

APPENDIX H – NOISE IMPACT ANALYSIS



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NOISE IMPACT ANALYSIS
NEWPORT BOULEVARD AND 32ND
STREET MODIFICATION PROJECT
CITY OF NEWPORT BEACH

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PROJECT No. 13083

JUNE 20, 2014

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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
L _{dn}	Day-night average noise level
Leq	Equivalent sound level
L _{max}	Maximum noise level
ONAC	Federal Office of Noise Abatement and Control
OSHA	Occupational Safety and Health Administration
RCNM	Roadway Construction Noise Model
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
UMTA	Federal Urban Mass Transit Administration

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 Newport Boulevard and 32nd Street Modification 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 Project Description

The project site is located within a fully urbanized section of the City of Newport Beach (City), and would improve a segment of Newport Boulevard that begins at the intersection with 30th Street and terminates at the intersection with Via Lido. The proposed project will also include improvements on a segment of 32nd Street that begins at the alley east of Newport Boulevard and terminates at Marcus Avenue west of Newport Boulevard. A recent City project has reconfigured 32nd Street west of Newport Boulevard into a two-lane road with bike lanes in each direction. The Project Location Map is shown in Figure 1.

1.3 Project Characteristics

Roadway and Signal Modifications

The proposed project would introduce one additional northbound through lane on Newport Boulevard from 30th Street to 32nd Street and one additional southbound through lane on Newport Boulevard from Via Lido to 32nd Street, terminating as a right-turn only lane at 32nd Street. The proposed project would require traffic signal modifications at the intersections of 30th Street, 32nd Street, Finley Avenue and Via Lido. Introduction of a raised, landscaped median along Newport Boulevard would eliminate the existing left turning movements from southbound Newport Boulevard onto eastbound 31st Street and from westbound 31st Street onto southbound Newport Boulevard. Acquisition of the two existing bank properties and roadway modifications on 32nd Street would result in the closure of the alley access that bisects these properties. The alley would be reconfigured to connect to the proposed public parking lot, which will include an exit/entrance via Marcus Avenue.

The proposed project would also introduce 6-foot-wide bike lanes along both sides of Newport Boulevard between 32nd Street and Via Lido to provide a connection to existing bike lanes on 32nd Street west of Newport Boulevard. Project construction would require temporary lane closures on both Newport Boulevard and 32nd Street; however, a traffic control plan would be implemented during construction to minimize disruptions due to lane closures.

Implementation of the proposed project would eliminate approximately 26 existing curbside metered parking spaces between 30th Street and Via Lido. These parking spaces will be replaced on properties proposed to be acquired by the under current project design, described below. Both bus stops along Newport Boulevard would be relocated to a location near each existing bus stop.

Median, Landscaping, and Sidewalk Modifications

The proposed improvements of Newport Boulevard north and south of the 32nd Street intersection would include construction of raised, landscaped medians that would improve safety and enhance the visual quality of the proposed project area. Additional visual enhancements associated with the proposed project include introduction of landscaping at the southeast corner of the intersection of Newport Boulevard and 32nd Street and northeast corner of the intersection of Newport Boulevard and Finley Avenue. The proposed project would also add landscaping to screen the proposed public parking lot at the northwest corner of Newport Boulevard and 32nd Street. Project landscaping must be found consistent with the Lido Village Design Guidelines prepared by the City of Newport Beach.

Project improvements would also include construction of new curb and gutters, curbs, sidewalks, curb ramps, driveway approaches, storm drain catch basins, street lights, signs, striping, signals, utility meters, Southern California Edison (SCE) air vents, and other items within the project area. Parking meters and several large palm trees will need to be removed and salvaged or disposed as directed by City staff.

Existing pavement within the proposed project area is generally in fair condition with the exception of a portion of Newport Boulevard between Finley Avenue and 32nd Street that appears to be in poor condition in both the northbound and southbound lanes. Pavement treatment for the proposed project would consist of isolated full-depth reconstruction and cold mill and overlay.

Right-of-Way Acquisitions

Current project design anticipates that the proposed project would require ROW acquisitions from three privately-owned parcels and two partial property dedications from two City-owned parcels. The evaluation presented in this Noise Impact Analysis includes the ROW acquisitions and dedications listed below in Table A in order to present the most conservative analysis. Private property ROW acquisitions under current project design would include a full property acquisition of the vacant Wachovia Bank building located at the northwest corner of the Newport Boulevard and 32nd Street intersection and the property west of the vacant Wachovia Bank Building currently configured as a parking lot for the bank. The existing structure and parking lot on both of these parcels would be demolished, and the two parcels would be converted to a public parking lot to provide replacement parking for the loss of on-street curbside parking. Current project design would require a partial ROW acquisition of the commercial property north of the vacant Wachovia Bank building.

Table A – Right-of-Way Acquisitions

Address No.	Ownership	Existing Use	ROW Acquisition
3201	Private	Vacant Wachovia Bank Building	8,684 SF (Full Acquisition)
3204	Private	Parking Lot for Vacant Wachovia Bank Building	6,748 SF (Full Acquisition)
3305	Private	Commercial with Parking Lot	48 SF (Partial Acquisition)
3300	City	Former City Hall	10,782 SF (Partial Dedication)
3531	City	Passive Recreation	1,224 SF (Partial Dedication)

Source: Chambers Group, Inc.

Current project design would require dedication of 0.25 acre of land from the former City Hall parcel located at the northeast corner of the intersection of Newport Boulevard and 32nd Street (3300 Newport Boulevard). This segment of the former City Hall parcel would be incorporated into the expanded ROW of Newport Boulevard. Similarly, current project design would require dedication of 0.03 acre of the City-owned Gateway Park located at the southwest corner of Newport Boulevard and Short Street (3531 Newport Boulevard) that would be incorporated into the expanded ROW of Newport Boulevard.

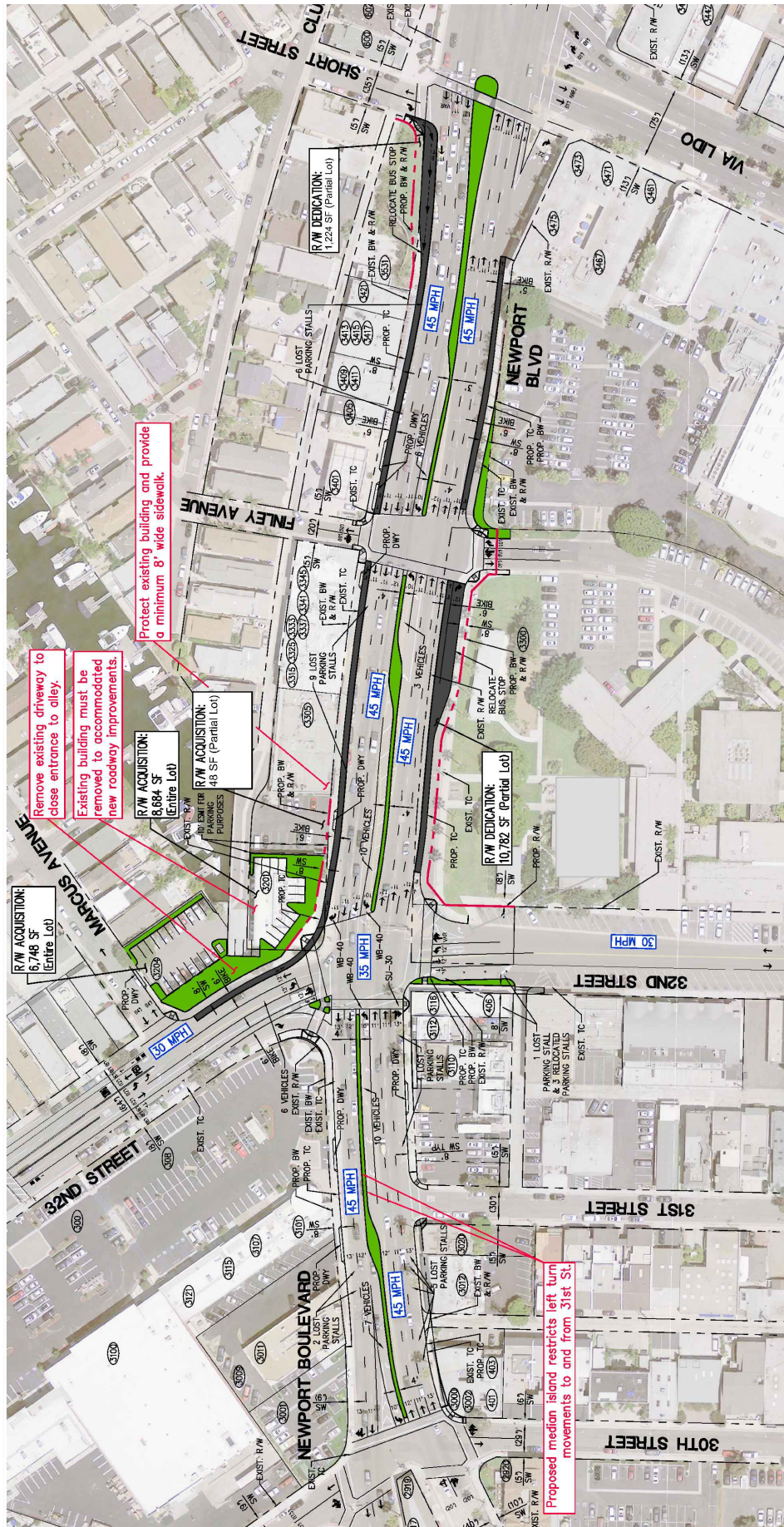
Project Schedule

Construction of the proposed project is expected to occur over a six-month period, beginning September 2015 and ending March 2016. To minimize public inconvenience, the construction phase will need to be completed prior to the start of Summer 2016. Construction activities will typically take place between the hours of 7:00 a.m. and 4:30 p.m., Monday thru Friday.



SOURCE: Chambers Group, Inc.

Figure 1
Project Location Map



Remove existing driveway to close entrance to alley.

Existing building must be removed to accommodate new roadway improvements.

Protect existing building and provide a minimum 8' wide sidewalk.

Proposed median island restricts left turn movements to and from 31st St.

SOURCE: VA Consulting, Inc.

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. The vibration of sound pressure waves in the air produces sound. 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 that 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 that 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 dBA. The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak traffic hour L_{eq} is the noise metric used by the California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (L_{dn}) 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 10:00 p.m. and 7:00 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the L_{dn} , except that it has another addition of 4.77 dB to sound levels during the evening hours between 7:00 p.m. and 10:00 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 Newport Beach relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

Another noise descriptor that is used primarily for the assessment of aircraft noise impacts is the Sound Exposure Level, which is also called the Single Event Level (SEL). The SEL descriptor represents the acoustic energy of a single event (i.e., an aircraft overflight) normalized to one-second event duration. This is useful for comparing the acoustical energy of different events involving different durations of the noise sources. The SEL is based on an integration of the noise during the period when the noise first rises within 10 dBA of its maximum value and last falls below 10 dBA of its maximum value. The SEL is often greater than 10 dBA or more than the L_{MAX} since the SEL logarithmically adds the L_{eq} for each second of the duration of the noise.

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 drop-off rate 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 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. Offsite 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 that 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

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

Noise Control Act of 1972

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; and
- 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). The federal Urban Mass Transit Administration (UMTA) regulates transit noise, 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.

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 regulatory 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.

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 California Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

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.

Table N2 Land Use Noise Compatibility Matrix

<i>Land Use Categories</i>		<i>Community Noise Equivalent Level (CNEL)</i>						
<i>Categories</i>	<i>Uses</i>	<i><55</i>	<i>55-60</i>	<i>60-65</i>	<i>65-70</i>	<i>70-75</i>	<i>75-80</i>	<i>>80</i>
Residential	Single Family, Two Family, Multiple Family	A	A	B	C	C	D	D
Residential	Mixed Use	A	A	A	C	C	C	D
Residential	Mobile Home	A	A	B	C	C	D	D
Commercial Regional, District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
Commercial Regional, Village District, Special	Commercial Retail, Bank, Restaurant, Movie Theatre	A	A	A	A	B	B	C
Commercial Industrial Institutional	Office Building, Research and Development, Professional Offices, City Office Building	A	A	A	B	B	C	D
Commercial Recreational Institutional Civic Center	Amphitheatre, Concert Hall Auditorium, Meeting Hall	B	B	C	C	D	D	D
Commercial Recreation	Children's Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	B	B	D	D
Commercial General, Special Industrial, Institutional	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
Institutional	Hospital, Church, Library, Schools' Classroom	A	A	B	C	C	D	D
Open Space	Parks	A	A	A	B	C	D	D
Open Space	Golf Course, Cemeteries, Nature Centers Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
Agriculture	Agriculture	A	A	A	A	A	A	A

SOURCE: Newport Beach, 2006

Zone A: Clearly Compatible—Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Zone B: Normally Compatible**—New construction or development should be undertaken only after detailed analysis of the noise reduction requirements and are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Zone C: Normally Incompatible—New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

Zone D: Clearly Incompatible—New construction or development should generally not be undertaken.

SOURCE: City of Newport Beach General Plan, 2006.

4.3 Local Regulations

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

City of Newport Beach General Plan

Goal N1 **Noise Compatibility** – Minimized land use conflicts between various noise sources and other human activities.

Policy N1.8 **Significant Noise Impacts**

Require the employment of noise mitigation measures for existing sensitive uses when a significant noise impact is identified. A significant noise impact occurs when there is an increase in the ambient CNEL produced by new development impacting existing sensitive uses. The CNEL increase is shown in

Table B – City of Newport Beach Significant Noise Impacts

CNEL (dBA)	dBA Increase
55	3
60	2
65	1
70	1
Over 75	Any increase is considered significant

Source: City of Newport Beach.

Goal N2 Minimize motor vehicle traffic and boat noise impacts on sensitive noise receptors.

Policy 2.6 **Barrier Construction Funding**

Establish a program to secure funding for the construction of noise barriers to protect private outdoor yard areas along arterial roadways where existing homes are exposed to noise levels above the City noise standards and develop a priority program for the construction of such barriers. A potential source of such funding may be a fee for new projects, which generate new traffic within the City, as well as road improvement funds where road improvements are made. The amount of these fees should be proportional to the amount of the new traffic that is caused by the new project. It should be recognized that noise barriers will not always be feasible mitigation to roadway noise. Noise barriers are most feasible for single-family homes where the rear yards are adjacent to the roadway. The feasibility of other situations should be evaluated on a case-by case basis.

Goal N5 Minimized excessive construction-related noise.

Policy N5.1 **Limiting Hours of Activity**

Enforce the limits on hours of construction activity.

City of Newport Beach Municipal Code

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

Section 10.28.040 Construction Activity – Noise Regulations.

- A. Weekdays and Saturdays. No person shall, while engaged in construction, remodeling, digging, grading, demolition, painting, plastering or any other related building activity, operate any tool, equipment or machine in a manner which produces loud noise that disturbs, or could disturb, a person of normal sensitivity who works or resides in the vicinity, on any weekday except between the hours of seven a.m. and six-thirty p.m., nor on any Saturday except between the hours of eight a.m. and six p.m.
- B. Sundays and Holidays. No person shall, while engaged in construction, remodeling, digging, grading, demolition, painting, plastering or any other related building activity, operate any tool, equipment or machine in a manner which produces loud noise that disturbs, or could disturb, a person of normal sensitivity who works or resides in the vicinity, on any Sunday or any federal holiday.
- C. No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.
- D. Exceptions.
 - 1. The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the Building Director or designee.
 - 2. The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City of Newport Beach, or its employees, contractors or agents, unless:
 - a. The City Manager or department director determines that the maintenance, repair or improvement is immediately necessary to maintain public services;
 - b. The maintenance, repair or improvement is of nature that cannot feasibly be conducted during normal business hours;
 - c. The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day which would otherwise be prohibited pursuant to this section.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise level environment, 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 vehicular traffic on the nearby roadways as well as from activities at the nearby commercial uses. 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 Extech Model 407780 Type 2 integrating sound level meters programmed in “slow” mode to record the sound pressure level at 3-second intervals for approximately 24 hours in “A” weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded. The sound level meters and microphones were mounted on trees or fences approximately 8 feet above the ground and were equipped with windscreens during all measurements. The sound level meters were calibrated before and after the monitoring using an Extech calibrator, Model 407766. 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 Locations

The noise monitoring locations were selected in order to obtain noise measurements of the current noise levels in the project study area and to provide a baseline for any potential noise impacts that may be created by development of the proposed project. The noise measurement sites were selected to provide a representative sampling of the noise levels created by nearby noise sources as well as experienced by nearby sensitive receptors. Descriptions of the noise monitoring sites are provided below in Table C and Figure 3 shows the noise monitoring site locations. 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 10:05 a.m. on Thursday, November 7, 2013 and 10:17 a.m. on Friday, November 8, 2013. When the noise measurements were started the sky was partly cloudy, the temperature was 71 degrees Fahrenheit, the humidity was 59 percent, barometric pressure was 30.07 inches of mercury, and there was no wind. Overnight the temperature dropped to 53 degrees Fahrenheit. At the conclusion of the noise measurements, the sky was clear, the temperature was 70 degrees Fahrenheit, the humidity was 67 percent, barometric pressure was 29.99 inches of mercury, and the wind was blowing around 4 miles per hour.

5.2 Noise Measurement Results

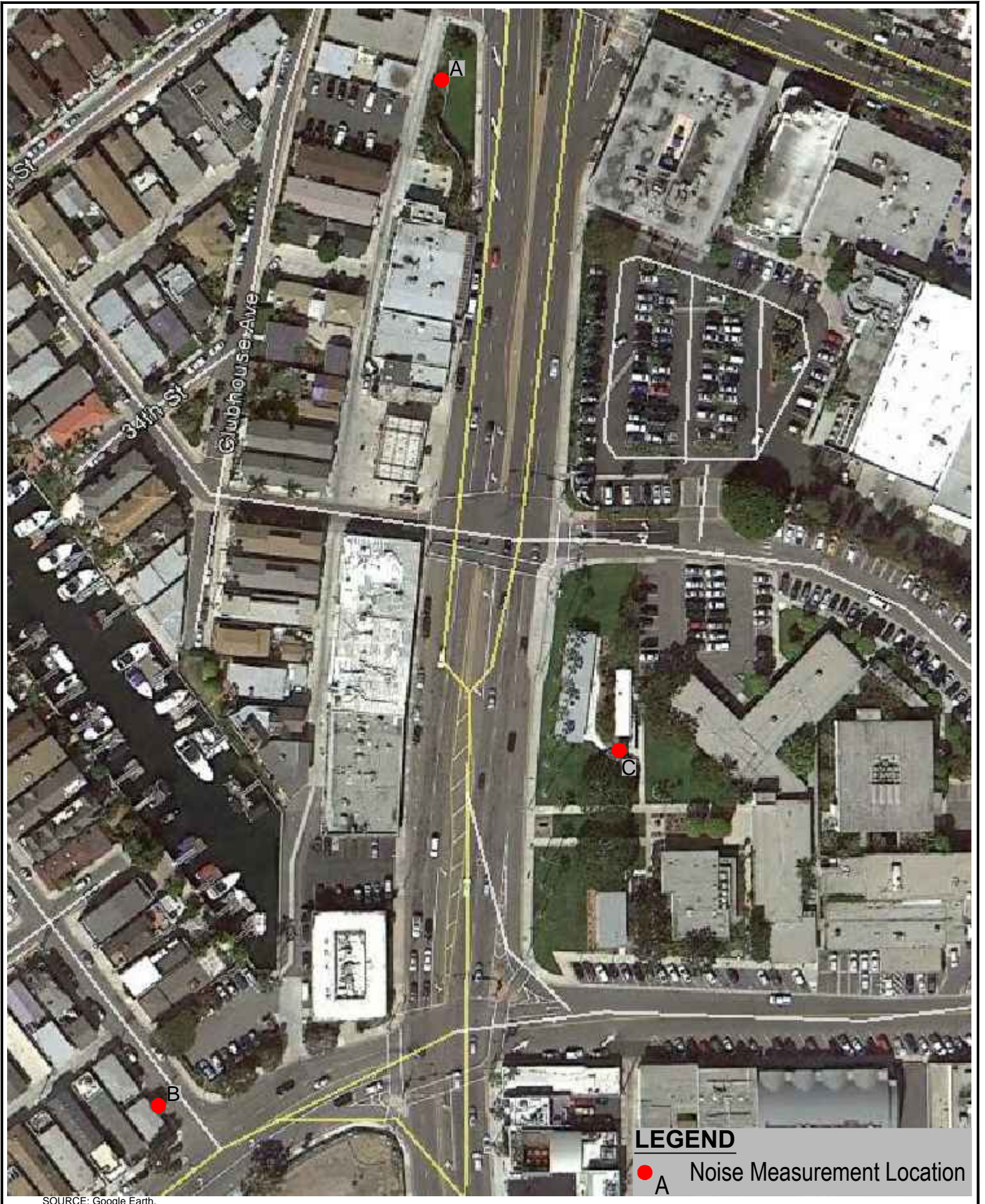
The results of the noise level measurements are presented in Table C. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table C also shows the L_{eq} , L_{max} , and CNEL, based on the entire measurement time. The noise monitoring data printouts are included in Appendix B. Figure 4 shows a graph of the 24-hour noise measurements.

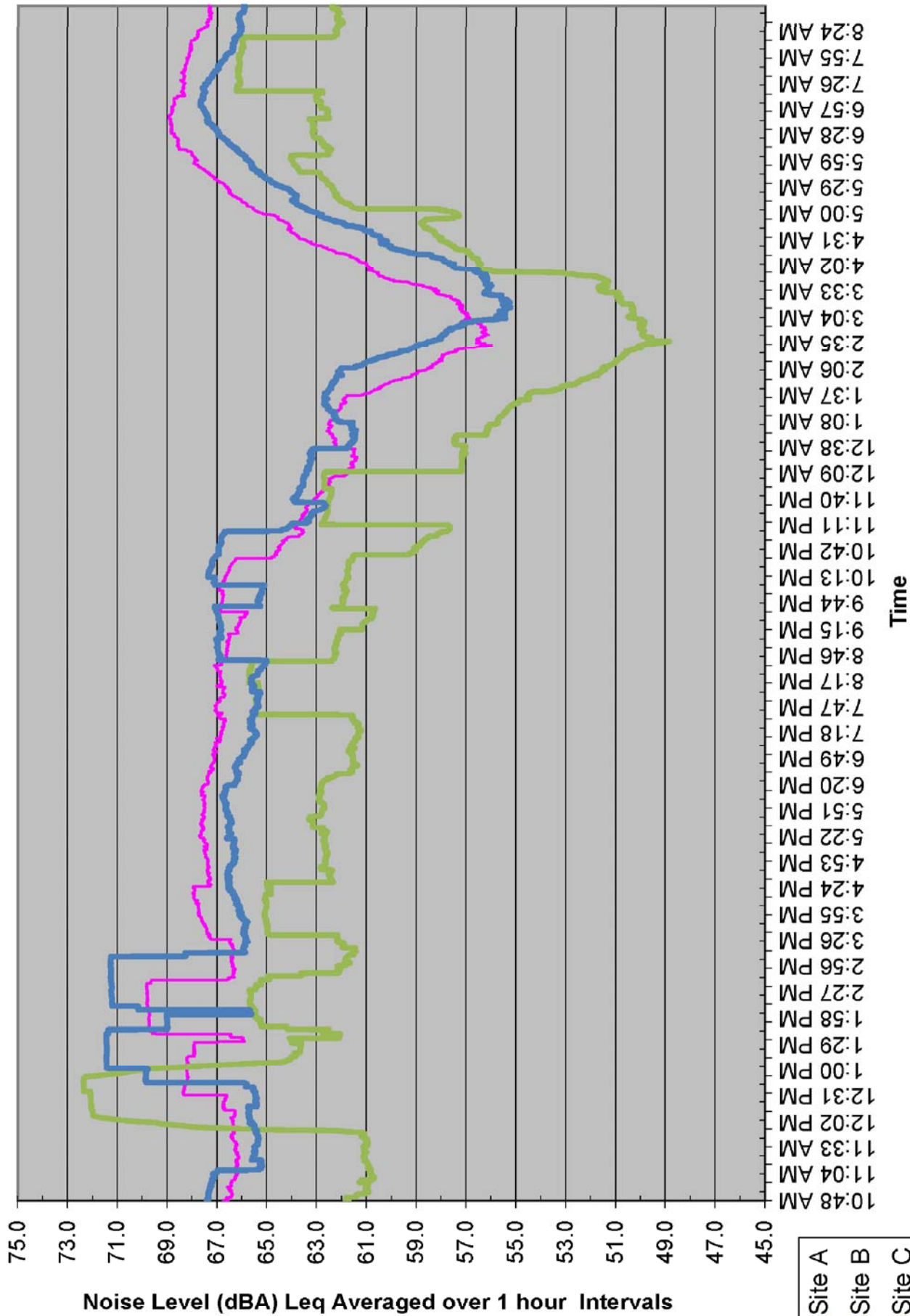
Table C – Existing (Ambient) Noise Level Measurements

Site No.	Site Description	Average (dBA L_{eq})	Maximum (dBA L_{max})	Min. 1-Hour Interval (dBA L_{eq}/Time)	Max. 1-Hour Interval (dBA L_{eq}/Time)	Average (dBA CNEL)
A	Located on a tree across the alley from the home at 522 ½ Clubhouse Avenue, approximately 75 feet south of Short Street centerline and 90 feet west of Newport Boulevard centerline.	66.4	96.3	56.0 3:15 AM	69.8 2:49 PM	71.3
B	Located on a power pole near the proposed public parking lot, approximately 15 feet southwest of Marcus Avenue centerline and 60 feet northwest of 32 nd Street centerline.	63.6	94.2	48.8 3:16 AM	72.4 1:22 PM	67.6
C	Located on a tree in front of the former City Hall approximately 140 feet east of Newport Boulevard centerline.	66.6	97.6	55.2 3:28 AM	71.4 1:16 PM	71.0

Source: Noise measurements taken with three Extech Model 407780 Type 2 integrating sound level meters between Thursday November 7, 2013 and Friday November 8, 2013.

Table C shows that all noise measurements currently exceed the City’s normally acceptable residential and hotel noise standard of 60 dBA CNEL.





SOURCE: Extech Model 407780 Type 2 Integrated Sound Level Meters.

Figure 5
Field Noise Measurements Graph

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

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 D below provides a list of the construction equipment anticipated to be used for each phase of construction as detailed in the Air Quality Section of the Initial Study/Mitigated Negative Declaration for the proposed project.

Table D – 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 Saw	1	20	90	90
Excavator	3	40	85	81
Dozer	2	40	85	82
Grading				
Excavator	1	40	85	81
Grader	1	40	85	N/A
Dozer	1	40	85	82
Tractor, Loader or Backhoe ⁵	3	40	84	N/A
Paving				
Paver	2	50	85	77
Paving Equipment	2	50	85	77
Roller	2	20	85	80

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.

⁵ For the tractor/loader/backhoe, the tractor noise level was utilized, since it is the loudest of the three types of equipment.

Source: Federal Highway Administration, 2006 and Vista Environmental, 2013.

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 D and through use of the RCNM. For each phase of construction, the nearest piece of equipment was placed at the shortest distance of the proposed activity to the nearest home and each subsequent piece of equipment was placed an additional 50 feet away.

6.2 Operations-Related Noise

The proposed project would result in additional vehicular lanes and off-street parking spaces, which may result in an increase in operational noise. The potential noise impacts to the project vicinity was modeled using SoundPlan Version 7.2 noise modeling software. 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.

SoundPlan Noise Modeling Software

Since the project vicinity is impacted by multiple roadways and the proposed project would introduce additional off-street parking, the SoundPlan Version 7.2 noise modeling software was used. SoundPlan's road noise and stationary noise source algorithms are based on the FHWA Traffic Noise Model (FHWA TNM Model). The SoundPlan Model requires the input of roadways, parking lots and the locations of the noise measurement receivers. In addition, sound barriers, terrain contour lines, building placement, and specific ground coverage zones may be incorporated as well. The site plan and aerial photos were used to determine the placement of the roadways, parking lots, and existing structures in the project vicinity. The ground coverage of loose soil was used throughout the study area and the default temperature and humidity were used in the analysis.

Roadway Assumptions

The roadway parameters used for this study are presented in Table E. The roadway speeds are based on the posted speed limits. The existing average daily traffic volumes were obtained from National Data & Surveying Services and the printouts are provided in Appendix C.

Table E – SoundPlan Model Roadway Parameters

Roadway	Segment	Vehicle Speed (MPH)	Number of Lanes		Average Daily Traffic		
			Existing	With Project	Existing Per Lane	With Project Per Lane	
Newport Blvd	Via Lido to 32 nd Street	30	5	6	49,515	9,903	8,253
Newport Blvd	32 nd Street to 30 th Street	30	4	5	32,000	8,000	6,400
32 nd Street	West of Newport Blvd	30	2	2	7,881	3,941	3,941
Alley	West of Newport Blvd	15	1	1	290	290	290

Source: NDS/ATD.

The vehicle mixes used in the SoundPlan Model are shown in Table F. The Secondary and Major Arterial vehicle mixes are based on typical vehicle mixes observed in Southern California.

Table F – Roadway Vehicle Mix

Vehicle Type	Traffic Flow Distributions			Overall
	Day (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	
Secondary and Local				
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 Arterials				
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.

Parking Lot Assumptions

The existing and proposed parking lots, located northwest of the intersection of Newport Boulevard and 32nd Street were also modeled in the SoundPlan model. The parking lot emission source is based on the different tonal contents typically created from parking lots and is primarily from engine and tire noise, slamming of doors, and pedestrians. The trips per lot per day was based on the assumption that six different vehicles would use each parking space per day. A summary of the parking lot parameters is provided in Table G.

Table G – Parking Lot Parameters

Parking Lot	Number of Parking Spaces	Trips Per Lot Per Day	Movements Per Space Per Hour	
			7 a.m. – 10 p.m.	10 p.m. – 7 a.m.
Marcus Ave	19	114	0.32	0.13
Las Fajitas	14	84	0.32	0.13
New Parking Lot	12	72	0.32	0.13

Source: Vista Environmental.

Sound Wall Assumptions

In order to provide an accurate representation of the existing noise environment, the 4-foot high sound wall on the north and west side of the parking lot adjacent to Marcus Avenue was incorporated in the SoundPlan model. This wall has approximately 1-foot of trellise on top of the wall, so the wall looks like it is 5 feet high, however the trellise provide nominal noise attenuation and was not included in the calculations.

In addition, the 6-foot high curving sound wall located in the passive park on the south side of Short Street was also incorporated into the SoundPlan model. Both walls were modeled with no reflection.

Sound Plan Model Calibration

Receivers were placed at the locations of the 24-hour noise measurement sites in order to assist in the calibration of the model as well as to verify the accuracy of the SoundPlan Model. Table G below provides a summary of the calculated results and a comparison to the measured results shown above in Table H. The SoundPlan Model printouts for the model calibration are provided in Appendix D.

Table H – Model Calibration of Existing Noise Levels

Site No.	Site Description	Calculated Noise Level ¹ (dBA CNEL)	Measured Noise Level ² (dBA CNEL)	Difference
A	Located approximately 75 feet south of Short Street centerline and 90 feet west of Newport Boulevard centerline.	70.1	71.3	-1.2
B	Located approximately 15 feet southwest of Marcus Avenue centerline and 60 feet northwest of 32 nd Street centerline.	68.1	67.6	0.5
C	Located on a tree in front of the former City Hall approximately 140 feet east of Newport Boulevard centerline.	68.8	71.0	-2.2

¹ Noise Level Calculated from SoundPlan Version 7.2.

² Noise measurements taken on Thursday November 7, 2013 and Friday November 8, 2013.

Table H above shows that the SoundPlan Model is within 2.2 dBA of the field noise measurements, which is within the range of allowed tolerances as described in Section 5.4.1, Routine Model Calibration, of the TeNS for the multiple range of noise sources impacting the project site. Therefore, based on the field noise measurements, the SoundPlan Model provides an accurate representation of the project area noise levels.

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, May 2006.

The construction-related and operational 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 in the Air Quality Analysis.

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:

- Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the proposed project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above noise levels existing without the proposed project; or
- Exposure of persons residing or working in the project area to excessive noise levels from aircraft.

7.2 Exposure of Persons to or Generation of Noise Levels in Excess of Standards

The proposed project would not expose persons to or generate noise levels in excess of standards established in the General Plan or Noise Ordinance or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the construction and operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

Construction activities associated with the proposed project would include demolition of an existing structure and roadway areas, partial re-grading of roads, and paving of roads, parking lots and sidewalks. The nearest sensitive receptor to the proposed improvements is a home located adjacent to the proposed public parking lot on Marcus Avenue.

Section 10.28.040 of the City's Municipal Code exempts construction activities from the City's noise standards that occur between 7:00 a.m. and 6:30 p.m. on weekdays and between 8:00 a.m. and 6:00 p.m. on Saturdays and no construction is allowed on Sundays and holidays. Section 10.28.040 provides an exception for public work projects provided the City Manager or department director determines that the construction activity cannot be feasibly conducted during normal business hours. Through adherence to the limitation of allowable construction times provided in Section 10.28.040, the construction noise levels would not exceed any standards. Impacts would be less than significant.

Operations-Related Noise

The proposed project consists of widening Newport Boulevard through adding a northbound through lane from 30th Street to 32nd Street, adding a southbound through lane from Via Lido to 32nd Street and adding 6-foot wide bike lanes on both sides of Newport Boulevard between 32nd Street and Via Lido and provide a connection to the existing bike lanes on 32nd Street. The proposed project would also include the construction of a public parking lot on the west side of Newport Boulevard with a minimum of 26 parking spaces, which would include reconfiguration of the existing alley. Development of the proposed project may create noise increases in excess of City standards at the nearby residential uses.

Policy N1.8 of the General Plan details the noise increases allowed from a project before a significant impact would occur, which consists of a 3 dBA increase, where the ambient noise is 55 dBA CNEL or less, a 2 dBA CNEL increase, where the ambient noise is between 55 and 60 dBA CNEL, a 1 dBA CNEL increase, where the ambient noise is between 60 and 70 dBA CNEL, and any increase, where the ambient noise exceeds 75 dBA CNEL.

In order to quantify the project noise impacts at the nearby homes, the noise levels were calculated through use of the SoundPlan noise prediction model. The SoundPlan model analyzed the exterior noise levels at representative homes in the vicinity of the proposed project. The results are provided below in Table J and the SoundPlan model printouts are provided in Appendix C. Figure 6 shows the existing noise contours and Figure 7 shows the existing with project noise contours.

Table J – Proposed Project Noise Impacts at Nearby Homes Prior to Mitigation

Receiver	Location of Home	Existing (dBA CNEL)	With Project (dBA CNEL)	Increase (dBA)	City Standard
1	On Clubhouse Drive north of Short Street	68.6	69.4	0.8	+1 dBA
2	On Clubhouse Drive south of Short Street	68.3	68.8	0.5	+1 dBA
3	On Clubhouse Drive south of parking lot	65.1	65.3	0.2	+1 dBA
4	On Clubhouse Drive north of Finley Ave	66.0	66.5	0.5	+1 dBA
5	On Clubhouse Drive south of Finley Ave	60.9	61.5	0.6	+1 dBA
6	On Alley west of Las Fajitas	53.4	53.8	0.4	+3 dBA
7	On Marcus Ave north of parking lot	61.3	63.9	2.6	+1 dBA
8	On 32 nd Street and Marcus Avenue	65.1	65.8	0.7	+1 dBA
9	On 30 th Street	59.9	60.2	0.3	+2 dBA
10	On 31 st Street	63.9	63.9	0.0	+1 dBA

Source: SoundPlan Version 7.2.

Table J shows that the noise level contributions from the proposed project would range from 0.0 to 2.6 dBA. Table J also shows that the project noise contribution to Receiver 7 would exceed the noise contribution standard of plus one dBA detailed in Policy N1.8 of the General Plan. This would be considered a significant impact.

Mitigation Measure 1 is provided that requires the applicant to raise the existing wall along the shared property line of the proposed public parking lot and the home at 3206 Marcus Avenue to a minimum of 6 feet high. The proposed project’s noise impacts have been recalculated, based on the 6-foot high sound wall and the results are shown below in Table K.

Table K – Mitigated Proposed Project Noise Impacts at Nearby Homes

Receiver	Location of Home	Existing (dBA CNEL)	With Project (dBA CNEL)	Increase (dBA)	City Standard
1	On Clubhouse Drive north of Short Street	68.6	69.4	0.8	+1 dBA
2	On Clubhouse Drive south of Short Street	68.3	68.8	0.5	+1 dBA
3	On Clubhouse Drive south of parking lot	65.1	65.3	0.2	+1 dBA
4	On Clubhouse Drive north of Finley Ave	66.0	66.5	0.5	+1 dBA
5	On Clubhouse Drive south of Finley Ave	60.9	61.5	0.6	+1 dBA
6	On Alley west of Las Fajitas	53.4	53.8	0.4	+3 dBA
7	On Marcus Ave north of parking lot	61.3	61.4	0.1	+1 dBA
8	On 32 nd Street and Marcus Avenue	65.1	65.7	0.6	+1 dBA
9	On 30 th Street	59.9	60.2	0.3	+2 dBA
10	On 31 st Street	63.9	63.9	0.0	+1 dBA

Source: FHWA RD-77-108 Model.

Table K shows that with application of Mitigation Measure 1, the project contribution to Receiver 7 would be reduced to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Mitigation Measure 1:

The project applicant shall either raise the existing wall along the shared property line of the proposed public parking lot and the home at 3206 Marcus Avenue to a minimum of 6 feet high or construct a new 6-foot high wall immediately south of the existing wall and located entirely on City property. The sound wall shall be constructed prior to the start of any demolition or construction activities.

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

Construction activities can produce vibration that may be felt by adjacent uses. Construction activities associated with the proposed project would include demolition of an existing structure and roadway areas, partial re-grading of roads, and paving of roads, parking lots and sidewalks. The primary source of vibration during construction would be from the operation of a bulldozer, which may operate as near as 15 feet to existing homes.

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 15 feet, which is the distance to the nearest home, would be 0.16 inch per second PPV. The vibration level at the nearest home receptor is below the

0.25 inch per second PPV threshold of perception for transient sources, that is detailed above in Section 4.2. Impacts would be less than significant.

Operations-Related Vibration Impacts

The on-going operation of the proposed project would not include the operation of any known vibration sources. Therefore, a less than significant vibration impact is anticipated from the operation of the proposed project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

7.4 Permanent Noise Level Increase

The ongoing operation of the proposed project may result in a potential substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the proposed project. Potential noise impacts associated with the operations of the proposed project would be from the widening and realignment of Newport Boulevard and 32nd Street and the addition of off-street public parking.

Policy N1.8 of the General Plan details the noise increases allowed from a project before a significant impact would occur, which consists of a 3 dBA increase, where the ambient noise is 55 dBA CNEL or less, a 2 dBA CNEL increase, where the ambient noise is between 55 and 60 dBA CNEL, a 1 dBA CNEL increase, where the ambient noise is between 60 and 70 dBA CNEL, and any increase, where the ambient noise exceeds 75 dBA CNEL.

The proposed project's operational noise impacts to the nearby homes has been analyzed above in Section 7.2, which found that the noise level contributions from the proposed project would range from 0.0 to 2.6 dBA. The analysis in Section 7.2 also found that the project noise contribution to Receiver 7 would exceed the noise contribution standard of plus one dBA detailed in Policy N1.8 of the General Plan. This would be considered a significant impact.

Mitigation Measure 1 has been provided that requires the applicant to raise the existing wall along the shared property line of the proposed public parking lot and the home at 3206 Marcus Avenue to a minimum of 6 feet high. The analysis in Section 7.2 found that with application of Mitigation Measure 1, the project's noise contribution to Receiver 7 would be reduced to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of Mitigation Measure 1 is required.

Level of Significance After Mitigation

Less than significant impact.

7.5 Temporary Noise Level Increase

The proposed project would not create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above noise levels existing without the proposed project. Construction activities associated with the proposed project would include demolition of an existing structure and roadway areas, partial re-grading of roads, and paving of roads, parking lots and sidewalks. The nearest sensitive receptor to the proposed improvements is a home located adjacent to the proposed public parking lot on Marcus Avenue.

Section 10.28.040 of the City's Municipal Code exempts construction activities from the City's noise standards that occur between 7:00 a.m. and 6:30 p.m. on weekdays and between 8:00 a.m. and 6:00 p.m. on Saturdays and no construction is allowed on Sundays and holidays. Section 10.28.040 provides an exception for public work projects provided the City Manager or department director determines that the construction activity cannot be feasibly conducted during normal business hours. However, the City construction noise standards do not provide any limits to the noise levels that may be created during construction activities at the nearby sensitive receptors and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase at the nearby sensitive receptors.

In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the OSHA agency limits for noise exposure have been utilized. The use of a significance threshold using an OSHA standard is considered conservative. The OSHA standard limits noise exposure of workers to 90 dB or less over 8 continuous hours and this standard has been utilized to analyze the construction noise impacts to the sensitive receptors located at the nearby offsite residences.

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 D – Construction Equipment Noise Emissions and Usage Factors. The results are shown below in Table L and the RCNM printouts are provided in Appendix E.

Table L – Construction Noise Levels at Nearby Receptors

Construction Phase	Distance to Nearest Home (feet)	Construction Noise Level (dBA Leq)
Demolition	50	84
Grading	15	89
Paving	10	89

Source: RCNM, Federal Highway Administration, 2006

Table L shows that greatest noise impacts would occur during the grading and paving phases of construction, with noise levels as high as 89 dBA Leq at the nearest home. Table L shows that the noise levels from each phase of construction activities would be within the 90 dB threshold detailed above. Therefore, a less than significant construction noise impact would occur from development of the proposed project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

7.6 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 John Wayne Airport, located approximately 4.5 miles northeast of the project site. The proposed project would not introduce any new sensitive receptors to the project study area, as such the proposed project would not expose people residing or working in the surrounding area to excessive levels of airport generated noise. No impact is anticipated.

Level of Significance Before Mitigation

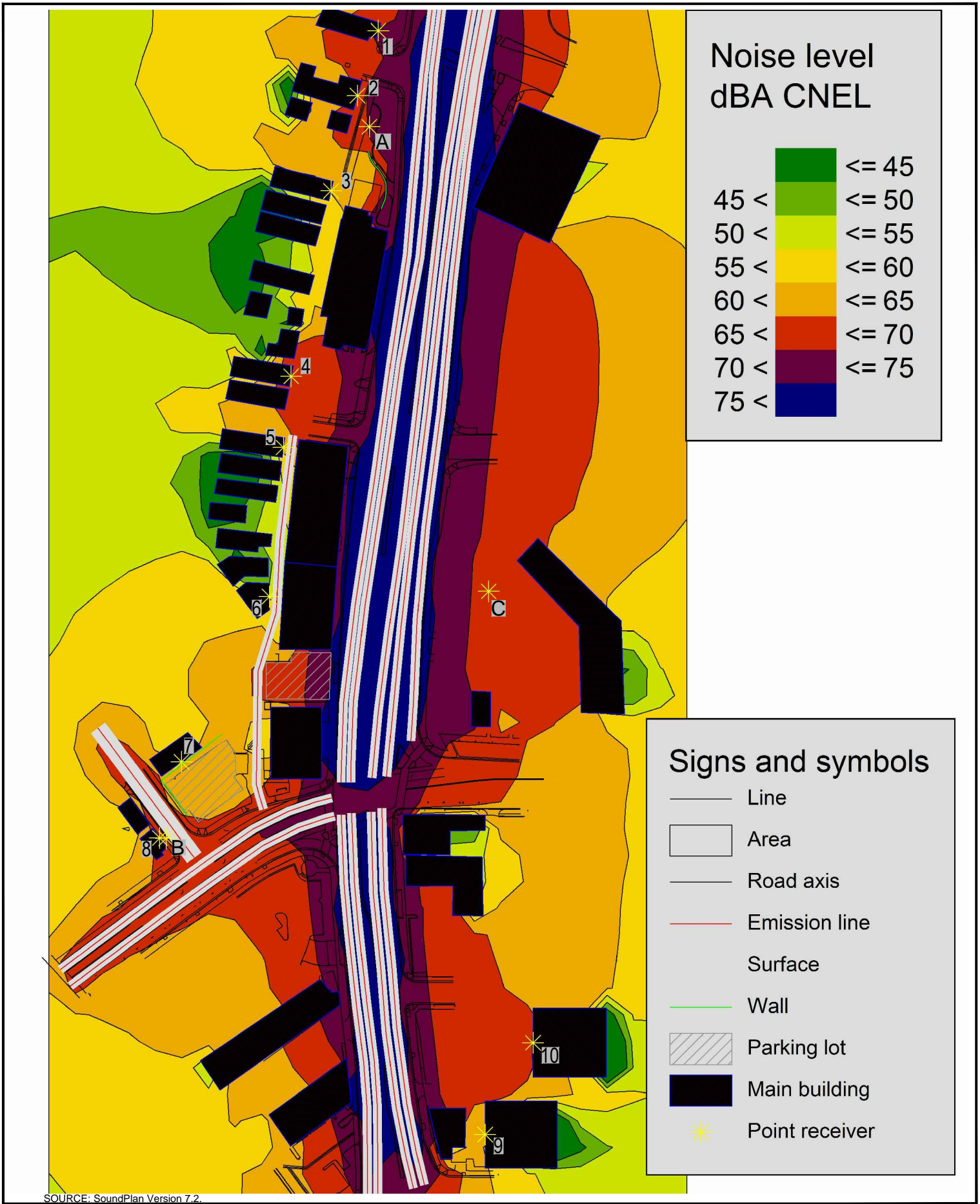
No impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No impact.



SOURCE: SoundPlan Version 7.2.

Figure 6
Existing Noise Contours

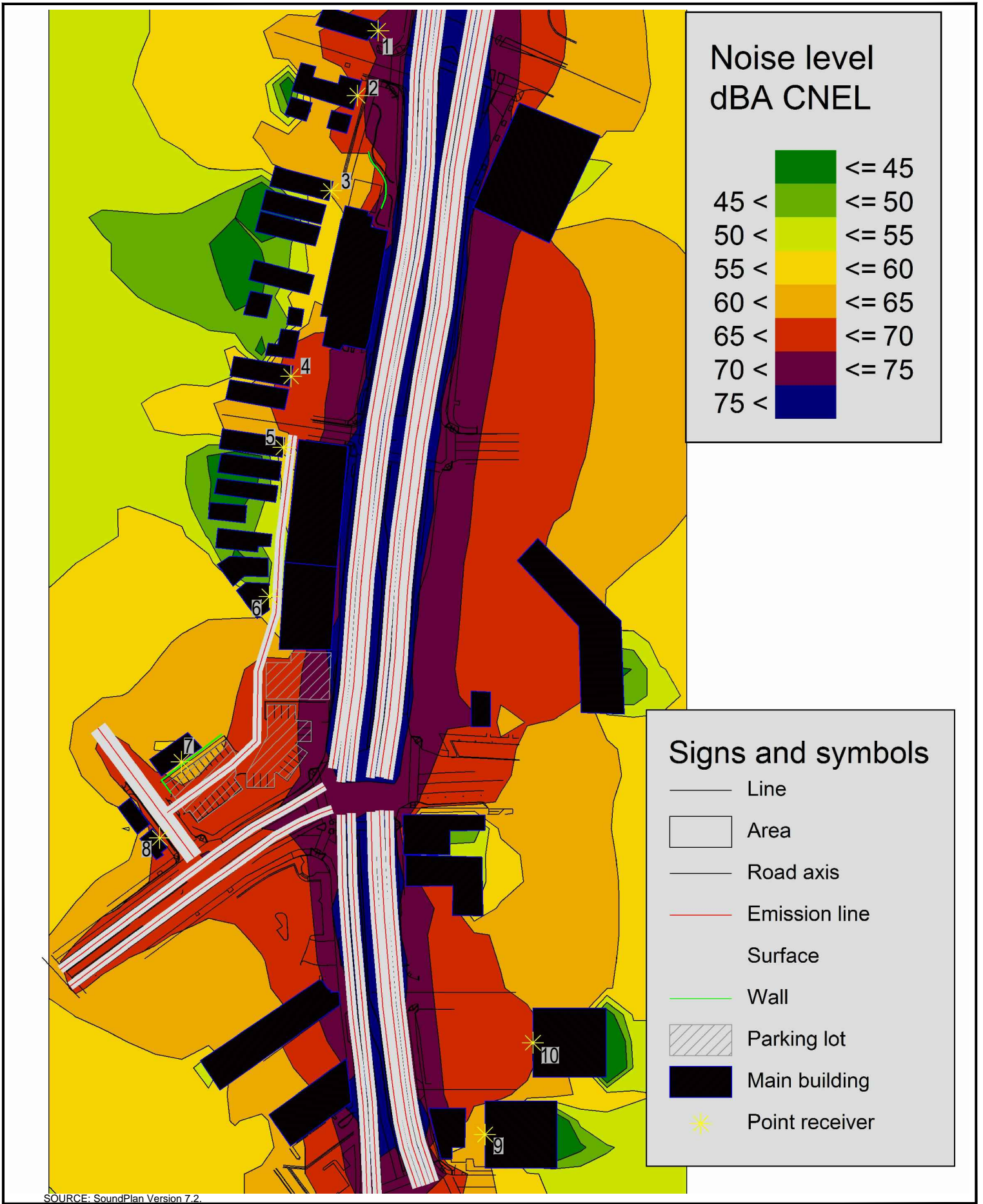


Figure 7
Existing With Project Noise Contours

8.0 REFERENCES

California Department of Transportation (Caltrans), *Technical Noise Supplement*, November 2009.

California Department of Transportation, *Transportation- and Construction-Induced Vibration Guidance Manual*, June, 2004

City of Newport Beach, *Newport Beach General Plan*, July 25, 2006.

City of Newport Beach, *Newport Beach Municipal Code*. 2013.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

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

APPENDIX A

Study Area Photo Index



Noise Measurement Site A - looking north



Noise Measurement Site A - looking northeast



Noise Measurement Site A - looking east



Noise Measurement Site A - looking southeast



Noise Measurement Site A - looking south



Noise Measurement Site A - looking southwest



Noise Measurement Site A - looking west



Noise Measurement Site A - looking northwest



Noise Measurement Site B - looking north



Noise Measurement Site B - looking northeast



Noise Measurement Site B - looking east



Noise Measurement Site B - looking southeast



Noise Measurement Site B - looking south



Noise Measurement Site B - looking southwest



Noise Measurement Site B - looking west



Noise Measurement Site B - looking northwest



Noise Measurement Site C - looking north



Noise Measurement Site C - looking northeast



Noise Measurement Site C - looking east



Noise Measurement Site C - looking southeast



Noise Measurement Site C - looking south



Noise Measurement Site C - looking southwest



Noise Measurement Site C - looking west



Noise Measurement Site C - looking northwest

APPENDIX B

Field Noise Measurement Printouts

Site A - At Passive Park SW of Short St & Newport Blvd

Table with 5 columns: Date, Time, Sampling, Record, Leq. Values include 11/07/13, 10:05:00 AM, 3, 29800, 66.4 SEL, 96.3, 42.7.

Site B - On SW side of Marcus Ave near proposed parking lot

Table with 5 columns: Date, Time, Sampling, Record, Leq. Values include 11/07/13, 10:11:00 AM, 3, 30000, 63.6 SEL, 94.2, 42.3.

Site C - East side of Newport Blvd in front of City Hall

Table with 5 columns: Date, Time, Sampling, Record, Leq. Values include 11/07/13, 10:18:00 AM, 3, 29600, 66.2 SEL, 97.6, 41.8.

Site A - At Passive Park SW of Short St & Newport Blvd

Large table with 5 columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains 100 rows of noise data for Site A.

Site B - On SW side of Marcus Ave near proposed parking lot

Large table with 5 columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains 100 rows of noise data for Site B.

Site C - East side of Newport Blvd in front of City Hall

Large table with 5 columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains 100 rows of noise data for Site C.

Site A - At Passive Park SW of Short St & Newport Blvd

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
66.4	10:11:36	66.4	66.4	66.4
67.6	10:11:39	67.6	67.6	67.6
65.4	10:11:42	65.4	65.4	65.4
65.4	10:11:45	65.4	65.4	65.4
64.4	10:11:48	64.4	64.4	64.4
66.3	10:11:51	66.3	66.3	66.3
69.1	10:11:54	69.1	69.1	69.1
66.8	10:11:57	66.8	66.8	66.8
62	10:12:00	62	62	62
61.4	10:12:03	61.4	61.4	61.4
63	10:12:06	63	63	63
60.3	10:12:09	60.3	60.3	60.3
64.5	10:12:12	64.5	64.5	64.5
62.3	10:12:15	62.3	62.3	62.3
57.2	10:12:18	57.2	57.2	57.2
55.2	10:12:21	55.2	55.2	55.2
58.4	10:12:24	58.4	58.4	58.4
58.5	10:12:27	58.5	58.5	58.5
66.3	10:12:30	66.3	66.3	66.3
63.9	10:12:33	63.9	63.9	63.9
58.6	10:12:36	58.6	58.6	58.6
66	10:12:39	66	66	66
69.8	10:12:42	69.8	69.8	69.8
67	10:12:45	67	67	67
69.5	10:12:48	69.5	69.5	69.5
68.5	10:12:51	68.5	68.5	68.5
66	10:12:54	66	66	66
70.1	10:12:57	70.1	70.1	70.1
67.7	10:13:00	67.7	67.7	67.7
67.2	10:13:03	67.2	67.2	67.2
71.7	10:13:06	71.7	71.7	71.7
70.1	10:13:09	70.1	70.1	70.1
68.9	10:13:12	68.9	68.9	68.9
69.9	10:13:15	69.9	69.9	69.9
67.8	10:13:18	67.8	67.8	67.8
71.7	10:13:21	71.7	71.7	71.7
74.8	10:13:24	74.8	74.8	74.8
70.3	10:13:27	70.3	70.3	70.3
65.5	10:13:30	65.5	65.5	65.5
60.4	10:13:33	60.4	60.4	60.4
66.3	10:13:36	66.3	66.3	66.3
64.5	10:13:39	64.5	64.5	64.5
61.5	10:13:42	61.5	61.5	61.5
64.5	10:13:45	64.5	64.5	64.5
63.3	10:13:48	63.3	63.3	63.3
58.6	10:13:51	58.6	58.6	58.6
56.4	10:13:54	56.4	56.4	56.4
58.1	10:13:57	58.1	58.1	58.1
58.4	10:14:00	58.4	58.4	58.4
58.8	10:14:03	58.8	58.8	58.8
63.2	10:14:06	63.2	63.2	63.2
63.7	10:14:09	63.7	63.7	63.7
57.6	10:14:12	57.6	57.6	57.6
52.9	10:14:15	52.9	52.9	52.9
59.4	10:14:18	59.4	59.4	59.4
66.9	10:14:21	66.9	66.9	66.9
66.2	10:14:24	66.2	66.2	66.2
65.4	10:14:27	65.4	65.4	65.4
66.1	10:14:30	66.1	66.1	66.1
69.1	10:14:33	69.1	69.1	69.1
68	10:14:36	68	68	68
67.3	10:14:39	67.3	67.3	67.3
68.7	10:14:42	68.7	68.7	68.7
66.8	10:14:45	66.8	66.8	66.8
68.1	10:14:48	68.1	68.1	68.1
65.4	10:14:51	65.4	65.4	65.4
67.7	10:14:54	67.7	67.7	67.7
66	10:14:57	66	66	66
64.9	10:15:00	64.9	64.9	64.9
61.1	10:15:03	61.1	61.1	61.1
59.1	10:15:06	59.1	59.1	59.1
56.9	10:15:09	56.9	56.9	56.9
60.4	10:15:12	60.4	60.4	60.4
59.4	10:15:15	59.4	59.4	59.4
60.5	10:15:18	60.5	60.5	60.5
65	10:15:21	65	65	65
67.3	10:15:24	67.3	67.3	67.3
67.6	10:15:27	67.6	67.6	67.6
67.2	10:15:30	67.2	67.2	67.2
67	10:15:33	67	67	67
66.6	10:15:36	66.6	66.6	66.6
67.8	10:15:39	67.8	67.8	67.8
68	10:15:42	68	68	68
68.3	10:15:45	68.3	68.3	68.3
62.9	10:15:48	62.9	62.9	62.9
65.3	10:15:51	65.3	65.3	65.3
66	10:15:54	66	66	66
66.5	10:15:57	66.5	66.5	66.5
65.7	10:16:00	65.7	65.7	65.7
66	10:16:03	66	66	66
66.6	10:16:06	66.6	66.6	66.6
65.4	10:16:09	65.4	65.4	65.4
66.1	10:16:12	66.1	66.1	66.1
67.4	10:16:15	67.4	67.4	67.4
63.6	10:16:18	63.6	63.6	63.6
64.3	10:16:21	64.3	64.3	64.3
63.4	10:16:24	63.4	63.4	63.4
64.4	10:16:27	64.4	64.4	64.4
66	10:16:30	66	66	66
61.2	10:16:33	61.2	61.2	61.2
62.8	10:16:36	62.8	62.8	62.8
61.2	10:16:39	61.2	61.2	61.2
65.7	10:16:42	65.7	65.7	65.7
66.2	10:16:45	66.2	66.2	66.2
60.7	10:16:48	60.7	60.7	60.7
62.4	10:16:51	62.4	62.4	62.4
59.4	10:16:54	59.4	59.4	59.4
59.8	10:16:57	59.8	59.8	59.8
61.3	10:17:00	61.3	61.3	61.3
61	10:17:03	61	61	61
60.5	10:17:06	60.5	60.5	60.5
63.5	10:17:09	63.5	63.5	63.5
64.2	10:17:12	64.2	64.2	64.2
66	10:17:15	66	66	66
63.7	10:17:18	63.7	63.7	63.7
60.7	10:17:21	60.7	60.7	60.7
60.8	10:17:24	60.8	60.8	60.8
68.6	10:17:27	68.6	68.6	68.6
74.8	10:17:30	74.8	74.8	74.8
77.6	10:17:33	77.6	77.6	77.6
70.5	10:17:36	70.5	70.5	70.5
67	10:17:39	67	67	67
65.8	10:17:42	65.8	65.8	65.8
67.3	10:17:45	67.3	67.3	67.3
66.8	10:17:48	66.8	66.8	66.8
79.4	10:17:51	79.4	79.4	79.4
76.5	10:17:54	76.5	76.5	76.5
71.2	10:17:57	71.2	71.2	71.2
69.9	10:18:00	69.9	69.9	69.9
68.4	10:18:03	68.4	68.4	68.4
69.2	10:18:06	69.2	69.2	69.2
67.8	10:18:09	67.8	67.8	67.8
65.2	10:18:12	65.2	65.2	65.2
64	10:18:15	64	64	64
60	10:18:18	60	60	60
56.2	10:18:21	56.2	56.2	56.2
57.8	10:18:24	57.8	57.8	57.8
57.8	10:18:27	57.8	57.8	57.8
57.7	10:18:30	57.7	57.7	57.7
58.9	10:18:33	58.9	58.9	58.9
59.3	10:18:36	59.3	59.3	59.3
64.9	10:18:39	64.9	64.9	64.9
69.2	10:18:42	69.2	69.2	69.2

Site B - On SW side of Marcus Ave near proposed parking lot

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
58.8	10:17:36	58.8	58.8	58.8
60.9	10:17:39	60.9	60.9	60.9
56.4	10:17:42	56.4	56.4	56.4
57.6	10:17:45	57.6	57.6	57.6
56.4	10:17:48	56.4	56.4	56.4
54	10:17:51	54	54	54
52.1	10:17:54	52.1	52.1	52.1
56.1	10:17:57	56.1	56.1	56.1
54.8	10:18:00	54.8	54.8	54.8
55.9	10:18:03	55.9	55.9	55.9
54.7	10:18:06	54.7	54.7	54.7
54.2	10:18:09	54.2	54.2	54.2
57.4	10:18:12	57.4	57.4	57.4
65.3	10:18:15	65.3	65.3	65.3
64.8	10:18:18	64.8	64.8	64.8
66.6	10:18:21	66.6	66.6	66.6
63.3	10:18:24	63.3	63.3	63.3
65.5	10:18:27	65.5	65.5	65.5
62.3	10:18:30	62.3	62.3	62.3
56.2	10:18:33	56.2	56.2	56.2
59	10:18:36	59	59	59
63.8	10:18:39	63.8	63.8	63.8
65.1	10:18:42	65.1	65.1	65.1
62.1	10:18:45	62.1	62.1	62.1
63.9	10:18:48	63.9	63.9	63.9
53.7	10:18:51	53.7	53.7	53.7
58.8	10:18:54	58.8	58.8	58.8
59.8	10:18:57	59.8	59.8	59.8
60.2	10:19:00	60.2	60.2	60.2
63.7	10:19:03	63.7	63.7	63.7
63.3	10:19:06	63.3	63.3	63.3
60.4	10:19:09	60.4	60.4	60.4
61.2	10:19:12	61.2	61.2	61.2
61.3	10:19:15	61.3	61.3	61.3
59	10:19:18	59	59	59
62.8	10:19:21	62.8	62.8	62.8
62.7	10:19:24	62.7	62.7	62.7
60.4	10:19:27	60.4	60.4	60.4
61.9	10:19:30	61.9	61.9	61.9
57.5	10:19:33	57.5	57.5	57.5
58.5	10:19:36	58.5	58.5	58.5
63.2	10:19:39	63.2	63.2	63.2
61.2	10:19:42	61.2	61.2	61.2
59.3	10:19:45	59.3	59.3	59.3
64	10:19:48	64	64	64
63.2	10:19:51	63.2	63.2	63.2
63.3	10:19:54	63.3	63.3	63.3
64.5	10:19:57	64.5	64.5	64.5
65.1	10:20:00	65.1	65.1	65.1
66.8	10:20:03	66.8	66.8	66.8
67.4	10:20:06	67.4	67.4	67.4
64.9	10:20:09	64.9	64.9	64.9
61.1	10:20:12	61.1	61.1	61.1
59.3	10:20:15	59.3	59.3	59.3
59.5	10:20:18	59.5	59.5	59.5
60.6	10:20:21	60.6	60.6	60.6
58.4	10:20:24	58.4	58.4	58.4
60.2	10:20:27	60.2	60.2	60.2
58.1	10:20:30	58.1	58.1	58.1
53.9	10:20:33	53.9	53.9	53.9
56.6	10:20:36	56.6	56.6	56.6
65.4	10:20:39	65.4	65.4	65.4
65.8	10:20:42	65.8	65.8	65.8
57.2	10:20:45	57.2	57.2	57.2
57.3	10:20:48	57.3	57.3	57.3
61	10:20:51	61	61	61
63.3	10:20:54	63.3	63.3	63.3
59.7	10:20:57	59.7	59.7	59.7
57.2	10:21:00	57.2	57.2	57.2
62.7	10:21:03	62.7	62.7	62.7
63.4	10:21:06	63.4	63.4	63.4
63.1	10:21:09	63.1	63.1	63.1
61.7	10:21:12	61.7	61.7	61.7
56	10:21:15	56	56	56
54.4	10:21:18	54.4	54.4	54.4
52.5	10:21:21	52.5	52.5	52.5
51.1	10:21:24	51.1	51.1	51.1
52.3	10:21:27	52.3	52.3	52.3
55.1	10:21:30	55.1	55.1	55.1
53.3	10:21:33	53.3	53.3	53.3
53.4	10:21:36	53.4	53.4	53.4
53.4	10:21:39	53.4	53.4	53.4
59.2	10:21:42	59.2	59.2	59.2
54.3	10:21:45	54.3	54.3	54.3
52.1	10:21:48</			

Site A - At Passive Park SW of Short St & Newport Blvd			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
65.7	10:18:45	65.7	65.7
65.5	10:18:48	65.5	65.5
67.8	10:18:51	67.8	67.8
67.8	10:18:54	67.8	67.8
71.1	10:18:57	71.1	71.1
72	10:19:00	72	72
71.2	10:19:03	71.2	71.2
72.1	10:19:06	72.1	72.1
70.2	10:19:09	70.2	70.2
70.1	10:19:12	70.1	70.1
70	10:19:15	70	70
67.9	10:19:18	67.9	67.9
69.3	10:19:21	69.3	69.3
69.2	10:19:24	69.2	69.2
68.5	10:19:27	68.5	68.5
68.2	10:19:30	68.2	68.2
67.6	10:19:33	67.6	67.6
68.7	10:19:36	68.7	68.7
67.5	10:19:39	67.5	67.5
69.5	10:19:42	69.5	69.5
69.5	10:19:45	69.5	69.5
66.6	10:19:48	66.6	66.6
63.5	10:19:51	63.5	63.5
65	10:19:54	65	65
59.8	10:19:57	59.8	59.8
56.3	10:20:00	56.3	56.3
57	10:20:03	57	57
63.9	10:20:06	63.9	63.9
67.8	10:20:09	67.8	67.8
69.6	10:20:12	69.6	69.6
69.8	10:20:15	69.8	69.8
69.4	10:20:18	69.4	69.4
67.4	10:20:21	67.4	67.4
65.9	10:20:24	65.9	65.9
60.8	10:20:27	60.8	60.8
57.7	10:20:30	57.7	57.7
58.6	10:20:33	58.6	58.6
66	10:20:36	66	66
67.6	10:20:39	67.6	67.6
67.5	10:20:42	67.5	67.5
68.3	10:20:45	68.3	68.3
66.6	10:20:48	66.6	66.6
66.9	10:20:51	66.9	66.9
68	10:20:54	68	68
67.7	10:20:57	67.7	67.7
62.2	10:21:00	62.2	62.2
62	10:21:03	62	62
65.2	10:21:06	65.2	65.2
62.8	10:21:09	62.8	62.8
63.4	10:21:12	63.4	63.4
67.1	10:21:15	67.1	67.1
65	10:21:18	65	65
58.3	10:21:21	58.3	58.3
62.8	10:21:24	62.8	62.8
66.7	10:21:27	66.7	66.7
62.7	10:21:30	62.7	62.7
66.4	10:21:33	66.4	66.4
66.8	10:21:36	66.8	66.8
64.8	10:21:39	64.8	64.8
65.6	10:21:42	65.6	65.6
68.4	10:21:45	68.4	68.4
67.3	10:21:48	67.3	67.3
66.2	10:21:51	66.2	66.2
66.5	10:21:54	66.5	66.5
66.8	10:21:57	66.8	66.8
67.2	10:22:00	67.2	67.2
67.3	10:22:03	67.3	67.3
74.4	10:22:06	74.4	74.4
70	10:22:09	70	70
65.7	10:22:12	65.7	65.7
67.8	10:22:15	67.8	67.8
67.1	10:22:18	67.1	67.1
68.6	10:22:21	68.6	68.6
65.7	10:22:24	65.7	65.7
66.2	10:22:27	66.2	66.2
65.3	10:22:30	65.3	65.3
65.2	10:22:33	65.2	65.2
58.4	10:22:36	58.4	58.4
62	10:22:39	62	62
64.1	10:22:42	64.1	64.1
60.2	10:22:45	60.2	60.2
65	10:22:48	65	65
60.2	10:22:51	60.2	60.2
52.1	10:22:54	52.1	52.1
52.6	10:22:57	52.6	52.6
55.2	10:23:00	55.2	55.2
56.4	10:23:03	56.4	56.4
57.3	10:23:06	57.3	57.3
56.1	10:23:09	56.1	56.1
56.8	10:23:12	56.8	56.8
59	10:23:15	59	59
61.2	10:23:18	61.2	61.2
67.6	10:23:21	67.6	67.6
68.8	10:23:24	68.8	68.8
70.7	10:23:27	70.7	70.7
71.3	10:23:30	71.3	71.3
70.9	10:23:33	70.9	70.9
72	10:23:36	72	72
71.2	10:23:39	71.2	71.2
70.8	10:23:42	70.8	70.8
73.4	10:23:45	73.4	73.4
68.8	10:23:48	68.8	68.8
67.8	10:23:51	67.8	67.8
69.5	10:23:54	69.5	69.5
67	10:23:57	67	67
70.9	10:24:00	70.9	70.9
72.4	10:24:03	72.4	72.4
69	10:24:06	69	69
65.6	10:24:09	65.6	65.6
67.4	10:24:12	67.4	67.4
64.8	10:24:15	64.8	64.8
61.5	10:24:18	61.5	61.5
62.2	10:24:21	62.2	62.2
62.7	10:24:24	62.7	62.7
65.2	10:24:27	65.2	65.2
62	10:24:30	62	62
64.4	10:24:33	64.4	64.4
62.6	10:24:36	62.6	62.6
55.8	10:24:39	55.8	55.8
55.2	10:24:42	55.2	55.2
55	10:24:45	55	55
55.5	10:24:48	55.5	55.5
55.5	10:24:51	55.5	55.5
60.3	10:24:54	60.3	60.3
59.4	10:24:57	59.4	59.4
67.6	10:25:00	67.6	67.6
69.4	10:25:03	69.4	69.4
70.1	10:25:06	70.1	70.1
69.3	10:25:09	69.3	69.3
68.1	10:25:12	68.1	68.1
67.7	10:25:15	67.7	67.7
70	10:25:18	70	70
64.6	10:25:21	64.6	64.6
68.5	10:25:24	68.5	68.5
65.1	10:25:27	65.1	65.1
61.8	10:25:30	61.8	61.8
58.3	10:25:33	58.3	58.3
63.1	10:25:36	63.1	63.1
60.7	10:25:39	60.7	60.7
58.8	10:25:42	58.8	58.8
62.4	10:25:45	62.4	62.4
67.6	10:25:48	67.6	67.6
70.3	10:25:51	70.3	70.3

Site B - On SW side of Marcus Ave near proposed parking lot			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
62.7	10:24:45	62.7	62.7
58.9	10:24:48	58.9	58.9
59.7	10:24:51	59.7	59.7
61.7	10:24:54	61.7	61.7
63.7	10:24:57	63.7	63.7
65.3	10:25:00	65.3	65.3
67.7	10:25:03	67.7	67.7
67.6	10:25:06	67.6	67.6
64.9	10:25:09	64.9	64.9
62.7	10:25:12	62.7	62.7
58.5	10:25:15	58.5	58.5
56.3	10:25:18	56.3	56.3
55.8	10:25:21	55.8	55.8
63.6	10:25:24	63.6	63.6
57	10:25:27	57	57
57.7	10:25:30	57.7	57.7
57.9	10:25:33	57.9	57.9
59	10:25:36	59	59
64.4	10:25:39	64.4	64.4
63	10:25:42	63	63
65.4	10:25:45	65.4	65.4
61.2	10:25:48	61.2	61.2
62.9	10:25:51	62.9	62.9
63	10:25:54	63	63
65.2	10:25:57	65.2	65.2
61.3	10:26:00	61.3	61.3
58.9	10:26:03	58.9	58.9
65.7	10:26:06	65.7	65.7
67.6	10:26:09	67.6	67.6
63.9	10:26:12	63.9	63.9
52.8	10:26:15	52.8	52.8
60	10:26:18	60	60
60.7	10:26:21	60.7	60.7
58.6	10:26:24	58.6	58.6
57.8	10:26:27	57.8	57.8
60.4	10:26:30	60.4	60.4
58.6	10:26:33	58.6	58.6
63.4	10:26:36	63.4	63.4
63.8	10:26:39	63.8	63.8
65.3	10:26:42	65.3	65.3
66	10:26:45	66	66
70.4	10:26:48	70.4	70.4
67.7	10:26:51	67.7	67.7
65.7	10:26:54	65.7	65.7
65.7	10:26:57	65.7	65.7
59	10:27:00	59	59
59.7	10:27:03	59.7	59.7
57.7	10:27:06	57.7	57.7
61.6	10:27:09	61.6	61.6
65.6	10:27:12	65.6	65.6
63.2	10:27:15	63.2	63.2
61.4	10:27:18	61.4	61.4
68.7	10:27:21	68.7	68.7
62.7	10:27:24	62.7	62.7
58.7	10:27:27	58.7	58.7
56.3	10:27:30	56.3	56.3
53.4	10:27:33	53.4	53.4
53.3	10:27:36	53.3	53.3
52	10:27:39	52	52
55.7	10:27:42	55.7	55.7
56.8	10:27:45	56.8	56.8
58.7	10:27:48	58.7	58.7
66.8	10:27:51	66.8	66.8
57	10:27:54	57	57
59.6	10:27:57	59.6	59.6
61.8	10:28:00	61.8	61.8
60.8	10:28:03	60.8	60.8
63.4	10:28:06	63.4	63.4
56.4	10:28:09	56.4	56.4
57.8	10:28:12	57.8	57.8
56.5	10:28:15	56.5	56.5
52.7	10:28:18	52.7	52.7
54.3	10:28:21	54.3	54.3
57.3	10:28:24	57.3	57.3
61.2	10:28:27	61.2	61.2
61.2	10:28:30	61.2	61.2
61.9	10:28:33	61.9	61.9
63.1	10:28:36	63.1	63.1
67	10:28:39	67	67
63.5	10:28:42	63.5	63.5
60.8	10:28:45	60.8	60.8
61	10:28:48	61	61
58.1	10:28:51	58.1	58.1
59.1	10:28:54	59.1	59.1
60.4	10:28:57	60.4	60.4
64.8	10:29:00	64.8	64.8
59.6	10:29:03	59.6	59.6
70.7	10:29:06	70.7	70.7
65.3	10:29:09	65.3	65.3
63.5	10:29:12	63.5	63.5
62.1	10:29:15	62.1	62.1
59.1	10:29:18	59.1	59.1
53.4	10:29:21	53.4	53.4
54.1	10:29:24	54.1	54.1
59.1	10:29:27	59.1	59.1
62.6	10:29:30	62.6	62.6
66	10:29:33	66	66
63.8	10:29:36	63.8	63.8
63.1	10:29:39	63.1	63.1
69	10:29:42	69	69
65.6	10:29:45	65.6	65.6
61.8	10:29:48	61.8	61.8
62.6	10:29:51	62.6	62.6
68.9	10:29:54	68.9	68.9
61.6	10:29:57	61.6	61.6
61.8	10:30:00	61.8	61.8
60.6	10:30:03	60.6	60.6
54.9	10:30:06	54.9	54.9
54.1	10:30:09	54.1	54.1
58.1	10:30:12	58.1	58.1
52.4	10:30:15	52.4	52.4
48.5	10:30:18	48.5	48.5
48.1	10:30:21	48.1	48.1
47.7	10:30:24	47.7	47.7
48.6	10:30:27	48.6	48.6
49	10:30:30	49	49
49.4	10:30:33	49.4	49.4
53.9	10:30:36	53.9	53.9
61.5	10:30:39	61.5	61.5
51.5	10:30:42	51.5	51.5
47.3	10:30:45	47.3	47.3
51.7	10:30:48	51.7	51.7
54	10:30:51	54	54
52.9	10:30:54	52.9	52.9
55	10:30:57	55	55
63.6	10:31:00	63.6	63.6
60.8	10:31:03	60.8	60.8
59.1	10:31:06	59.1	59.1
59.3	10:31:09	59.3	59.3
58.6	10:31:12	58.6	58.6
60	10:31:15	60	60
61.8	10:31:		

Site A - At Passive Park SW of Short St & Newport Blvd

Table with columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains 100 rows of data for Site A.

Site B - On SW side of Marcus Ave near proposed parking lot

Table with columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains 100 rows of data for Site B.

Site C - East side of Newport Blvd in front of City Hall

Table with columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains 100 rows of data for Site C.

Site A - At Passive Park SW of Short St & Newport Blvd

Site B - On SW side of Marcus Ave near proposed parking lot

Site C - East side of Newport Blvd in front of City Hall

Table with columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains traffic noise data for Site A across various time intervals.

Table with columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains traffic noise data for Site B across various time intervals.

Table with columns: SPL, Time, Leq (1 hour Avg.), Ldn, CNEL. Contains traffic noise data for Site C across various time intervals.

APPENDIX C

24-Hour Vehicle Counts Printouts

Newport Blvd between 32th Street to 30th Street

City Roadway Classification: Major Road

MPAH Roadway Classification: Major

Roadway Segment Capacity per Lane ⁽¹⁾: 9,383

Existing ADT ⁽²⁾: 32,000

Existing Number of Lanes: 4

Existing V/C: 0.853

Existing LOS: D

Proposed Number of Lanes: 5

Proposed V/C: 0.682

Proposed LOS: B

(1) Table A-4-2: "Arterial Highways" of the Guidance For Administration of the County Master Plan of Arterial Highways

(2) ADT Counts taken from OCTA 2009 Traffic Flow Map

Location: Newport Blvd between Via Lido & 32th Street
City Roadway Classification: Major Road
MPAH Roadway Classification Major
Roadway Segment Capacity: 56,300
Roadway Segment Capacity per Lane: 9,383
Existing ADT ⁽¹⁾ : 49,515
Existing Number of Lanes: 5
Existing V/C: 1.055
Existing LOS: F
Proposed Number of Lanes: 6
Proposed V/C: 0.879
Proposed LOS: D

(1) Table A-4-2: "Arterial Highways" of the Guidance For Administration of the County MPAH

(2) ADT Counts taken in March 13, 2013 with two percent growth factor.

Notes:

1. Newport Blvd. from Via Lido to 32nd St. is a 5 lane arterial and from 32nd St. to 30th St. is a 4 lane arterial. Visitors to the beach typically travel southbound on Newport Blvd. and turn right at 32nd St. towards the beach. Therefore, we want to capture the most critical vehicular movement and thus, provided an LOS calculation for Via Lido to 32nd St. An additional LOS calculation from 32nd St. to 30th St. using the OCTA ADT of 32,000 can be provided upon request.

Transportation Studies, Inc.

2640 Walnut Avenue, Ste H
Tustin, CA. 92780

Location: : NEWPORT BOULEVARD
Segment: : S/O WEST COAST HIGHWAY
Client: : CITY OF NEWPORT

Site: NEWPORT BCH
Date: 03/13/13

Interval	NB				SB				Combined		Day:	Wednesday
	AM		PM		AM		PM		AM	PM		
12:00	34	130	406	1,564	42	125	458	1,749	76	255	864	3,313
12:15	44		386		35		470		79		856	
12:30	27		374		22		373		49		747	
12:45	25		398		26		448		51		846	
01:00	32	131	434	1,748	19	64	412	1,749	51	195	846	3,497
01:15	35		416		23		467		58		883	
01:30	22		443		14		420		36		863	
01:45	42		455		8		450		50		905	
02:00	9	41	392	1,735	12	29	428	1,619	21	70	820	3,354
02:15	19		443		5		372		24		815	
02:30	8		436		9		421		17		857	
02:45	5		464		3		398		8		862	
03:00	8	40	497	1,813	8	31	396	1,681	16	71	893	3,494
03:15	6		404		4		419		10		823	
03:30	18		440		12		440		30		880	
03:45	8		472		7		426		15		898	
04:00	5	63	454	1,699	8	45	408	1,793	13	108	862	3,492
04:15	10		426		5		452		15		878	
04:30	16		421		13		454		29		875	
04:45	32		398		19		479		51		877	
05:00	35	240	410	1,535	21	106	454	2,008	56	346	864	3,543
05:15	57		383		18		502		75		885	
05:30	64		357		28		518		92		875	
05:45	84		385		39		534		123		919	
06:00	86	538	378	1,457	88	456	500	1,968	174	994	878	3,425
06:15	124		373		94		538		218		911	
06:30	151		354		128		468		279		822	
06:45	177		352		146		462		323		814	
07:00	264	1,325	380	1,455	198	998	438	1,553	462	2,323	818	3,008
07:15	310		394		232		398		542		792	
07:30	368		388		256		385		624		773	
07:45	383		293		312		332		695		625	
08:00	377	1,600	318	1,184	315	1,263	306	1,062	692	2,863	624	2,246
08:15	377		330		246		264		623		594	
08:30	456		264		304		246		760		510	
08:45	390		272		398		246		788		518	
09:00	334	1,366	246	924	342	1,284	224	847	676	2,650	470	1,771
09:15	327		238		337		216		664		454	
09:30	333		268		293		234		626		502	
09:45	372		172		312		173		684		345	
10:00	321	1,341	188	614	350	1,372	192	600	671	2,713	380	1,214
10:15	352		158		317		148		669		306	
10:30	326		146		338		141		664		287	
10:45	342		122		367		119		709		241	
11:00	327	1,409	90	263	392	1,655	96	272	719	3,064	186	535
11:15	334		60		390		56		724		116	
11:30	372		55		417		60		789		115	
11:45	376		58		456		60		832		118	
Totals	8,224		15,991		7,428		16,901		15,652		32,892	
Split%	52.5		48.6		47.5		51.4					
Day Totals		24,215				24,329				48,544		
Day Splits		49.9				50.1						
Peak Hour	08:00		02:15		11:00		05:30		11:00		05:30	
Volume	1,600		1,840		1,655		2,090		3,064		3,583	
Factor	0.88		0.93		0.91		0.97		0.92		0.97	

VOLUME

Alley n/o 32nd St

Day: Thursday
Date: 11/14/2013

City: Newport Beach
Project #: CA13_1307_002

DAILY TOTALS					NB	SB	EB	WB	Total		
					206	84	0	0	290		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	1			2	12:00	3	3			6
00:15	0	0			0	12:15	2	2			4
00:30	1	0			1	12:30	4	2			6
00:45	0	2	0	1	3	12:45	3	12	2	9	21
01:00	1	0			1	13:00	1	1			2
01:15	0	0			0	13:15	3	1			4
01:30	0	0			0	13:30	4	0			4
01:45	0	1	0		1	13:45	4	12	1	3	15
02:00	0	0			0	14:00	4	0			4
02:15	0	0			0	14:15	4	0			4
02:30	0	0			0	14:30	4	0			4
02:45	0	0			0	14:45	6	18	1	1	19
03:00	0	0			0	15:00	3	2			5
03:15	1	0			1	15:15	5	2			7
03:30	0	0			0	15:30	0	1			1
03:45	0	1	0		1	15:45	1	9	3	8	17
04:00	0	0			0	16:00	3	3			6
04:15	1	0			1	16:15	5	3			8
04:30	0	0			0	16:30	3	2			5
04:45	1	2	1	1	3	16:45	7	18	2	10	28
05:00	1	0			1	17:00	4	3			7
05:15	1	0			1	17:15	7	0			7
05:30	2	0			2	17:30	3	1			4
05:45	0	4	0		4	17:45	2	16	2	6	22
06:00	1	0			1	18:00	0	2			2
06:15	2	1			3	18:15	2	3			5
06:30	2	0			2	18:30	4	0			4
06:45	0	5	0	1	6	18:45	1	7	2	7	14
07:00	6	1			7	19:00	2	1			3
07:15	3	0			3	19:15	4	1			5
07:30	8	0			8	19:30	2	1			3
07:45	5	22	2	3	25	19:45	2	10	1	4	14
08:00	4	0			4	20:00	5	1			6
08:15	0	1			1	20:15	3	0			3
08:30	7	2			9	20:30	1	0			1
08:45	4	15	2	5	20	20:45	3	12	1	2	14
09:00	2	2			4	21:00	2	0			2
09:15	3	1			4	21:15	2	1			3
09:30	1	2			3	21:30	0	1			1
09:45	2	8	0	5	13	21:45	1	5	0	2	7
10:00	1	5			6	22:00	0	0			0
10:15	2	1			3	22:15	0	0			0
10:30	0	1			1	22:30	1	1			2
10:45	0	3	2	9	12	22:45	0	1	0	1	2
11:00	4	2			6	23:00	1	0			1
11:15	6	2			8	23:15	1	0			1
11:30	4	1			5	23:30	1	0			1
11:45	5	19	1	6	25	23:45	1	4	0		4
TOTALS	82	31			113	TOTALS	124	53			177
SPLIT %	72.6%	27.4%			39.0%	SPLIT %	70.1%	29.9%			61.0%

DAILY TOTALS					NB	SB	EB	WB	Total
					206	84	0	0	290
AM Peak Hour	07:00	10:00			07:00	PM Peak Hour	16:30	15:45	16:15
AM Pk Volume	22	9			25	PM Pk Volume	21	11	29
Pk Hr Factor	0.688	0.450			0.781	Pk Hr Factor	0.750	0.917	0.806
7 - 9 Volume	37	8	0	0	45	4 - 6 Volume	34	16	50
7 - 9 Peak Hour	07:00	07:45			07:00	4 - 6 Peak Hour	16:30	16:00	16:15
7 - 9 Pk Volume	22	5	0	0	25	4 - 6 Pk Volume	21	10	29
Pk Hr Factor	0.688	0.625	0.000	0.000	0.781	Pk Hr Factor	0.750	0.833	0.806

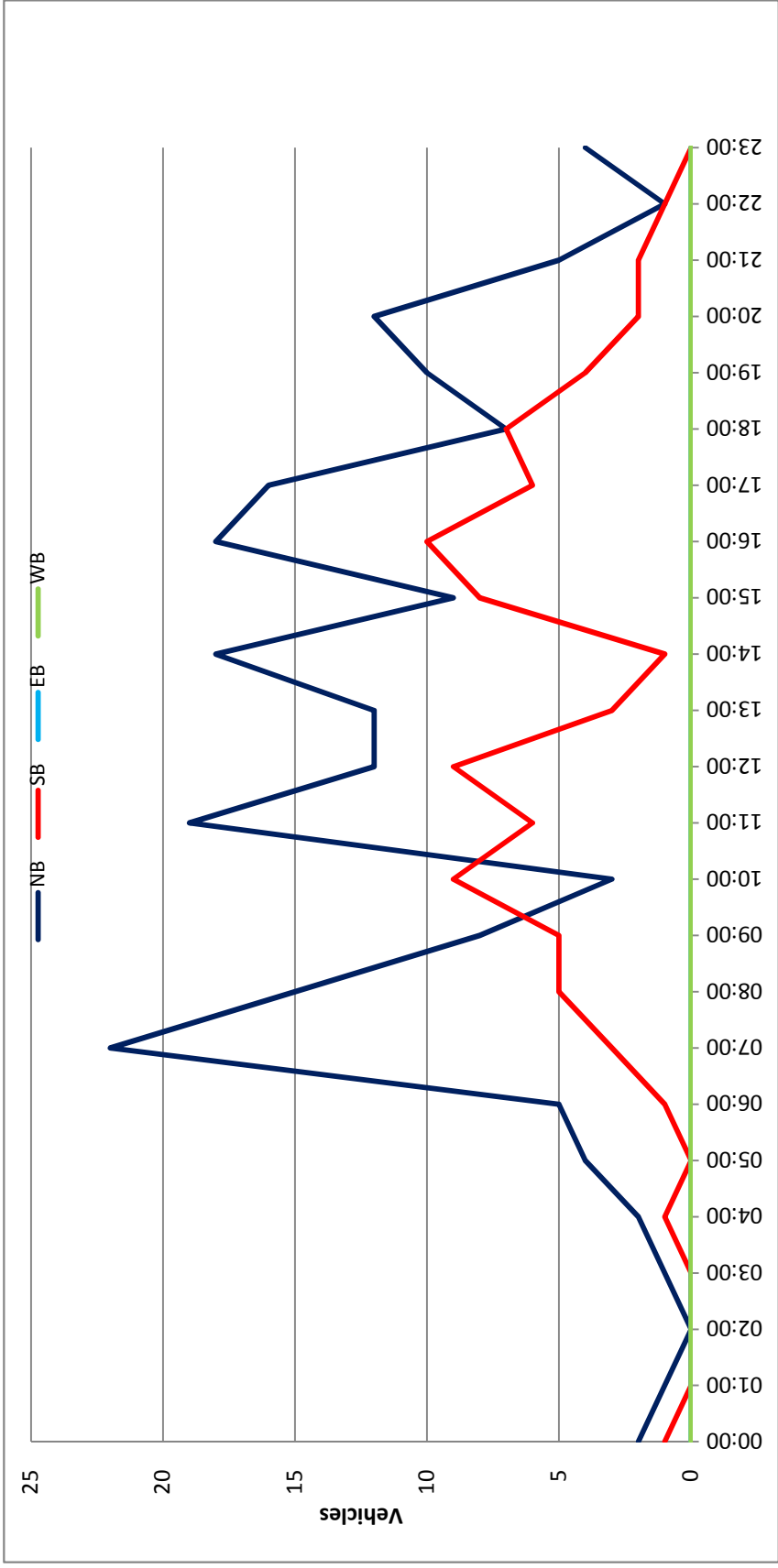
Prepared by NDS/ATD

Project #: CA13_1307_002

City: Newport Beach

Location: Alley n/o 32nd St

Date: 11/14/2013



VOLUME

32nd St between Marcus Ave & Newport Blvd

Day: Wednesday
Date: 11/20/2013City: Newport Beach
Project #: CA13_1307_001

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	4,001	3,880	7,881			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			9	11	20	12:00			66	54	120	
00:15			3	4	7	12:15			55	60	115	
00:30			5	7	12	12:30			60	72	132	
00:45			3	20	9	12:45			73	254	63	249
01:00			3	8	11	13:00			61	60	121	
01:15			1	7	8	13:15			67	58	125	
01:30			3	2	5	13:30			63	61	124	
01:45			2	9	2	13:45			43	234	62	241
02:00			4	3	7	14:00			55	66	121	
02:15			1	3	4	14:15			58	68	126	
02:30			0	2	2	14:30			71	52	123	
02:45			1	6	3	14:45			58	242	66	252
03:00			3	2	5	15:00			78	74	152	
03:15			2	4	6	15:15			69	60	129	
03:30			1	1	2	15:30			57	66	123	
03:45			2	8	2	15:45			63	267	85	285
04:00			4	4	8	16:00			63	55	118	
04:15			1	2	3	16:15			55	79	134	
04:30			1	0	1	16:30			66	86	152	
04:45			4	10	2	16:45			59	243	67	287
05:00			11	2	13	17:00			76	88	164	
05:15			12	2	14	17:15			58	98	156	
05:30			25	9	34	17:30			65	91	156	
05:45			14	62	6	17:45			71	270	69	346
06:00			22	5	27	18:00			52	80	132	
06:15			41	19	60	18:15			58	80	138	
06:30			28	23	51	18:30			54	74	128	
06:45			35	126	15	18:45			69	233	83	317
07:00			53	21	74	19:00			52	80	132	
07:15			67	22	89	19:15			58	70	128	
07:30			74	23	97	19:30			51	67	118	
07:45			74	268	35	19:45			56	217	63	280
08:00			80	45	125	20:00			42	62	104	
08:15			96	32	128	20:15			39	67	106	
08:30			78	38	116	20:30			34	76	110	
08:45			80	334	33	20:45			33	148	50	255
09:00			74	47	121	21:00			27	53	80	
09:15			66	54	120	21:15			29	38	67	
09:30			78	29	107	21:30			24	42	66	
09:45			54	272	40	21:45			32	112	32	165
10:00			55	52	107	22:00			29	33	62	
10:15			65	54	119	22:15			30	39	69	
10:30			64	42	106	22:30			19	38	57	
10:45			65	249	50	22:45			14	92	36	146
11:00			66	62	128	23:00			10	16	26	
11:15			70	52	122	23:15			16	12	28	
11:30			68	53	121	23:30			10	14	24	
11:45			75	279	60	23:45			10	46	12	54
TOTALS			1643	1003	2646	TOTALS			2358	2877	5235	
SPLIT %			62.1%	37.9%	33.6%	SPLIT %			45.0%	55.0%	66.4%	

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	4,001	3,880	7,881		
AM Peak Hour			08:00	11:45	11:00	PM Peak Hour			14:30	17:00	17:00
AM Pk Volume			334	246	506	PM Pk Volume			276	346	616
Pk Hr Factor			0.870	0.854	0.937	Pk Hr Factor			0.885	0.883	0.939
7 - 9 Volume	0	0	602	249	851	4 - 6 Volume	0	0	513	633	1146
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	334	150	482	4 - 6 Pk Volume	0	0	270	346	616
Pk Hr Factor	0.000	0.000	0.870	0.833	0.941	Pk Hr Factor	0.000	0.000	0.888	0.883	0.939

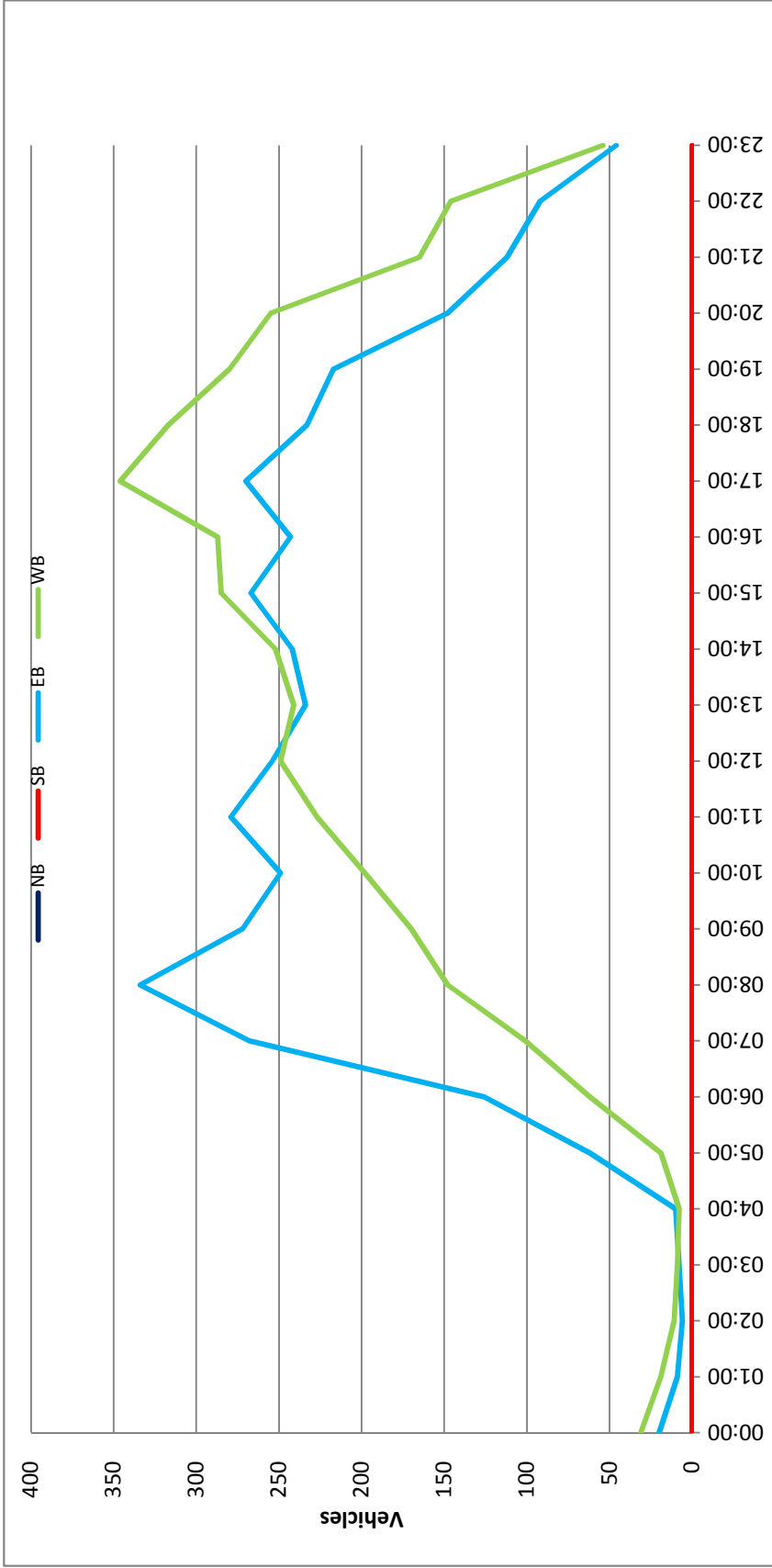
Prepared by NDS/ATD

Project #: CA13_1307_001

City: Newport Beach

Location: 32nd St between Marcus Ave & Newport

Date: 11/20/2013



APPENDIX D

SoundPlan Model Printouts

**Newport Blvd and 32nd St Widening
Assessed receiver levels - Existing**

Name	Usage	Floor	X m	Dir	Y m	Z m	Ldn dB(A)	Leq,d dB(A)	Leq,n dB(A)
01	RM	G	163.9	E	520.2	4.08	68.6	62.3	62.2
02	RM	G	156.1	E	495.8	4.08	68.3	62.0	61.9
03	RM	G	146.1	E	459.9	4.08	65.1	57.9	58.8
04	RM	G	131.1	E	390.2	4.08	66.0	59.7	59.6
05	RM	G	128.2	E	363.4	4.08	60.9	55.0	54.4
06	RM	G	123.0	E	307.3	4.08	53.4	48.9	46.6
07	RM	G	89.9	SE	245.1	4.08	61.3	55.8	54.7
08	RM	G	81.7	NE	216.4	4.08	65.1	59.2	58.6
09	RM	G	204.1	W	104.9	4.08	59.9	53.7	53.4
10	RM	G	222.1	W	139.4	4.08	63.9	57.8	57.4
A	RA	G	160.6		484.0	1.52	70.1	63.9	63.6
B	RA	G	84.0		216.3	1.68	68.1	62.0	61.6
C	RA	G	205.4		309.3	1.50	68.8	62.6	62.4



Newport Blvd and 32nd St Widening Source level road - Existing

16

MSVges Night Veh/h	MSVges Day Veh/h	Pavement type	Road	Section name	KM km	ADT Veh/24h	Gradient %
150.45	569.93	Average (of DGAC and PCC)	Newport Blvd SB Ln 1	Via Lido to 32nd St	0.000	9903	0.0
150.45	569.93	Average (of DGAC and PCC)	Newport Blvd SB Ln 2	Via Lido to 32nd St	0.000	9903	0.0
150.45	569.93	Average (of DGAC and PCC)	Newport Blvd NB Ln 1	Via Lido to 32nd St	0.000	9903	0.0
150.45	569.93	Average (of DGAC and PCC)	Newport Blvd NB Ln 2	Via Lido to 32nd St	0.000	9903	0.0
150.45	569.93	Average (of DGAC and PCC)	Newport Blvd NB Ln 3	Via Lido to 32nd St	0.000	9903	0.0
121.54	460.41	Average (of DGAC and PCC)	Newport Blvd SB Ln 1	32nd St to 30th St	0.000	8000	0.0
121.54	460.41	Average (of DGAC and PCC)	Newport Blvd SB Ln 2	32nd St to 30th St	0.000	8000	0.0
121.54	460.41	Average (of DGAC and PCC)	Newport Blvd NB Ln 1	32nd St to 30th St	0.000	8000	0.0
121.54	460.41	Average (of DGAC and PCC)	Newport Blvd NB Ln 2	32nd St to 30th St	0.000	8000	0.0
65.09	223.68	Average (of DGAC and PCC)	32nd St WB	West of Newport Blvd	0.000	3941	0.0
65.09	223.68	Average (of DGAC and PCC)	32nd St EB	West of Newport Blvd	0.000	3941	0.0
4.79	16.46	Average (of DGAC and PCC)	Alley west of Newport	32nd St to Finley Ave	0.000	290	0.0
30.38	115.10	Average (of DGAC and PCC)	Marcus Ave	32nd St to Finley Ave	0.000	2000	0.0

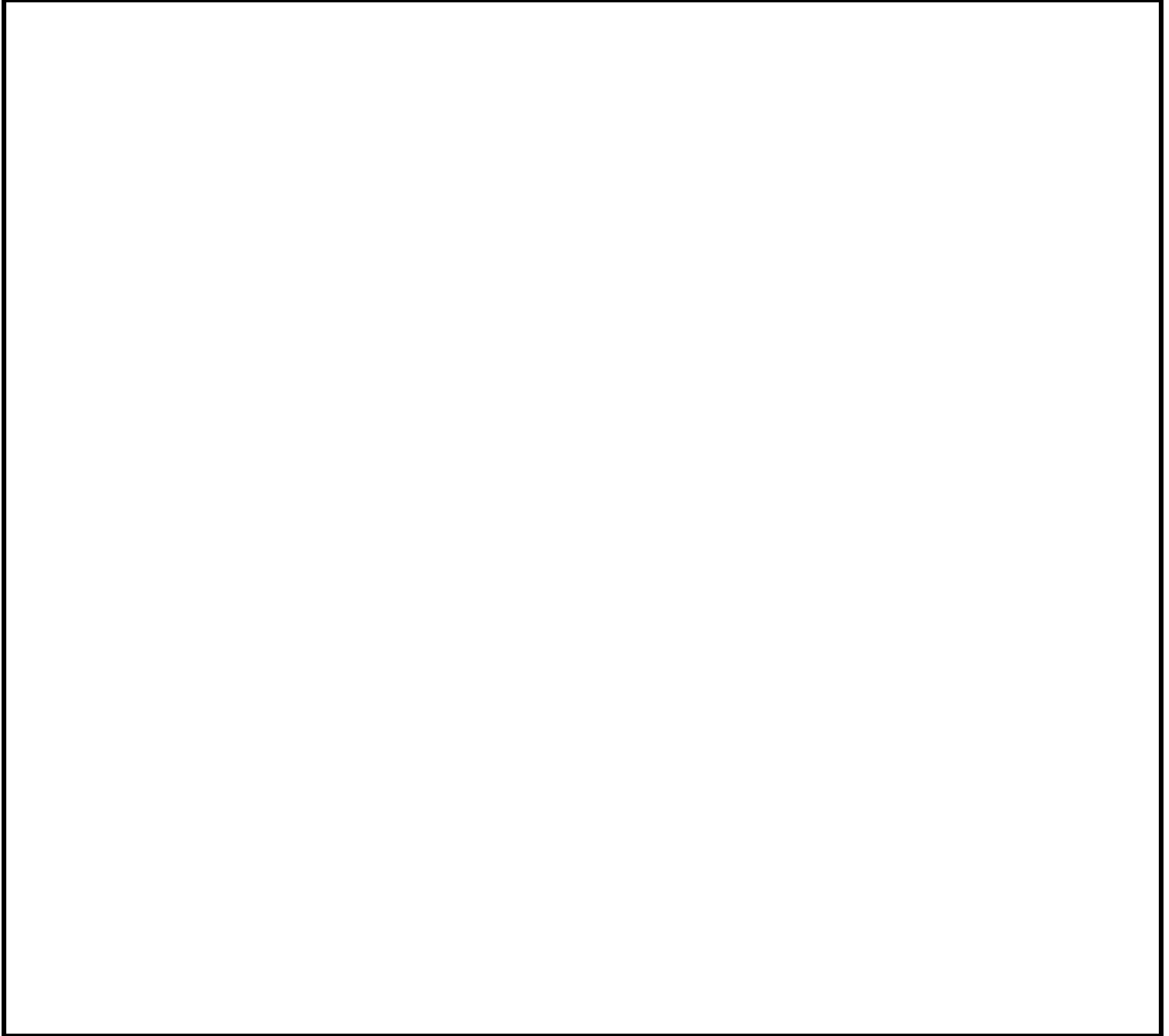
Vista Environmental

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**Newport Blvd and 32nd St Widening
Source level parking lots - Existing**

14

Parking lot	Obj.ID	PPT	KPA	KI	KD	TL	Unit B0	Size B
Marcus Ave Parking Lot	3840	Visitors and staff	0.00	4.00	2.50	1	1 parking bay	19.00
Las Fajitas Parking Lot	3841	Visitors and staff	0.00	4.00	1.75	1	1 parking bay	14.00



	Vista Environmental	1
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**Newport Blvd and 32nd St Widening
Assessed receiver levels - Existing Plus Project**

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Name	Usage	Floor	X m	Dir	Y m	Z m	Ldn dB(A)	Leq,d dB(A)	Leq,n dB(A)
01	RM	G	163.9	E	520.2	4.08	69.4	63.1	62.9
02	RM	G	156.1	E	495.8	4.08	68.8	62.5	62.4
03	RM	G	146.1	E	459.9	4.08	65.3	58.2	59.1
04	RM	G	131.1	E	390.2	4.08	66.5	60.2	60.1
05	RM	G	128.2	E	363.4	4.08	61.5	55.5	55.0
06	RM	G	123.0	E	307.3	4.08	53.8	49.4	47.0
07	RM	G	89.9	SE	245.1	4.08	63.9	58.2	57.4
08	RM	G	81.7	NE	216.4	4.08	65.8	59.9	59.3
09	RM	G	204.1	W	104.9	4.08	60.2	54.0	53.7
10	RM	G	222.1	W	139.4	4.08	63.9	57.7	57.4



Newport Blvd and 32nd St Widening Source level road - Existing Plus Project

16

MSVges Night Veh/h	MSVges Day Veh/h	Pavement type	Road	Section name	KM km	ADT Veh/24h	Gradient %
125.38	474.97	Average (of DGAC and PCC)	Newport Blvd SB Ln 1	Via Lido to 32nd St	0.000	8253	0.0
125.38	474.97	Average (of DGAC and PCC)	Newport Blvd SB Ln 2	Via Lido to 32nd St	0.000	8253	0.0
125.38	474.97	Average (of DGAC and PCC)	Newport Blvd SB Ln 3	Via Lido to 32nd St	0.000	8253	0.0
125.38	474.97	Average (of DGAC and PCC)	Newport Blvd NB Ln 1	Via Lido to 32nd St	0.000	8253	0.0
125.38	474.97	Average (of DGAC and PCC)	Newport Blvd NB Ln 2	Via Lido to 32nd St	0.000	8253	0.0
125.38	474.97	Average (of DGAC and PCC)	Newport Blvd NB Ln 3	Via Lido to 32nd St	0.000	8253	0.0
97.23	368.33	Average (of DGAC and PCC)	Newport Blvd SB Ln 1	32nd St to 30th St	0.000	6400	0.0
97.23	368.33	Average (of DGAC and PCC)	Newport Blvd SB Ln 2	32nd St to 30th St	0.000	6400	0.0
97.23	368.33	Average (of DGAC and PCC)	Newport Blvd NB Ln 1	32nd St to 30th St	0.000	6400	0.0
97.23	368.33	Average (of DGAC and PCC)	Newport Blvd NB Ln 2	32nd St to 30th St	0.000	6400	0.0
97.23	368.33	Average (of DGAC and PCC)	Newport Blvd NB Ln 3	32nd St to 30th St	0.000	6400	0.0
65.09	223.68	Average (of DGAC and PCC)	32nd St WB	West of Newport Blvd	0.000	3941	0.0
65.09	223.68	Average (of DGAC and PCC)	32nd St EB	West of Newport Blvd	0.000	3941	0.0
4.79	16.46	Average (of DGAC and PCC)	Alley west of Newport Boulevard	Via Lido to 32nd St	0.000	290	0.0
30.38	115.10	Average (of DGAC and PCC)	Marous Ave	32nd St to Finley Ave	0.000	2000	0.0

	Vista Environmental
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**Newport Blvd and 32nd St Widening
Source level parking lots - Existing Plus Project**

14

Parking lot	PPT	KPA	KI	KD	TL	Unit B0	Size B	
Marcus Ave Parking Lot	Visitors and staff	0.00	4.00	2.50	1	1 parking bay	19.00	
Las Fajitas Parking Lot	Visitors and staff	0.00	4.00	1.75	1	1 parking bay	14.00	
New Parking Lot	Visitors and staff	0.00	4.00	1.19	1	1 parking bay	12.00	



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Newport Blvd and 32nd St Widening
Assessed receiver levels - Existing Plus Project with 6-foot
High Sound Wall

Name	Usage	Floor	X m	Dir	Y m	Z m	Ldn dB(A)	Leq,d dB(A)	Leq,n dB(A)
01	RM	G	163.9	E	520.2	4.08	69.4	63.1	62.9
02	RM	G	156.1	E	495.8	4.08	68.8	62.5	62.4
03	RM	G	146.1	E	459.9	4.08	65.3	58.2	59.1
04	RM	G	131.1	E	390.2	4.08	66.5	60.2	60.1
05	RM	G	128.2	E	363.4	4.08	61.5	55.5	55.0
06	RM	G	123.0	E	307.3	4.08	53.8	49.3	46.9
07	RM	G	89.9	SE	245.1	4.08	61.4	54.7	55.0
08	RM	G	81.7	NE	216.4	4.08	65.7	59.7	59.2
09	RM	G	204.1	W	104.9	4.08	60.2	54.0	53.7
10	RM	G	222.1	W	139.4	4.08	63.9	57.7	57.4



APPENDIX E

RCNM Model Construction Noise Printouts

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/22/2013
 Case Description: Newport Blvd Widening - Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Home	Residential	63.6	63.6	63.6

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Concrete Saw	No	20		89.6	50	0
Excavator	No	40		80.7	75	0
Excavator	No	40		80.7	100	0
Excavator	No	40		80.7	125	0
Dozer	No	40		81.7	150	0
Dozer	No	40		81.7	175	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Noise Limits (dBA)	
			Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A
Excavator	77.2	73.2	N/A	N/A	N/A	N/A
Excavator	74.7	70.7	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Dozer	72.1	68.1	N/A	N/A	N/A	N/A
Dozer	70.8	66.8	N/A	N/A	N/A	N/A
Total	90	84	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/22/2013
 Case Description: Newport Blvd Widening - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Home	Residential	63.6	63.6	63.6

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40			80.7	15
Grader	No	40	85			40
Dozer	No	40			81.7	65
Tractor	No	40	84			90
Tractor	No	40	84			115
Tractor	No	40	84			140

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Excavator	91.2	87.2	N/A	N/A	N/A	N/A
Grader	86.9	83.0	N/A	N/A	N/A	N/A
Dozer	79.4	75.4	N/A	N/A	N/A	N/A
Tractor	78.9	74.9	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A
Tractor	75.1	71.1	N/A	N/A	N/A	N/A
Total	91	89	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/22/2013
 Case Description: Newport Blvd Widening - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Home	Residential	63.6	63.6	63.6

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	10	0
Paver	No	50		77.2	35	0
Paver	No	50		77.2	60	0
Paver	No	50		77.2	85	0
Roller	No	20		80	110	0
Roller	No	20		80	135	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Paver	91.2	88.2	N/A	N/A	N/A	N/A
Paver	80.3	77.3	N/A	N/A	N/A	N/A
Paver	75.6	72.6	N/A	N/A	N/A	N/A
Paver	72.6	69.6	N/A	N/A	N/A	N/A
Roller	73.2	66.2	N/A	N/A	N/A	N/A
Roller	71.4	64.4	N/A	N/A	N/A	N/A
Total	91	89	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.