.6
47.1	11:38:40	47.1
48.2	11:38:41	48.2
47.9	11:38:42	47.9
47.4	11:38:43	47.4
47.3	11:38:44	47.3
47.3	11:38:45	47.3
47.5	11:38:46	47.5
47.5	11:38:47	47.5
48.3	11:38:48	48.3
48.6	11:38:49	48.6
49.0	11:38:50	49.0
49.8	11:38:51	49.8
50.7	11:38:52	50.7
50.2	11:38:53	50.2
49.7	11:38:54	49.7
49.0	11:38:55	49.0
49.2	11:38:56	49.2
49.4	11:38:57	49.4
48.0	11:38:58	48.0
47.0	11:38:59	47.0
46.6	11:39:00	46.6
46.5	11:39:01	46.5
46.5	11:39:02	46.5
46.9	11:39:03	46.9
47.1	11:39:04	47.1
46.4	11:39:05	46.4
45.9	11:39:06	45.9
45.6	11:39:07	45.6
45.4	11:39:08	45.4
45.4	11:39:09	45.4
45.4	11:39:10	45.4
45.4	11:39:11	45.4
45.4	11:39:12	45.4
45.7	11:39:13	45.7
46.3	11:39:14	46.3
47.2	11:39:15	47.2
47.0	11:39:16	47.0
45.5	11:39:17	45.5
46.6	11:39:18	46.6
46.7	11:39:19	46.7
46.5	11:39:20	46.5
46.2	11:39:21	46.2
46.3	11:39:22	46.3
46.3	11:39:23	46.3
46.3	11:39:24	46.3
45.9	11:39:25	45.9
45.7	11:39:26	45.7
46.3	11:39:27	46.3
45.4	11:39:28	45.4
45.8	11:39:29	45.8
45.9	11:39:30	45.9
45.4	11:39:31	45.4
46.0	11:39:32	46.0
45.9	11:39:33	45.9
45.9	11:39:34	45.9
45.7	11:39:35	45.7
45.4	11:39:36	45.4
46.0	11:39:37	46.0

Site 2 - Near Southeast Corner of Project Site

SPL Time Leq (1 hour Avg.)

SPL	Time	Leq (1 hour Avg.)
52.6	11:30:27	52.6
51.2	11:30:28	51.2
49.1	11:30:29	49.1
51.1	11:30:30	48.1
49.9	11:30:31	49.2
50.4	11:30:32	55.5
49.6	11:30:33	49.6
48.6	11:30:34	63.0
47.9	11:30:35	61.0
47.2	11:30:36	58.0
47.6	11:30:37	54.9
47.6	11:30:38	54.9
47.1	11:30:39	52.0
46.8	11:30:40	49.5
47.4	11:30:41	47.8
47.7	11:30:42	47.1
48.2	11:30:43	48.2
48.3	11:30:44	48.4
49.7	11:30:45	48.0
47.6	11:30:46	47.6
46.8	11:30:47	46.8
47.1	11:30:48	47.1
47.4	11:30:49	47.4
47.7	11:30:50	47.7
48.2	11:30:51	49.2
50.9	11:30:52	50.4
49.1	11:30:53	51.5
48.1	11:30:54	53.3
48.3	11:30:55	54.9
49.3	11:30:56	57.0
54.2	11:30:57	56.5
53.1	11:30:58	56.5
52.2	11:30:59	56.5
51.3	11:30:60	56.5
50.9	11:30:61	56.0
49.1	11:30:62	56.0
48.0	11:30:63	56.0
47.0	11:30:64	56.0
46.7	11:30:65	56.0
46.3	11:30:66	56.0
46.0	11:30:67	56.0
45.7	11:30:68	56.0
45.4	11:30:69	56.0
45.1	11:30:70	56.0
44.8	11:30:71	56.0
44.5	11:30:72	56.0
44.2	11:30:73	56.0
43.9	11:30:74	56.0
43.6	11:30:75	56.0
43.3	11:30:76	56.0
43.0	11:30:77	56.0
42.7	11:30:78	56.0
42.4	11:30:79	56.0
42.1	11:30:80	56.0
41.8	11:30:81	56.0
41.5	11:30:82	56.0
41.2	11:30:83	56.0
40.9	11:30:84	56.0
40.6	11:30:85	56.0
40.3	11:30:86	56.0
40.0	11:30:87	56.0
39.7	11:30:88	56.0
39.4	11:30:89	56.0
39.1	11:30:90	56.0
38.8	11:30:91	56.0
38.5	11:30:92	56.0
38.2	11:30:93	56.0
37.9	11:30:94	56.0
37.6	11:30:95	56.0
37.3	11:30:96	56.0
37.0	11:30:97	56.0
36.7	11:30:98	56.0
36.4	11:30:99	56.0
36.1	11:30:100	56.0
35.8	11:30:101	56.0
35.5	11:30:102	56.0
35.2	11:30:103	56.0
34.9	11:30:104	56.0
34.6	11:30:105	56.0
34.3	11:30:106	56.0
34.0	11:30:107	56.0
33.7	11:30:108	56.0
33.4	11:30:109	56.0
33.1	11:30:110	56.0
32.8	11:30:111	56.0
32.5	11:30:112	56.0
32.2	11:30:113	56.0
31.9	11:30:114	56.0
31.6	11:30:115	56.0
31.3	11:30:116	56.0
31.0	11:30:117	56.0
30.7	11:30:118	56.0
30.4	11:30:119	56.0
30.1	11:30:120	56.0
29.8	11:30:121	56.0
29.5	11:30:122	56.0
29.2	11:30:123	56.0
28.9	11:30:124	56.0
28.6	11:30:125	56.0
28.3	11:30:126	56.0
28.0	11:30:127	56.0
27.7	11:30:128	56.0
27.4	11:30:129	56.0
27.1	11:30:130	56.0
26.8	11:30:131	56.0
26.5	11:30:132	56.0
26.2	11:30:133	56.0
25.9	11:30:134	56.0
25.6	11:30:135	56.0
25.3	11:30:136	56.0
25.0	11:30:137	56.0
24.7	11:30:138	56.0
24.4	11:30:139	56.0
24.1	11:30:140	56.0
23.8	11:30:141	56.0
23.5	11:30:142	56.0
23.2	11:30:143	56.0
22.9	11:30:144	56.0
22.6	11:30:145	56.0
22.3	11:30:146	56.0
22.0	11:30:147	56.0
21.7	11:30:148	56.0
21.4	11:30:149	56.0
21.1	11:30:150	56.0
20.8	11:30:151	56.0
20.5	11:30:152	56.0
20.2	11:30:153	56.0
19.9	11:30:154	56.0
19.6	11:30:155	56.0
19.3	11:30:156	56.0
19.0	11:30:157	56.0
18.7	11:30:158	56.0
18.4	11:30:159	56.0
18.1	11:30:160	56.0
17.8	11:30:161	56.0
17.5	11:30:162	56.0
17.2	11:30:163	56.0
16.9	11:30:164	56.0
16.6	11:30:165	56.0
16.3	11:30:166	56.0
16.0	11:30:167	56.0

Site 1 - On East Property Line Fence

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
46.5	11:39:38	48.5	59.4
46.5	11:39:39	48.5	59.4
46.5	11:39:40	48.5	59.4
47.5	11:39:41	47.5	54.5
48.3	11:39:42	48.3	53.1
48.7	11:39:43	48.7	53.6
48.2	11:39:44	48.2	54.7
48.1	11:39:45	48.1	59.7
50.3	11:39:46	50.3	61.3
51.6	11:39:47	51.6	55.2
51.0	11:39:48	51.0	55.3
50.7	11:39:49	50.7	52.9
49.8	11:39:50	49.8	52.7
48.9	11:39:51	48.9	54.6
49.0	11:39:52	49.0	60.0
53.3	11:39:53	53.3	62.3
55.6	11:39:54	55.6	59.6
53.1	11:39:55	53.1	57.0
51.3	11:39:56	51.3	53.7
50.2	11:39:57	50.2	50.5
50.2	11:39:58	50.2	47.8
50.3	11:39:59	50.3	46.0
49.6	11:40:00	49.6	44.8
48.4	11:40:01	48.4	43.9
48.8	11:40:02	48.8	43.3
48.4	11:40:03	48.4	43.0
47.2	11:40:04	47.2	43.4
46.7	11:40:05	46.7	44.0
46.5	11:40:06	46.5	44.3
46.9	11:40:07	46.9	45.6
48.1	11:40:08	48.1	45.3
52.3	11:40:09	52.3	48.7
53.2	11:40:10	53.2	53.2
53.1	11:40:11	53.1	54.7
53.7	11:40:12	53.7	57.3
53.9	11:40:13	53.9	53.9
53.4	11:40:14	53.4	61.2
53.0	11:40:15	53.0	60.2
53.0	11:40:16	53.0	57.7
52.9	11:40:17	52.9	54.0
52.6	11:40:18	52.6	52.2
52.3	11:40:19	52.3	50.0
51.1	11:40:20	51.1	49.6
50.6	11:40:21	50.6	50.8
49.2	11:40:22	49.2	52.5
48.5	11:40:23	48.5	53.5
47.9	11:40:24	47.9	56.4
47.6	11:40:25	47.6	58.6
47.4	11:40:26	47.4	59.6
47.3	11:40:27	47.3	62.1
47.0	11:40:28	47.0	61.9
46.6	11:40:29	46.6	59.7
46.3	11:40:30	46.3	58.6
46.0	11:40:31	46.0	57.6
45.8	11:40:32	45.8	55.6
45.2	11:40:33	45.2	55.7
45.4	11:40:34	45.4	55.5
45.7	11:40:35	45.7	53.4
45.8	11:40:36	45.8	50.4
45.3	11:40:37	45.3	47.7
45.8	11:40:38	45.8	47.9
45.8	11:40:39	45.8	46.9
45.9	11:40:40	45.9	46.1
46.5	11:40:41	46.5	47.0
46.9	11:40:42	46.9	45.8
48.9	11:40:43	48.9	45.2
53.7	11:40:44	53.7	45.0
53.5	11:40:45	53.5	45.1
52.6	11:40:46	52.6	44.7
51.8	11:40:47	51.8	44.3
51.2	11:40:48	51.2	44.0
50.5	11:40:49	50.5	44.4
50.5	11:40:50	50.5	46.1
49.9	11:40:51	49.9	46.2
49.9	11:40:52	49.9	45.8
48.1	11:40:53	48.1	45.1
49.0	11:40:54	49.0	46.7
49.0	11:40:55	49.0	46.4
49.3	11:40:56	49.3	48.8
49.2	11:40:57	49.2	49.2
48.9	11:40:58	48.9	56.8
49.9	11:40:59	49.9	60.4
48.3	11:41:00	48.3	53.5
47.3	11:41:01	47.3	62.9
46.4	11:41:02	46.4	60.0
46.0	11:41:03	46.0	56.9
45.7	11:41:04	45.7	54.1
45.6	11:41:05	45.6	52.3
46.8	11:41:06	46.8	53.1
45.7	11:41:07	45.7	57.3
45.8	11:41:08	45.8	53.4
45.9	11:41:09	45.9	53.1
46.5	11:41:10	46.5	46.5
46.9	11:41:11	46.9	46.9
48.6	11:41:12	48.6	48.6
48.3	11:41:13	48.3	69.8
49.0	11:41:13	49.0	68.2
49.3	11:41:14	49.3	68.3
49.2	11:41:15	49.2	69.2
49.2	11:41:16	49.2	64.9
47.2	11:41:17	47.2	63.7
47.2	11:41:18	47.2	61.1
46.8	11:41:19	46.8	46.8
46.3	11:41:20	46.3	46.3
46.3	11:41:21	46.3	52.6
46.5	11:41:22	46.5	50.5
47.3	11:41:23	47.3	48.3
47.5	11:41:24	47.5	47.4
47.5	11:41:25	47.5	47.4
47.6	11:41:26	47.6	49.6
47.1	11:41:27	47.1	45.4
47.0	11:41:28	47.0	57.9
48.1	11:41:29	48.1	57.3
48.6	11:41:30	48.6	61.3
48.1	11:41:30	48.1	61.3
48.6	11:41:31	48.6	58.9
51.4	11:41:32	51.4	56.7
52.5	11:41:33	52.5	56.7
51.7	11:41:34	51.7	59.3
51.8	11:41:35	51.8	64.0
52.5	11:41:36	52.5	57.7
52.2	11:41:37	52.2	60.2
53.0	11:41:38	53.0	57.1
52.9	11:41:39	52.9	53.6
52.2	11:41:40	52.2	50.3
51.8	11:41:41	51.8	48.1
50.7	11:41:42	50.7	47.4
50.1	11:41:43	50.1	49.1
48.8	11:41:44	48.8	52.5
48.0	11:41:45	48.0	55.0
47.5	11:41:46	47.5	60.6
46.8	11:41:47	46.8	63.2
46.5	11:41:48	46.5	63.5
46.1	11:41:49	46.1	65.1
45.9	11:41:50	45.9	65.9
46.3	11:41:51	46.3	65.7
47.4	11:41:52	47.4	63.9
50.0	11:41:53	50.0	61.1
50.8	11:41:54	50.8	60.0
50.6	11:41:55	50.6	63.9
50.2	11:41:56	50.2	50.8
49.8	11:41:57	49.8	63.4
49.9	11:41:58	49.9	60.7
50.7	11:41:59	50.7	57.7
49.9	11:42:00	49.9	54.7
49.5	11:42:01	49.5	51.7
48.9	11:42:02	48.9	48.8
48.9	11:42:03	48.9	46.3
48.3	11:42:04	48.3	44.5
47.3	11:42:05	47.3	43.5
46.5	11:42:06	46.5	43.7
46.1	11:42:07	46.1	42.4
47.5	11:42:08	47.5	42.2
47.4	11:42:09	47.4	42.0
45.8	11:42:10	45.8	42.0
46.1	11:42:11	46.1	44.9
48.9	11:42:12	48.9	44.9
48.9	11:42:13	48.9	44.9
48.0	11:42:14	48.0	44.0
48.9	11:42:15	48.9	45.1
49.8	11:42:16	49.8	46.9
49.3	11:42:17	49.3	49.7
48.5	11:42:18	48.5	54.2
48.0	11:42:19	48.0	58.1

Site 2 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
46.5	11:39:09	59.4	59.4
46.5	11:39:10	59.4	59.3
46.9	11:39:11	57.3	57.3
47.5	11:39:12	54.5	54.5
48.3	11:39:13	53.1	53.1
48.7	11:39:14	53.6	53.6
48.2	11:39:15	54.7	54.7
48.1	11:39:16	59.7	59.7
50.3	11:39:17	61.1	61.3
51.6	11:39:18	55.2	55.2
51.0	11:39:19	55.3	55.3
50.7	11:39:20	50.7	50.5
49.1	11:39:21	59.7	59.7
49.8	11:39:22	56.9	56.9
51.3	11:39:23	57.3	57.3
51.9	11:39:24	58.9	58.9
51.0	11:39:25	57.0	57.0
50.7	11:39:26	53.0	53.0
50.5	11:39:27	57.3	57.3
50.2	11:39:28	50.8	50.8
49.9	11:39:29	57.3	57.3
49.8	11:39:30	50.7	50.7
50.7	11:39:31	52.7	52.7
49.5	11:39:32	54.6	54.6
49.0	11:39:33	60.0	60.0
52.2	11:39:34	62.2	62.1
51.3	11:39:35	59.8	59.8
51.0	11:39:36	54.9	54.9
50.7	11:39:37	57.0	57.0
50.5	11:39:38	56.3	56.3
50.2	11:39:39	50.5	50.5
49.9	11:39:40	56.3	56.3
49.8	11:39:41	53.1	53.1
49.5	11:39:42	53.7	53.7
49.2	11:39:43	57.3	57.3
49.0	11:39:44	53.1	53.1
48.8	11:39:45	54.6	54.6
48.5	11:39:46	59.7	59.7
48.2	11:39:47	56.9	56.9
48.0	11:39:48	54.9	54.9
47.8	11:39:49	54.9	54.9
47.5	11:39:50	57.0	57.0
47.2	11:39:51	56.3	56.3
47.0	11:39:52	50.8	50.8
46.7	11:39:53	57.3	57.3
46.5	11:39:54	53.1	53.1
46.2	11:39:55	54.7	54.7
46.0	11:39:56	59.7	59.7
45.7	11:39:57	56.9	56.9
45.5	11:39:58	53.1	53.1
45.2	11:39:59	54.7	54.7
45.0	11:39:60	59.7	59.7
44.7	11:39:61	56.9	56.9
44.5	11:39:62	53.1	53.1
44.2	11:39:63	54.7	54.7
44.0	11:39:64	50.3	50.3
43.8	11:39:65	53.1	53.1
43.5	11:39:66	54.7	54.7
43.3	11:39:67	50.3	50.3
43.0	11:39:68	53.1	53.1
42.8	11:39:69	54.7	54.7
42.5	11:39:70	50.3	50.3
42.2	11:39:71	53.1	53.1
41.9	11:39:72	54.7	54.7
41.6	11:39:73	50.3	50.3
41.3	11:39:74	53.1	53.1
41.0	11:39:75	54.7	54.7
40.7	11:39:76	50.3	50.3
40.4	11:39:77	53.1	53.1
40.1	11:39:78	54.7	54.7
39.8	11:39:79	50.3	50.3
39.5	11:39:80	53.1	53.1
39.2	11:39:81	54.7	54.7
38.9	11:39:82	50.3	50.3
38.6	11:39:83	53.1	53.1
38.3	11:39:84	54.7	54.7
38.0	11:39:85	50.3	50.3
37.7	11:39:86	53.1	53.1
37.4	11:39:87	54.7	54.7
37.1	11:39:88</		

Site 1 - On East Property Line Fence

SPL Time Leq (1 hour Avg.)

SPL	Time	Leq (1 hour Avg.)
47.4	11:42:21	47.8
47.7	11:42:22	47.7
47.9	11:42:23	47.9
48.2	11:42:24	48.2
48.6	11:42:25	48.6
48.4	11:42:26	48.4
48.7	11:42:27	48.7
50.3	11:42:28	50.7
49.6	11:42:29	49.6
49.5	11:42:30	49.5
49.5	11:42:31	49.5
49.3	11:42:32	49.3
49.4	11:42:33	49.4
49.1	11:42:34	49.1
49.5	11:42:35	49.5
48.8	11:42:36	48.8
47.8	11:42:37	47.8
47.4	11:42:38	47.4
47.2	11:42:39	47.2
46.9	11:42:40	46.9
46.3	11:42:41	46.3
46.6	11:42:42	46.6
47.2	11:42:43	47.2
47.2	11:42:44	47.2
46.8	11:42:45	46.8
46.5	11:42:46	46.5
47.1	11:42:47	47.1
48.3	11:42:48	48.3
48.1	11:42:49	48.1
47.8	11:42:50	47.8
47.4	11:42:51	47.4
47.3	11:42:52	47.3
48.0	11:42:53	48.0
48.9	11:42:54	48.9
49.1	11:42:55	49.1
49.7	11:42:56	49.7
49.4	11:42:57	49.4
49.0	11:42:58	49.0
48.9	11:42:59	48.9
48.2	11:43:00	48.2
48.8	11:43:01	48.8
49.4	11:43:02	49.4
50.2	11:43:03	50.2
52.1	11:43:04	52.1
52.3	11:43:05	52.3
52.8	11:43:06	52.8
53.7	11:43:07	53.7
53.3	11:43:08	53.3
56.5	11:43:09	56.5
56.2	11:43:10	56.2
56.4	11:43:11	56.4
57.7	11:43:12	57.7
57.5	11:43:13	57.5
60.0	11:43:14	60.0
60.1	11:43:15	60.1
59.3	11:43:16	59.3
58.6	11:43:17	58.6
57.4	11:43:18	57.4
58.6	11:43:19	58.6
57.6	11:43:20	57.6
56.3	11:43:21	56.3
54.6	11:43:22	54.6
55.3	11:43:23	55.3
55.8	11:43:24	55.8
55.2	11:43:25	55.2
55.1	11:43:26	55.1
54.5	11:43:27	54.5
54.1	11:43:28	54.1
55.4	11:43:29	55.4
53.1	11:43:30	53.1
53.0	11:43:31	53.0
53.3	11:43:32	53.3
52.9	11:43:33	52.9
55.4	11:43:34	55.4
51.8	11:43:35	51.8
51.4	11:43:36	51.4
51.0	11:43:37	51.0
52.1	11:43:38	52.1
52.1	11:43:39	52.1
51.4	11:43:40	51.4
55.2	11:43:41	55.2
50.0	11:43:42	50.0
49.5	11:43:43	49.5
49.1	11:43:44	49.1
49.6	11:43:45	49.6
49.6	11:43:46	49.6
49.6	11:43:47	49.6
49.4	11:43:48	49.4
49.3	11:43:49	49.3
50.3	11:43:50	50.3
49.9	11:43:51	49.9
50.1	11:43:52	50.1
49.9	11:43:53	49.9
49.9	11:43:54	49.9
49.6	11:43:55	49.6
55.1	11:43:56	55.1
54.1	11:43:57	54.1
53.1	11:43:58	53.1
53.0	11:43:59	53.0
53.3	11:43:60	53.3
52.9	11:43:61	52.9
55.4	11:43:62	55.4
51.8	11:43:63	51.8
51.4	11:43:64	51.4
51.0	11:43:65	51.0
52.1	11:43:66	52.1
52.1	11:43:67	52.1
51.4	11:43:68	51.4
55.2	11:43:69	55.2
50.7	11:43:70	50.7
50.7	11:43:71	50.7
50.7	11:43:72	50.7
50.7	11:43:73	50.7
50.0	11:43:74	50.0
49.5	11:43:75	49.5
49.1	11:43:76	49.1
49.9	11:43:77	49.9
49.9	11:43:78	49.9
49.5	11:43:79	49.5
49.1	11:43:80	49.1
49.9	11:43:81	49.9
49.6	11:43:82	49.6
49.6	11:43:83	49.6
49.4	11:43:84	49.4
49.3	11:43:85	49.3
49.0	11:43:86	49.0
49.0	11:43:87	49.0
49.8	11:43:88	49.8
49.5	11:43:89	49.5
49.1	11:43:90	49.1
48.8	11:43:91	48.8
48.4	11:43:92	48.4
48.4	11:43:93	48.4
48.4	11:43:94	48.4
48.4	11:43:95	48.4
48.4	11:43:96	48.4
48.4	11:43:97	48.4
48.4	11:43:98	48.4
48.4	11:43:99	48.4
48.4	11:43:100	48.4
48.4	11:43:101	48.4
48.4	11:43:102	48.4
48.4	11:43:103	48.4
48.4	11:43:104	48.4
48.4	11:43:105	48.4
48.4	11:43:106	48.4
48.4	11:43:107	48.4
48.4	11:43:108	48.4
48.4	11:43:109	48.4
48.4	11:43:110	48.4
48.4	11:43:111	48.4
48.4	11:43:112	48.4
48.4	11:43:113	48.4
48.4	11:43:114	48.4
48.4	11:43:115	48.4
48.4	11:43:116	48.4
48.4	11:43:117	48.4
48.4	11:43:118	48.4
48.4	11:43:119	48.4
48.4	11:43:120	48.4
48.4	11:43:121	48.4
48.4	11:43:122	48.4
48.4	11:43:123	48.4
48.4	11:43:124	48.4
48.4	11:43:125	48.4
48.4	11:43:126	48.4
48.4	11:43:127	48.4
48.4	11:43:128	48.4
48.4	11:43:129	48.4
48.4	11:43:130	48.4
48.4	11:43:131	48.4
48.4	11:43:132	48.4
48.4	11:43:133	48.4
48.4	11:43:134	48.4
48.4	11:43:135	48.4
48.4	11:43:136	48.4
48.4	11:43:137	48.4
48.4	11:43:138	48.4
48.4	11:43:139	48.4
48.4	11:43:140	48.4
48.4	11:43:141	48.4
48.4	11:43:142	48.4
48.4	11:43:143	48.4
48.4	11:43:144	48.4
48.4	11:43:145	48.4
48.4	11:43:146	48.4
48.4	11:43:147	48.4
48.4	11:43:148	48.4
48.4	11:43:149	48.4
48.4	11:43:150	48.4
48.4	11:43:151	48.4
48.4	11:43:152	48.4
48.4	11:43:153	48.4
48.4	11:43:154	48.4
48.4	11:43:155	48.4
48.4	11:43:156	48.4
48.4	11:43:157	48.4
48.4	11:43:158	48.4
48.4	11:43:159	48.4
48.4	11:43:160	48.4
48.4	11:43:161	48.4
48.4	11:43:162	48.4
48.4	11:43:163	48.4
48.4	11:43:164	48.4
48.4	11:43:165	48.4
48.4	11:43:166	48.4
48.4	11:43:167	48.4
48.4	11:43:168	48.4
48.4	11:43:169	48.4
48.4	11:43:170	48.4
48.4	11:43:171	48.4
48.4	11:43:172	48.4
48.4	11:43:173	48.4
48.4	11:43:174	48.4
48.4	11:43:175	48.4
48.4	11:43:176	48.4
48.4	11:43:177	48.4
48.4	11:43:178	48.4
48.4	11:43:179	48.4
48.4	11:43:180	48.4
48.4	11:43:181	48.4
48.4	11:43:182	48.4
48.4	11:43:183	48.4
48.4	11:43:184	48.4
48.4	11:43:185	48.4
48.4	11:43:186	48.4
48.4	11:43:187	48.4
48.4	11:43:188	48.4
48.4	11:43:189	48.4
48.4	11:43:190	48.4
48.4	11:43:191	48.4
48.4	11:43:192	48.4
48.4	11:43:193	48.4
48.4	11:43:194	48.4
48.4	11:43:195	48.4
48.4	11:43:196	48.4
48.4	11:43:197	48.4
48.4	11:43:198	48.4
48.4	11:43:199	48.4
48.4	11:43:200	48.4
48.4	11:43:201	48.4
48.4	11:43:202	48.4
48.4	11:43:203	48.4
48.4	11:43:204	48.4
48.4	11:43:205	48.4
48.4	11:43:206	48.4
48.4	11:43:207	48.4
48.4	11:43:208	48.4
48.4	11:43:209	48.4
48.4	11:43:210	48.4
48.4	11:43:211	48.4
48.4	11:43:212	48.4
48.4	11:43:213	48.4
48.4	11:43:214	48.4
48.4	11:43:215	48.4
48.4	11:43:216	48.4
48.4	11:43:217	48.4
48.4	11:43:218	48.4
48.4	11:43:219	48.4
48.4	11:43:220	48.4
48.4	11:43:221	48.4
48.4	11:43:222	48.4
48.4	11:43:223	48.4
48.4	11:43:224	48.4
48.4	11:43:225	48.4
48.4	11:43:226	48.4
48.4	11:43:227	48.4
48.4	11:43:228	48.4
48.4	11:43:229	48.4
48.4	11:43:230	48.4
48.4	11:43:231	48.4
48.4	11:43:232	48.4
48.4	11:43:233	48.4
48.4	11:43:234	48.4
48.4	11:43:235	48.4
48.4	11:43:236	48.4
48.4	11:43:237	48.4
48.4	11:43:238	48.4
48.4	11:43:239	48.4
48.4	11:43:240	48.4
48.4	11:43:241	48.4
48.4	11:43:242	48.4
48.4	11:43:243	48.4
48.4	11:43:244	48.4
48.4	11:43:245	48.4
48.4	11:43:246	48.4
48.4	11:43:247	48.4
48.4	11:43:248	48.4
48.4	11:43:249	48.4
48.4	11:43:250	48.4
48.4	11:43:251	48.4
48.4	11:43:252	48.4
48.4	11:43:253	48.4
48.4	11:43:254	48.4
48.4	11:43:255	48.4
48.4	11:43:256	48.4
48.4	11:43:257	48.4
48.4	11:43:258	48.4
48.4	11:43:259	48.4
48.4	11:43:260	48.4
48.4	11:43:261	48.4
48.4	11:43:262	48.4
48.4	11:43:263	48.4
48.4	11:43:264	48.4
48.4	11:43:265	48.4
48.4	11:43:266	48.4
48.4	11:43:267	48.4
48.4	11:43:268	48.4
48.4	11:43:269	48.4
48.4	11:43:270	48.4
48.4	11:4	

APPENDIX C

RCNM Model Construction Noise Calculation Printouts

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Demolition

---- Receptor #1 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Nearest Homes to East	Residential	56.8	44.2	44.2		
Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	70	3
Excavator	No	40		80.7	120	3
Excavator	No	40		80.7	170	3
Excavator	No	40		80.7	220	3
Dozer	No	40		81.7	270	3
Dozer	No	40		81.7	320	3
Results						
Calculated (dBA)			Noise Limits (dBA)			
Equipment	*Lmax	Leq	Day Lmax	Leq	Lmax	Leq
Concrete Saw	83.7	76.7	N/A	N/A	N/A	N/A
Excavator	70.1	66.1	N/A	N/A	N/A	N/A
Excavator	67.1	63.1	N/A	N/A	N/A	N/A
Excavator	64.8	60.9	N/A	N/A	N/A	N/A
Dozer	64.0	60.0	N/A	N/A	N/A	N/A
Dozer	62.5	58.6	N/A	N/A	N/A	N/A
Total	84	77	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Demolition

---- Receptor #2 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Nearest Homes to South	Residential	67	57	57.1		
Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	100	5
Excavator	No	40		80.7	150	5
Excavator	No	40		80.7	200	5
Excavator	No	40		80.7	250	5
Dozer	No	40		81.7	300	5
Dozer	No	40.0		81.7	350	5
Results						
Calculated (dBA)			Noise Limits (dBA)			
Equipment	*Lmax	Leq	Day Lmax	Leq	Lmax	Leq
Concrete Saw	78.6	71.6	N/A	N/A	N/A	N/A
Excavator	66.2	62.2	N/A	N/A	N/A	N/A
Excavator	63.7	59.7	N/A	N/A	N/A	N/A
Excavator	61.7	57.8	N/A	N/A	N/A	N/A
Dozer	61.1	57.1	N/A	N/A	N/A	N/A
Dozer	59.8	55.8	N/A	N/A	N/A	N/A
Total	79	73	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Grading

---- Receptor #1 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night	Receptor	Estimated
Nearest Homes to East	Residential	56.8	44.2	44.2		
Description	Impact	Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet) Estimated Shielding (dBA)
Excavator	No	No	40		80.7	70 3
Grader	No	No	40	85		120 3
Dozer	No	No	40		81.7	170 3
Tractor	No	No	40	84		220 3
Front End Loader	No	No	40		79.1	270 3
Backhoe	No	No	40		77.6	320 3
Results						
Calculated (dBA)			Noise Limits (dBA)			
Equipment	*Lmax	Leq	Day Lmax	Leq	Lmax	Leq
Excavator	74.8	70.8	N/A	N/A	N/A	N/A
Grader	74.4	70.4	N/A	N/A	N/A	N/A
Dozer	68.0	64.1	N/A	N/A	N/A	N/A
Tractor	68.1	64.2	N/A	N/A	N/A	N/A
Front End Loader	61.5	57.5	N/A	N/A	N/A	N/A
Backhoe	58.4	54.5	N/A	N/A	N/A	N/A
Total	75	75	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Grading

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)			Equipment Spec	Actual Lmax	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night				
Nearest Homes to South	Residential	66.9	57.1	57.1				
Description	Impact Device	Usage(%)	(dBA)	(dBA)				
Excavator	No	40		80.7			100	5
Grader	No	40	85				150	5
Dozer	No	40		81.7			200	5
Tractor	No	40	84				250	5
Front End Loader	No	40		79.1			300	5
Backhoe	No	40		77.6			350	5
Results								
Calculated (dBA)				Noise Limits (dBA)				
		Day		Evening				
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq		
Excavator	69.7	65.7	N/A	N/A	N/A	N/A		
Grader	70.5	66.5	N/A	N/A	N/A	N/A		
Dozer	64.6	60.6	N/A	N/A	N/A	N/A		
Tractor	65.0	61.0	N/A	N/A	N/A	N/A		
Front End Loader	58.5	54.6	N/A	N/A	N/A	N/A		
Backhoe	55.7	51.7	N/A	N/A	N/A	N/A		
Total	71	70	N/A	N/A	N/A	N/A		

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Building Construction

---- Receptor #1 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Nearest Homes to East	Residential	56.8	44.2	44.2		
Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	70	3
Gradall	No	40		83.4	120	3
Gradall	No	40		83.4	170	3
Tractor	No	40	84		220	3
Front End Loader	No	40		79.1	270	3
Backhoe	No	40		77.6	320	3
Generator	No	50		80.6	370	3
Welder / Torch	No	40		74	420	3
Results						
Calculated (dBA)				Noise Limits (dBA)		
Equipment	*Lmax	Leq	Lmax	Day Leq	Evening Lmax	Leq
Crane	74.6	66.7	N/A	N/A	N/A	N/A
Gradall	72.8	68.8	N/A	N/A	N/A	N/A
Gradall	69.8	65.8	N/A	N/A	N/A	N/A
Tractor	68.1	64.2	N/A	N/A	N/A	N/A
Front End Loader	61.5	57.5	N/A	N/A	N/A	N/A
Backhoe	58.4	54.5	N/A	N/A	N/A	N/A
Generator	60.2	57.2	N/A	N/A	N/A	N/A
Welder / Torch	52.5	48.5	N/A	N/A	N/A	N/A
Total	75	73	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Building Construction

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Homes to South	Residential	66.9	57.1	57.1

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	100	5
Gradall	No	40		83.4	150	5
Gradall	No	40		83.4	200	5
Tractor	No	40	84		250	5
Front End Loader	No	40		79.1	300	5
Backhoe	No	40		77.6	350	5
Generator	No	50		80.6	400	5
Welder / Torch	No	40		74	450	5

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day	Leq	Lmax	Leq
Crane	69.5	61.6	N/A	N/A	N/A	N/A
Gradall	68.9	64.9	N/A	N/A	N/A	N/A
Gradall	66.4	62.4	N/A	N/A	N/A	N/A
Tractor	65.0	61.0	N/A	N/A	N/A	N/A
Front End Loader	58.5	54.6	N/A	N/A	N/A	N/A
Backhoe	55.7	51.7	N/A	N/A	N/A	N/A
Generator	57.6	54.6	N/A	N/A	N/A	N/A
Welder / Torch	49.9	45.9	N/A	N/A	N/A	N/A
Total	70	69	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Homes to East	Residential	56.8	44.2	44.2

Description	Impact Device	Usage(%)	Equipment			Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)			
Paver	No	50		77.2		70	3
Paver	No	50		77.2		120	3
Paver	No	50		77.2		170	3
Paver	No	50		77.2		220	3
Roller	No	20		80		270	3
Roller	No	20		80		320	3

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day	Noise Limits (dBA)	Evening	Leq
Paver	71.3	68.3	N/A	N/A	N/A	N/A
Paver	66.6	63.6	N/A	N/A	N/A	N/A
Paver	63.6	60.6	N/A	N/A	N/A	N/A
Paver	61.4	58.3	N/A	N/A	N/A	N/A
Roller	62.4	55.4	N/A	N/A	N/A	N/A
Roller	60.9	53.9	N/A	N/A	N/A	N/A
Total	71	71	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
 Case Description: Sunrise of Oceanside - Paving

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)			Equipment	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night			
Nearest Homes to South	Residential	66.9	57.1	57.1	Impact Device	Spec Lmax (dBA)	Actual Lmax (dBA)
Paver	No	50				77.2	100
Paver	No	50				77.2	150
Paver	No	50				77.2	200
Paver	No	50				77.2	250
Roller	No	20				80	300
Roller	No	20				80	350
Total					Results		
Equipment		Calculated (dBA)		Noise Limits (dBA)			
Paver		*Lmax	Leq	Day Lmax	Leq	Lmax	Leq
Paver		66.2	63.2	N/A	N/A	N/A	N/A
Paver		62.7	59.7	N/A	N/A	N/A	N/A
Paver		60.2	57.2	N/A	N/A	N/A	N/A
Paver		58.2	55.2	N/A	N/A	N/A	N/A
Roller		59.4	52.4	N/A	N/A	N/A	N/A
Roller		58.1	51.1	N/A	N/A	N/A	N/A
	Total	66	66	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/30/2020
Case Description: Sunrise of Oceanside - Painting

---- Receptor #1 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Nearest Homes to East	Residential	56.8	44.2	44.2		
Equipment						
Description	Impact	Device	Usage(%)	Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
Compressor (air)	No		40		77.7	90
Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Lmax	Day	Evening	Leq
Compressor (air)	69.6	65.6	N/A	N/A	N/A	N/A
Total	70	66	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Nearest Homes to South	Residential	66.9	57.1	57.1		
Equipment						
Description	Device	Impact	Usage(%)	Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
Compressor (air)	No		40		77.7	120
						5
Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Lmax	Day	Evening	
Compressor (air)	65.1	61.1	N/A	N/A	N/A	N/A
Total	65	61	N/A	N/A	N/A	N/A

APPENDIX D

FHWA Model Offsite Traffic Noise Calculation Printouts

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING

Project: Sunrise of Oceanside
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Collector - Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (State Route 76)					
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	65.76%	13.48%	15.77%	95.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.60%	0.80%	0.60%	3.00%	1.92%	0.35%	0.97%	3.24%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	3.50%	1.00%	0.50%	5.00%	0.96%	0.09%	0.70%	1.76%

Road Name: College Boulevard

Average Daily Traffic: 29102 Vehicles

Vehicle Type	Vehicle Speed: 50 MPH			Vehicle Mix: 2			Roadway Classification: Major Arterial (4 Lanes)				
	NOISE PARAMETERS AT 100 FEET FROM CENTERLINE			(Equiv. Lane Dist: 96.29 ft)			Centerline Distance to Noise Contour (in feet)				
Noise Adjustments			Unmitigated Noise Levels								
REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.98	-4.37	-1.20	67.5	65.2	63.9	57.8	66.2	66.87	70 dBA:
Medium Trucks	78.79	-12.88	-4.37	-1.20	60.3	41.6	44.6	38.6	45.8	46.59	65 dBA:
Heavy Trucks	83.02	-10.67	-4.37	-1.20	66.8	51.4	52.0	44.2	52.8	53.65	60 dBA:
Total:	70.6	65.4	64.2	58.0	66.5	67.0	67.1	55	dBA:	582	642

Road Name: College Boulevard

Average Daily Traffic: 27782 Vehicles

Vehicle Type	Vehicle Speed: 50 MPH			Vehicle Mix: 2			Roadway Classification: Major Arterial (4 Lanes)					
	NOISE PARAMETERS AT 90 FEET FROM CENTERLINE			(Equiv. Lane Dist: 85.85 ft)			Centerline Distance to Noise Contour (in feet)					
Noise Adjustments			Unmitigated Noise Levels									
REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	71.12	1.78	-3.63	-1.20	68.1	65.7	64.4	58.4	66.8	67.4	70 dBA:	
Medium Trucks	78.79	-13.09	-3.63	-1.20	60.9	42.1	45.1	39.1	46.3	47.1	65 dBA:	
Heavy Trucks	83.02	-10.87	-3.63	-1.20	67.3	52.0	52.6	44.8	53.3	54.2	60 dBA:	
Total:	71.2	65.9	64.7	58.6	64.7	58.6	67.0	67.7	55	dBA:	569	628

Road Name: Mesa Drive

Average Daily Traffic: 11041 Vehicles

Vehicle Type	Vehicle Speed: 45 MPH			Vehicle Mix: 1			Roadway Classification: Secondary Collector				
	NOISE PARAMETERS AT 85 FEET FROM CENTERLINE			(Equiv. Lane Dist: 82.37 ft)			Centerline Distance to Noise Contour (in feet)				
Noise Adjustments			Unmitigated Noise Levels								
REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	69.34	-1.52	-3.35	-1.20	63.3	61.1	59.8	53.8	62.2	62.9	70 dBA:
Medium Trucks	77.62	-18.76	-3.35	-1.20	54.3	33.1	39.1	20.8	33.9	36.7	65 dBA:
Heavy Trucks	82.14	-22.72	-3.35	-1.20	54.9	29.5	26.1	30.8	37.0	37.1	60 dBA:
Total:	64.3	61.2	59.9	53.8	62.3	62.3	62.9	55	dBA:	259	285

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING

Project: Sunrise of Oceanside

Site Conditions: Soft

Road Name: Mesa Drive		Segment: East of College Boulevard		Roadway Classification: Secondary Collector									
Average Daily Traffic: 10784 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE		(Equiv. Lane Dist: 82.37 ft)		Centerline Distance to Noise Contour (in feet)									
Vehicle Type	Noise Adjustments	Finite Adj.	Leg Peak	Leq Day	Leq Eye								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eye	Leq Night	Ldn	CNEL	Ldn	CNEL		
Automobiles	69.34	-1.62	-3.35	-1.20	63.2	61.0	59.7	62.1	62.8	70 dBA:	25	28	
Medium Trucks	77.62	-18.86	-3.35	-1.20	54.2	33.0	39.0	20.7	33.8	36.6	65 dBA:	55	61
Heavy Trucks	82.14	-22.82	-3.35	-1.20	54.8	29.4	26.0	30.7	36.9	37.0	60 dBA:	118	130
Total:	64.2		61.1		59.8		53.7		62.2		62.8		255

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT

Project: Sunrise of Oceanside
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Collector - Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (State Route 76)					
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	65.76%	13.48%	15.77%	95.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.60%	0.80%	0.60%	3.00%	1.92%	0.35%	0.97%	3.24%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	3.50%	1.00%	0.50%	5.00%	0.96%	0.09%	0.70%	1.76%

Road Name: College Boulevard

Average Daily Traffic: 29201 Vehicles

Vehicle Speed: 50 MPH

NOISE PARAMETERS AT 100 FEET FROM CENTERLINE

(Equiv. Lane Dist: 96.29 ft)

Unmitigated Noise Levels

Centerline Distance to

Noise Contour (in feet)

Ldn CNEL

66.9 70 dBA:

58 64

65 dBA:

126 139

60 dBA:

271 299

55 dBA:

583 643

Total: **70.6 65.4 64.2 58.1 66.5 67.1**

Segment: North of Mesa Drive

Vehicle Mix: 2

Roadway Classification: Major Arterial (4 Lanes)

(Equiv. Lane Dist: 96.29 ft)

Unmitigated Noise Levels

Centerline Distance to

Noise Contour (in feet)

Ldn CNEL

66.3 66.9 70 dBA:

58 64

65 dBA:

126 139

60 dBA:

271 299

55 dBA:

583 643

Total: **70.6 65.4 64.2 58.1 66.5 67.1**

Segment: South of Mesa Drive

Vehicle Mix: 2

Roadway Classification: Major Arterial (4 Lanes)

(Equiv. Lane Dist: 85.85 ft)

Unmitigated Noise Levels

Centerline Distance to

Noise Contour (in feet)

Ldn CNEL

66.8 67.4 70 dBA:

57 63

65 dBA:

123 136

60 dBA:

265 292

55 dBA:

570 630

Total: **71.2 65.9 64.7 58.6 67.0 67.7**

Segment: West of College Boulevard

Vehicle Mix: 1

Roadway Classification: Secondary Collector

(Equiv. Lane Dist: 82.37 ft)

Unmitigated Noise Levels

Centerline Distance to

Noise Contour (in feet)

Ldn CNEL

62.2 62.9 70 dBA:

26 29

65 dBA:

56 62

60 dBA:

120 133

55 dBA:

259 286

Total: **64.3 61.2 59.9 53.9 62.3 62.9**

Segment: Mesa Drive

Vehicle Speed: 45 MPH

Roadway Classification: Secondary Collector

(Equiv. Lane Dist: 82.37 ft)

Unmitigated Noise Levels

Centerline Distance to

Noise Contour (in feet)

Ldn CNEL

62.2 62.9 70 dBA:

26 29

65 dBA:

56 62

60 dBA:

120 133

55 dBA:

259 286

Total: **64.3 61.2 59.9 53.9 62.3 62.9**

Segment: Mesa Drive

Vehicle Speed: 45 MPH

Roadway Classification: Secondary Collector

(Equiv. Lane Dist: 82.37 ft)

Unmitigated Noise Levels

Centerline Distance to

Noise Contour (in feet)

Ldn CNEL

62.2 62.9 70 dBA:

26 29

65 dBA:

56 62

60 dBA:

120 133

55 dBA:

259 286

Total: **64.3 61.2 59.9 53.9 62.3 62.9**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT

Project: Sunrise of Oceanside
Site Conditions: Soft

Road Name: Mesa Drive		Segment: East of College Boulevard											
Average Daily Traffic: 11006 Vehicles		Vehicle Speed: 45 MPH											
		Roadway Classification: Secondary Collector											
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE		(Equiv. Lane Dist: 82.37 ft)											
Vehicle Type	REMEI Traffic Adj.	Dist Adj.	Finite Adj.										
	REMEI Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL	
Vehicle Type	REMEI Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL	
Automobiles	69.34	-1.54	-3.35	-1.20	63.3	61.1	59.8	53.8	62.2	62.9	70 dBA:	26	28
Medium Trucks	77.62	-18.77	-3.35	-1.20	54.3	33.0	39.1	20.8	33.9	36.7	65 dBA:	56	61
Heavy Trucks	82.14	-22.73	-3.35	-1.20	54.9	29.5	26.1	30.8	37.0	37.1	60 dBA:	120	132
				Total:	64.3	61.1	59.9	53.8	62.2	62.9	55 dBA:	258	285

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING PLUS CUMULATIVE PROJECTS WITHOUT PROJECT

Project: Sunrise of Oceanside Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Collector - Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (State Route 76)					
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	65.76%	13.48%	15.77%	95.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.60%	0.80%	0.60%	3.00%	1.92%	0.35%	0.97%	3.24%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	3.50%	1.00%	0.50%	5.00%	0.96%	0.09%	0.70%	1.76%

Road Name: College Boulevard

Average Daily Traffic: 30192 Vehicles

Vehicle Type	Vehicle Speed: 50 MPH			Vehicle Mix: 2			Roadway Classification: Major Arterial (4 Lanes)			
	NOISE PARAMETERS AT 100 FEET FROM CENTERLINE			(Equiv. Lane Dist: 96.29 ft)			Centerline Distance to Noise Contour (in feet)			
Noise Adjustments			Unmitigated Noise Levels							
REMEL Traffic Adj.	Finite Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		
Automobiles	71.12	2.14	-4.37	-1.20	67.7	65.3	64.0	58.0	66.4	
Medium Trucks	78.79	-12.72	-4.37	-1.20	60.5	41.7	44.8	38.7	45.9	
Heavy Trucks	83.02	-10.51	-4.37	-1.20	66.9	51.6	52.2	44.4	52.9	
Total:		70.8	65.5	64.3	58.2	66.6	67.3	55 dBA:	59.6	65.8

Road Name: Mesa Drive

Average Daily Traffic: 29142 Vehicles

Vehicle Type	Vehicle Speed: 50 MPH			Vehicle Mix: 2			Roadway Classification: Major Arterial (4 Lanes)			
	NOISE PARAMETERS AT 90 FEET FROM CENTERLINE			(Equiv. Lane Dist: 85.85 ft)			Centerline Distance to Noise Contour (in feet)			
Noise Adjustments			Unmitigated Noise Levels							
REMEL Traffic Adj.	Finite Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		
Automobiles	71.12	1.99	-3.63	-1.20	68.3	65.9	64.6	58.6	67.0	
Medium Trucks	78.79	-12.88	-3.63	-1.20	61.1	42.3	45.3	39.3	46.5	
Heavy Trucks	83.02	-10.66	-3.63	-1.20	67.5	52.2	52.8	45.0	53.5	
Total:		71.4	66.1	64.9	58.8	67.2	67.9	55 dBA:	58.8	64.9

Road Name: Mesa Drive

Average Daily Traffic: 11041 Vehicles

Vehicle Type	Vehicle Speed: 45 MPH			Vehicle Mix: 1			Roadway Classification: Secondary Collector			
	NOISE PARAMETERS AT 85 FEET FROM CENTERLINE			(Equiv. Lane Dist: 82.37 ft)			Centerline Distance to Noise Contour (in feet)			
Noise Adjustments			Unmitigated Noise Levels							
REMEL Traffic Adj.	Finite Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		
Automobiles	69.34	-1.52	-3.35	-1.20	63.3	61.1	59.8	53.8	62.2	
Medium Trucks	77.62	-18.76	-3.35	-1.20	54.3	33.1	39.1	20.8	33.9	
Heavy Trucks	82.14	-22.72	-3.35	-1.20	54.9	29.5	26.1	30.8	37.0	
Total:		64.3	61.2	59.9	53.8	62.3	62.9	55 dBA:	59.8	64.9

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING PLUS CUMULATIVE PROJECTS WITHOUT PROJECT

Project: Sunrise of Oceanside
Site Conditions: Soft

Road Name: Mesa Drive		Segment: East of College Boulevard										
Average Daily Traffic: 10784 Vehicles		Vehicle Speed: 45 MPH										
		Roadway Classification: Secondary Collector										
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE		(Equiv. Lane Dist: 82.37 ft)										
Vehicle Type	REMEI Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Noise Adjustments		Unmitigated Noise Levels										
Automobiles	69.34	-1.62	-3.35	-1.20	63.2	61.0	59.7	53.7	62.1	62.8	70 dBA:	25
Medium Trucks	77.62	-18.86	-3.35	-1.20	54.2	33.0	39.0	20.7	33.8	36.6	65 dBA:	55
Heavy Trucks	82.14	-22.82	-3.35	-1.20	54.8	29.4	26.0	30.7	36.9	37.0	60 dBA:	61
												118
												130
												255
												281
Total:	64.2	61.1	59.8	53.7	62.2	62.8	62.2	62.8	62.8	62.8	55 dBA:	28

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING PLUS CUMULATIVE PROJECTS WITH PROJECT

Vehicle Type	Vehicle Mix 1 (Collector - Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (State Route 76)					
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	65.76%	13.48%	15.77%	95.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.60%	0.80%	0.60%	3.00%	1.92%	0.35%	0.97%	3.24%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	3.50%	1.00%	0.50%	5.00%	0.96%	0.09%	0.70%	1.76%

Project: Sunrise of Oceanside Site Conditions: Soft

Road Name: College Boulevard		Segment: North of Mesa Drive		Roadway Classification: Major Arterial (4 Lanes)			
Average Daily Traffic: 30291 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2			
		NOISE PARAMETERS AT 100 FEET FROM CENTERLINE		(Equiv. Lane Dist: 96.29 ft)			
		Unmitigated Noise Levels				Centerline Distance to Noise Contour (in feet)	
Noise Adjustments		REMEL Traffic Adj.	Finite Adj.	Leq Day	Leq Eve.	Leq Night	Ldn
Vehicle Type	Vehicle Type	REMEL Traffic Adj.	Finite Adj.	Leq Day	Leq Eve.	Leq Night	Ldn
Automobiles	Automobiles	71.12	2.16	-4.37	-1.20	67.7	65.3
Medium Trucks	Medium Trucks	78.79	-12.71	-4.37	-1.20	60.5	41.8
Heavy Trucks	Heavy Trucks	83.02	-10.49	-4.37	-1.20	67.0	51.6
	Total:	70.8	65.5	64.4	58.2	66.6	67.3
						55 dBA:	597

Road Name: College Boulevard

Vehicle Type	NOISE PARAMETERS AT 90 FEET FROM CENTERLINE						Centerline Distance to Noise Contour (in feet)			
	Noise Adjustments			Unmitigated Noise Levels			Roadway Classification: Major Antennal (4 Lanes)			
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Ldn	CNEL
Automobiles	71.12	2.00	-3.63	-1.20	68.3	65.9	64.6	58.6	67.0	67.6
Medium Trucks	78.79	-12.86	-3.63	-1.20	61.1	42.4	45.4	39.3	46.5	47.4
Heavy Trucks	83.02	-10.65	-3.63	-1.20	67.5	52.2	52.8	45.0	53.5	54.4
Total:	71.4				66.1	65.0	58.8	67.2	67.9	65.0

Road Name: Mesa Drive

Vehicle Type	NOISE PARAMETERS AT 85 FEET FROM CENTERLINE						Centerline Distance to Noise Contour (in feet)		
	Noise Adjustments			Unmitigated Noise Levels			Ldn	CNEL	Roadway Classification: Secondary Connector
REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	
Automobiles	69.34	-1.51	-3.35	-1.20	63.3	61.2	59.8	53.8	62.2
Medium Trucks	77.62	-18.75	-3.35	-1.20	54.3	33.1	39.1	20.8	33.9
Heavy Trucks	82.14	-22.71	-3.35	-1.20	54.9	29.5	26.1	30.8	37.0
Total:	64.3		61.2	59.9	53.9	62.3	62.9	55.0	259

West of College Boulevard

T 85 FEET FROM CENTERLINE							Centerline Distance to Noise Contour (in feet)		
Unmitigated Noise Levels			(Equiv. Lane Dist: 82.37 ft)						
	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Ldn	CNEL
-1.20	63.3	61.2	59.8	53.8	62.2	62.9	70 dBA:	26	29
-1.20	54.3	33.1	39.1	20.8	33.9	36.7	65 dBA:	56	62
-1.20	54.9	29.5	26.1	30.8	37.0	37.1	60 dBA:	120	133
Total:	64.3	61.2	59.9	53.9	62.3	62.9	55 dBA:	259	286

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING PLUS CUMULATIVE PROJECTS WITH PROJECT

Project: Sunrise of Oceanside
Site Conditions: Soft

Vehicle Type	Road Name:		Segment:		East of College Boulevard		Centerline Distance to Noise Contour (in feet)	
	Average Daily Traffic: 11006 Vehicles	Vehicle Speed: 45 MPH	Vehicle Mix: 1	Roadway Classification: Secondary Collector	(Equiv. Lane Dist: 82.37 ft)			
					NOISE LEVELS			
Vehicle Type	REMEI Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	
Automobiles	69.34	-1.54	-3.35	-1.20	63.3	61.1	59.8	
Medium Trucks	77.62	-18.77	-3.35	-1.20	54.3	33.0	39.1	
Heavy Trucks	82.14	-22.73	-3.35	-1.20	54.9	29.5	26.1	
Total:	64.3	61.1	59.9	53.8	62.2	62.9	55 dBA:	
							258	

APPENDIX E

Operational Reference Noise Measurement Printouts and Calculations

General Information		
Serial Number		02509
Model		831
Firmware Version		2.112
Filename		831_Data.005
User		GT
Job Description	Northwest Fresno Walmart Relocation	
Location	Rooftop HVAC Unit	

Measurement Description		
Start Time	Saturday, 2013 July 27 18:31:43	
Stop Time	Saturday, 2013 July 27 18:41:44	
Duration	00:10:01.1	
Run Time	00:10:01.1	
Pause	00:00:00.0	
Pre Calibration	Saturday, 2013 July 27 17:53:07	
Post Calibration	None	
Calibration Deviation	---	

Note		
Located 10 feet southeast of rooftop HVAC Unit 14 located on western side of roof		
94 F, 30% Hu., 29.45 in Hg, no wind, partly cloudy		

Overall Data		
LAeq		66.6 dB
LASmax		67.6 dB
LApeak (max)	2013 Jul 27 18:33:16	81.6 dB
LASmin	2013 Jul 27 18:32:17	65.8 dB
LCeq	2013 Jul 27 18:41:08	75.8 dB
LAeq		66.6 dB
LCeq - LAeq		9.2 dB
LAIEq		67.2 dB
LAeq		66.6 dB
LAIEq - LAeq		0.6 dB
Ldn		66.6 dB
LDay 07:00-23:00		66.6 dB
LNight 23:00-07:00		---
Lden		66.6 dB
LDay 07:00-19:00		66.6 dB
LEvening 19:00-23:00		---
LNight 23:00-07:00		---
LAE		94.4 dB
# Overloads		0
Overload Duration		0.0 s
# OBA Overloads		0
OBA Overload Duration		0.0 s

Statistics		
LAS5.00		67.0 dBA
LAS10.00		66.9 dBA
LAS33.30		66.7 dBA
LAS50.00		66.6 dBA
LAS66.60		66.5 dBA
LAS90.00		66.3 dBA

LAS > 65.0 dB (Exceedence Counts / Duration)	1 / 601.1	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings		
RMS Weight		A Weighting
Peak Weight		A Weighting
Detector		Slow
Preamp		PRM831
Integration Method		Linear
OBA Range		Normal
OBA Bandwidth		1/1 and 1/3
OBA Freq. Weighting		Z Weighting
OBA Max Spectrum		Bin Max
Gain	+0	dB
Under Range Limit	26.2	dB
Under Range Peak	75.8	dB
Noise Floor	17.1	dB
Overload	143.4	dB

1/1 Spectra												
Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	70.9	64.4	61.4	74.2	68.2	64.9	66.3	61.7	55.1	49.9	44.3	44.0
LZSmax	83.8	78.9	70.0	78.4	72.3	66.1	67.8	63.1	56.9	53.2	46.7	45.4
LZSmin	53.2	56.5	56.7	67.7	66.1	63.5	65.0	60.7	53.9	48.4	43.2	43.7

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	68.1	65.7	63.2	61.0	58.0	59.3	56.0	57.8	55.8	69.7	72.0	59.3
LZSmax	82.3	79.5	78.7	77.2	72.8	72.3	67.9	63.5	64.0	74.2	76.1	72.0
LZSmin	41.9	46.3	48.8	48.7	46.5	49.7	50.1	51.8	41.2	63.9	67.9	54.5
Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	61.6	63.7	64.5	59.0	58.7	60.9	63.2	60.8	59.9	59.2	56.1	54.6
LZSmax	71.3	68.0	67.3	61.6	61.7	64.1	65.5	64.2	62.0	60.7	57.6	58.6
LZSmin	52.9	60.0	57.2	45.1	56.0	58.9	61.1	58.4	58.4	57.1	54.9	53.3
Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	52.0	49.8	48.4	46.4	45.4	42.8	41.1	38.6	38.5	38.4	39.0	40.2
LZSmax	54.4	52.3	51.2	50.2	49.7	45.7	45.4	41.6	40.4	40.4	41.4	41.3
LZSmin	50.9	48.4	46.9	45.0	43.7	41.4	39.6	37.5	37.9	38.0	38.7	39.9

Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	27 Jul 2013 17:53:07	-25.9
PRM831	27 Jul 2013 13:36:08	-25.6
PRM831	28 Apr 2013 15:34:24	-25.9
PRM831	23 Apr 2013 10:17:33	-25.0
PRM831	27 Feb 2013 19:15:30	-25.7
PRM831	24 Jan 2013 12:00:16	-25.6
PRM831	15 Jan 2013 07:50:44	-26.2
PRM831	04 Jan 2013 13:47:46	-26.5

Summary			
File Name	831_Data.002		
Serial Number	0002509		
Model	Model 831		
Firmware Version	2.301		
User	GT		
Location	At 7080 Mayten Ave - Edge of MFR Parking Lot		
Job Description	Mayten & Foothill		
Note			
Measurement Description			
Start	2015-09-10 15:54:09		
Stop	2015-09-10 16:10:10		
Duration	0:16:00.5		
Run Time	0:16:00.5		
Pause	0:00:00.0		
Pre Calibration	2015-09-10 15:32:49		
Post Calibration	None		
Calibration Deviation	---		
Overall Settings			
RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamp	PRM831		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	High		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	Bin Max		
Gain	0.0 dB		
Overload	143.1 dB		
	A C Z		
Under Range Peak	75.6	72.6	77.6 dB
Under Range Limit	26.1	26.4	31.8 dB
Noise Floor	17.0	17.3	22.5 dB
Results			
LAeq	52.1 dB		
LAE	81.9 dB		
EA	17.242 $\mu\text{Pa}^2\text{h}$		
LApeak (max)	2015-09-10 16:03:36 98.6 dB		
LASmax	2015-09-10 16:03:36 74.6 dB		
LASmin	2015-09-10 15:54:57 41.3 dB		
SEA	-99.9 dB		
LAS > 65.0 dB (Exceedance Counts / Duration)	6 11.6 s		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s		
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s		
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s		
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s		
 Community Noise	Ldn	00:23:00	3:00-07:00	Lden
LCeq	52.1	52.1	-99.9	52.1
LAeq	65.0 dB			
LCeq - LAeq	52.1 dB			
LAeq	12.9 dB			
LAeq	61.6 dB			
LAeq - LAeq	52.1 dB			
# Overloads	9.5 dB			
Overload Duration	0			
# OBA Overloads	0.0 s			
OBA Overload Duration	0			

Statistics

LAS5.00	55.0 dB
LAS10.00	53.4 dB
LAS33.30	49.1 dB
LAS50.00	47.1 dB
LAS66.60	45.8 dB
LAS90.00	43.9 dB

Calibration History

		Date re. 1V/Pa	6.3
Preamp			
PRM831	2015-09-10 15:32:49	-25.6	73.9
PRM831	2015-08-14 17:54:36	-26.3	36.4
PRM831	2015-08-05 20:29:18	-24.7	64.2
PRM831	2015-07-24 14:47:10	-25.6	60.9
PRM831	2015-05-05 14:56:20	-25.8	61.2
PRM831	2015-04-22 8:42:55	-26.3	58.2
PRM831	2015-04-17 11:29:03	-26.3	21.3
PRM831	2015-04-17 9:59:48	-26.0	30.6
PRM831	2015-04-17 8:00:28	-26.0	9.4
PRM831	2061-08-11 15:40:00	-26.0	44.2
PRM831	2014-10-15 14:30:38	-26.0	72.4

File Translated: V:\Vista Env\2010\10022-Fresno Walmart\Noise Measurements\LD\15.s1mdl
 Model/Serial Number: 824 / A3176
 Firmware/Software Revs: 4.283 / 3.120
 Name:
 Descr1: 1021 Didrikson Way
 Descr2: Laguna Beach, CA 92651
 Setup/Setup Descr: slm&rta.ssa / SLM & Real-Time Analyzer
 Location: 30' N of vendor truck loading area for Fresno Walmart
 Note1: Approx 70' S of Locust Ave CL
 Note2: 52F, 29.57 in Hg, 67% Humid., no wind, clear sky

Overall Any Data

Start Time: 19-May-2011 07:05:53
 Elapsed Time: 00:08:30.5

	A Weight	C Weight	Flat
Leq:	54.8 dBA	65.1 dBC	66.1 dBf
SEL:	81.9 dBA	92.2 dBC	93.2 dBf
Peak:	85.2 dBA	85.8 dBC	86.0 dBf
19-May-2011 07:09:58	19-May-2011 07:09:52	19-May-2011 07:09:52	
Lmax (slow):	67.9 dBA	73.2 dBC	73.8 dBf
19-May-2011 07:09:50	19-May-2011 07:13:57	19-May-2011 07:13:57	
Lmin (slow):	43.7 dBA	60.0 dBC	61.6 dBf
19-May-2011 07:11:17	19-May-2011 07:06:52	19-May-2011 07:06:51	
Lmax (fast):	70.7 dBA	75.5 dBC	75.7 dBf
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	
Lmin (fast):	43.1 dBA	57.8 dBC	58.9 dBf
19-May-2011 07:11:17	19-May-2011 07:09:10	19-May-2011 07:09:10	
Lmax (impulse):	72.1 dBA	76.8 dBC	77.1 dBf
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	
Lmin (impulse):	43.6 dBA	61.1 dBC	62.4 dBf
19-May-2011 07:11:17	19-May-2011 07:06:51	19-May-2011 07:09:10	

Spectra

Date Time Run Time
 19-May-2011 07:05:53 00:08:30.5

Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1	Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1
12.5	50.2		56.3		35.5		630	46.5		61.4		31.0	
16.0	50.9	55.5	56.1	61.5	37.1	41.8	800	45.4		60.8		30.5	
20.0	51.0		57.6		38.0		1000	44.5	49.3	56.1	63.9	31.7	35.6
25.0	55.8		57.5		41.1		1250	43.5		59.4		30.2	
31.5	57.7	61.6	57.1	63.3	46.2	49.9	1600	42.6		56.3		28.1	
40.0	56.7		60.3		46.3		2000	41.1	46.1	56.4	61.9	24.9	30.4
50.0	56.8		57.9		44.0		2500	40.0		58.4		21.7	
63.0	55.7	61.0	56.5	62.1	45.9	49.1	3150	40.2		60.8		19.4	
80.0	56.2		57.4		42.2		4000	39.5	43.8	58.6	63.4	18.7	24.1
100	55.6		55.1		42.3		5000	36.7		54.4		19.7	
125	54.3	59.2	59.0	63.8	40.7	45.7	6300	32.8		50.2		21.5	
160	52.8		61.0		39.4		8000	30.2	35.2	57.7	58.5	21.2	25.9
200	51.1		57.3		35.5		10000	25.4		41.5		20.5	
250	51.4	55.2	70.6	71.0	34.6	39.0	12500	22.9		32.2		19.4	
315	48.2		58.2		32.0		16000	20.8	26.5	27.4	33.9	19.1	24.4
400	47.0		59.0		30.1		20000	21.2		23.8		20.3	
500	47.0	51.6	64.3	66.9	30.4	35.3							

Ln Start Level: 15 dB
 L1.00 0.0 dBA L50.00 0.0 dBA L95.00 0.0 dBA
 L5.00 0.0 dBA L90.00 0.0 dBA L99.00 0.0 dBA

Detector: Slow
 Weighting: A
 SPL Exceedance Level 1: 85.0 dB Exceeded: 0 times
 SPL Exceedance level 2: 120 dB Exceeded: 0 times
 Peak-1 Exceedance Level: 105 dB Exceeded: 0 times
 Peak-2 Exceedance Level: 100 dB Exceeded: 0 times
 Hysteresis: 2
 Overloaded: 0 time(s)
 Paused: 0 times for 00:00:00.0

File Translated: V:\Vista Env\2010\10022-Fresno Walmart\Noise Measurements\LD\15.slmdl
Model/Serial Number: 824 / A3176

Current Any Data
Start Time: 19-May-2011 07:05:53
Elapsed Time: 00:08:30.5

	A Weight	C Weight	Flat
Leq:	54.8 dBA	65.1 dBC	66.1 dBF
SEL:	81.9 dBA	92.2 dBC	93.2 dBF
Peak:	85.2 dBA	85.8 dBC	86.0 dBF
19-May-2011 07:09:58	19-May-2011 07:09:52	19-May-2011 07:09:52	
Lmax (slow):	67.9 dBA	73.2 dBC	73.8 dBF
19-May-2011 07:09:50	19-May-2011 07:13:57	19-May-2011 07:13:57	
Lmin (slow):	43.7 dBA	60.0 dBC	61.6 dBF
19-May-2011 07:11:17	19-May-2011 07:06:52	19-May-2011 07:06:51	
Lmax (fast):	70.7 dBA	75.5 dBC	75.7 dBF
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	
Lmin (fast):	43.1 dBA	57.8 dBC	58.9 dBF
19-May-2011 07:11:17	19-May-2011 07:09:10	19-May-2011 07:09:10	
Lmax (impulse):	72.1 dBA	76.8 dBC	77.1 dBF
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	
Lmin (impulse):	43.6 dBA	61.1 dBC	62.4 dBF
19-May-2011 07:11:17	19-May-2011 07:06:51	19-May-2011 07:09:10	
Calibrated:	18-May-2011 13:09:02	Offset: -48.2 dB	
Checked:	19-May-2011 06:46:08	Level: 113.9 dB	
Calibrator	not set	Level: 114.0 dB	
Cal Records Count:	0		
Interval Records:	Disabled	Number Interval Records:	0
History Records:	Disabled	Number History Records:	0
Run/Stop Records:		Number Run/Stop Records:	2

DIESEL GENERATOR SET

MTU 6R0120 DS200

200 kWe / 60 Hz / Standby
208 - 600V

Reference MTU 6R0120 DS200 (180 kWe) for Prime Rating Technical Data



SYSTEM RATINGS

Standby

Voltage (L-L)	240V	240V	208V	240V	380V	480V	600V
Phase	1	1	3	3	3	3	3
PF	1	1	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60	60
kW	200	200	200	200	200	200	200
kVA	200	200	250	250	250	250	250
Amps	833	833	694	601	380	301	241
skVA@30%							
Voltage Dip	268	366	433	433	373	577	512
Generator							
Model	432CSL6210	432PSL6228	431CSL6206	431CSL6206	431CSL6208	431CSL6206	431PSL6243
Temp Rise	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C
Connection	12 LEAD DOUBLE DELTA	4 LEAD	12 LEAD WYE	12 LEAD DELTA	12 LEAD WYE	12 LEAD WYE	4 LEAD WYE

CERTIFICATIONS AND STANDARDS

// **Emissions** – EPA Tier 3 Certified

// **Generator set is designed and manufactured in facilities certified to standards ISO 9001:2008 and ISO 14001:2004**

// **Seismic Certification – Optional**

- IBC Certification
- OSHPD Pre-Approval

// **Power Rating**

- Accepts Rated Load in One Step Per NFPA 110

// **UL 2200 / CSA – Optional**

- UL 2200 Listed
- CSA Certified
- CE Marking Provided

// **Performance Assurance Certification (PAC)**

- Generator Set Tested to ISO 8528-5 for Transient Response
- Verified product design, quality and performance integrity
- All engine systems are prototype and factory tested

STANDARD FEATURES*

- // MTU Onsite Energy is a single source supplier
- // Global Product Support
- // 2 Year Standard Warranty
- // OM926LA Diesel Engine
 - 7.2 Liter Displacement
 - 4-Cycle
- // Engine-generator resilient mounted
- // Complete Range of Accessories

- // Generator
 - Brushless, Rotating Field Generator
 - 2/3 Pitch Windings
 - 300% Short Circuit Capability with Optional Permanent Magnet Generator (PMG)
- // Digital Control Panel(s)
 - UL Recognized, CSA Certified, NFPA 110
 - Complete System Metering
 - LCD Display
- // Cooling System
 - Integral Set-Mounted
 - Engine-Driven Fan

STANDARD EQUIPMENT*

// Engine

Air Cleaners
Oil Pump
Oil Drain Extension and S/O Valve
Full Flow Oil Filter
Fuel Filter with Water Separator
Jacket Water Pump
Thermostat
Blower Fan and Fan Drive
Radiator - Unit Mounted
Electric Starting Motor - 12V
Governor - Electronic Isochronous
Base - Formed Steel
SAE Flywheel and Bell Housing
Charging Alternator - 12V
Battery Box and Cables
Flexible Fuel Connectors
Flexible Exhaust Connection
EPA Certified Engine

Brushless Alternator with Brushless Pilot Exciter
4 Pole, Rotating Field
130 °C Max. Standby Temperature Rise
1 Bearing, Sealed
Flexible Coupling
Full Amortisseur Windings
125% Rotor Balancing
3-Phase Voltage Sensing
100% of Rated Load - One Step
5% Max. Total Harmonic Distortion

// Digital Control Panel(s)

Digital Metering
Engine Parameters
Generator Protection Functions
Engine Protection
SAE J1939 Engine ECU Communications
Windows®-Based Software
Multilingual Capability
Remote Communications to RDP-110 Remote Annunciator
Programmable Input and Output Contacts
UL Recognized, CSA Certified, CE Approved
Event Recording
IP 54 Front Panel Rating with Integrated Gasket
NFPA110 Compatible

// Generator

NEMA MG1, IEEE and ANSI standards compliance for temperature rise and motor starting
Self-Ventilated and Drip-Proof
Superior Voltage Waveform
Solid State, Volts-per-Hertz Regulator
±1% Voltage Regulation No Load to Full Load Regulation

UL Recognized, CSA Certified, CE Approved
Event Recording
IP 54 Front Panel Rating with Integrated Gasket
NFPA110 Compatible

APPLICATION DATA

// Engine

Manufacturer	Mercedes-Benz
Model	OM926LA
Type	4-Cycle
Arrangement	6-Inline
Displacement: L (in³)	7.2 (439)
Bore: cm (in)	10.6 (4.17)
Stroke: cm (in)	13.6 (5.35)
Compression Ratio	17.5:1
Rated RPM	1,800
Engine Governor	MR2 / ADM3
Max. Power: kWm (bhp)	247 (331)
Speed Regulation	±0.25%
Air Cleaner	Dry

// Liquid Capacity (Lubrication)

Total Oil System: L (gal)	29 (7.7)
Engine Jacket Water Capacity: L (gal)	10 (2.6)
System Coolant Capacity: L (gal)	24.1 (6.4)

// Electrical

Electric Volts DC	12
Cold Cranking Amps Under -17.8 °C (0 °F)	950

// Fuel System

Fuel Supply Connection Size	-6 JIC
Fuel Supply Hose Size	3/8" ID
Fuel Return Connection Size	-6 JIC
Fuel Return Hose Size	3/8" ID
Max. Fuel Lift: m (ft)	2.6 (8.5)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	330.5 (87.3)

// Fuel Consumption *

At 100% of Power Rating: L/hr (gal/hr)	55.3 (14.6)
At 75% of Power Rating: L/hr (gal/hr)	40.5 (10.7)
At 50% of Power Rating: L/hr (gal/hr)	26.5 (7)

* Based on 431CSL6206 480 Volt generator set

// Cooling - Radiator System

Ambient Capacity of Radiator: °C (°F)	50 (122)
Max. Restriction of Cooling Air: Intake and Discharge Side of Rad.: kPa (in. H ₂ O)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	143 (37)
Heat Rejection to Coolant: kW (BTUM)	95.5 (5,431)
Heat Rejection to Air to Air: kW (BTUM)	55.3 (3,145)
Heat Radiated to Ambient: kW (BTUM)	40.8 (2,322)
Fan Power: kW (hp)	15.6 (22.1)

// Air Requirements

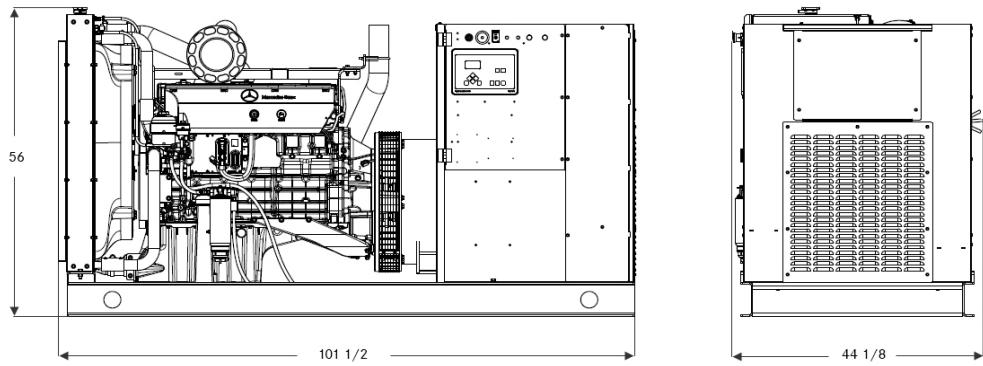
Aspirating: *m ³ /min (SCFM)	14.8 (523)
Air Flow Required for Rad.	
Cooled Unit: *m ³ /min (SCFM)	408 (14,408)
Remote Cooled Applications:	
Air Flow Required for Dissipation of Radiated Generator Set Heat for a Max. of 25 °F Rise: *m ³ /min (SCFM)	149.2 (5,269)

* Air density = 1.184 kg/m³ (0.0739 lbm/ft³)

// Exhaust System

Gas Temp. (Stack): °C (°F)	520 (968)
Gas Volume at Stack	
Temp: m ³ /min (CFM)	44.8 (1,582)
Max. Allowable	
Back Pressure: kPa (in. H ₂ O)	10.5 (42)

WEIGHTS AND DIMENSIONS



Drawing above for illustration purposes only, based on standard open power 480 volt generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific template drawings.

System	Dimensions (LxWxH)	Weight (less tank)
Open Power Unit (OPU)	2,580 x 1,121 x 1,422 mm (101.57 x 44.13 x 56 in)	1,632-2,120 kg (3,598-4,674 lb)

Weights and dimensions are based on open power units and are estimates only. Consult the factory for accurate weights and dimensions for your specific generator set.

SOUND DATA

Unit Type	Standby Full Load
Level 0: Open Power Unit dB(A)	88.9

Sound data is provided at 7 m (23 ft). Generator set tested in accordance with ISO 8528-10 and with infinite exhaust.

EMISSIONS DATA

NO _x + NMHC	CO	PM
3.93	1.2	0.06

All units are in g/hp-hr and shown at 100% load (not comparable to EPA weighted cycle values).
 Emission levels of the engine may vary with ambient temperature, barometric pressure, humidity, fuel type and quality, installation parameters, measuring instrumentation, etc. The data was obtained in compliance with US EPA regulations. The weighted cycle value (not shown) from each engine is guaranteed to be within the US EPA Standards.

RATING DEFINITIONS AND CONDITIONS

// Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. No overload capability for this rating. Ratings are in accordance with ISO 3046-1, BS 5514, and AS 2789. Average load factor: ≤ 85%.

// Deration Factor:

Altitude: Consult your local MTU Onsite Energy Power Generation Distributor for altitude derations.

Temperature: Consult your local MTU Onsite Energy Power Generation Distributor for temperature derations.

C/F = Consult Factory/MTU Onsite Energy Distributor

N/A = Not Available

Stationary Noise Calculation - Nearest Homes to East

Stationary Noise Sources	Reference Distance	Reference Leq	Reference Distance	Project Site Leq	1.5 (Line Source; hard=0, soft=.5; Point Source; hard=1, soft=1.5)
Rooftop Mechanical Equipment	10	66.6	55	48	(eq. N-2141.2 of TENS)
parking lot	10	52.1	150	23	
Delivery Trucks	30	54.8	150	37	
Backup Generator	23	88.9	200	65	

Stationary Noise Sources	Distance from Receptor	Distance to Wall	Height of Wall	Without Wall Noise	With Wall Noise at Level at Residence	Source Height	Observer Height	Exterior	Source Frequenc	Source y (hz)	barrier to receiver - b	source to receiver - c	source to receiver -	path difference	line of sight (slope)	Barrier Atten
Rooftop Mechanica	45	10	36	48	35	36	13	800	50.5371	10	59.61543	0.9217		fresnel		
parking lot	10	150	2	23	5	3	13	800	14.8661	150.0033	160.3122	4.5572	1	2.62167	-13.106	
Delivery Trucks	10	150	2	37	20	5	13	800	14.8661	150.03	160.1999	4.6962	1	12.96272	-17.455	
Backup Generator	170	30	36	65	46	5	13	800	171.5488	43.13931	200.1599	14.5282	1	13.35805	-17.502	